

INVESTIGATION OF BUREAU OF INTERNAL REVENUE

HEARINGS

BEFORE THE

SELECT COMMITTEE ON INVESTIGATION OF THE
BUREAU OF INTERNAL REVENUE

UNITED STATES SENATE

SIXTY-EIGHTH CONGRESS

SECOND SESSION

PURSUANT TO

S. Res. 168

AUTHORIZING THE APPOINTMENT OF A SPECIAL COMMITTEE
TO INVESTIGATE THE BUREAU OF INTERNAL REVENUE

JANUARY 21, 23, 24, 27, 28, 30, AND 31, AND
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PART 10

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**SELECT COMMITTEE ON INVESTIGATION OF THE BUREAU OF
INTERNAL REVENUE**

JAMES COUZENS, Michigan, *Chairman*

JAMES E. WATSON, Indiana.

ANDRIEUS A. JONES, New Mexico.

RICHARD P. ERNST, Kentucky.

WILLIAM H. KING, Utah.

COPPER MINES VALUATIONS

1585

INVESTIGATION OF THE BUREAU OF INTERNAL REVENUE

FRIDAY, JANUARY 23, 1925

UNITED STATES SENATE,
SELECT COMMITTEE TO INVESTIGATE THE
BUREAU OF INTERNAL REVENUE.
Washington, D. C.

The committee met at 10.30 o'clock a. m., pursuant to adjournment of yesterday.

Present: Senators Couzens (presiding), Ernst, and King.

Present also: Mr. L. C. Manson, of counsel for the committee, and Mr. Edward T. Wright, investigating engineer for the committee.

Present on behalf of the Bureau of Internal Revenue: Mr. C. R. Nash, assistant to the Commissioner of Internal Revenue; Mr. Nelson T. Haftson, Solicitor Internal Revenue Bureau; Mr. James M. Williamson, attorney, office of Solicitor Bureau of Internal Revenue; Mr. S. M. Breenridge, head engineering division, Bureau of Internal Revenue; and Mr. John A. Grimes, chief metals valuation section.

The CHAIRMAN. You may proceed, Mr. Manson, when you are ready.

Mr. MANSON. I will submit now to the representatives of the bureau some exhibits that I wish to introduce this morning.

The matter to be considered this morning deals with the valuation of copper mines.

The first valuation of copper mines was made late in the year 1919. These valuations were necessarily hurriedly made. The statement appears in a memorandum of a deputy commissioner to the commissioner that less than one day be applied to the valuation of each mine in making the first valuations. These valuations were recognized as being purely provisional, and were so marked. They were made in this manner in order that the Government might collect some taxes from the copper mining companies in 1917.

The CHAIRMAN. As I understand it, that valuation was never intended to be final; is that the idea?

Mr. MANSON. That is the idea exactly.

The CHAIRMAN. Then, why was there such haste in collecting some of the taxes if the valuation was not intended to be final?

Mr. MANSON. The Government was at war at that time and they wanted to get in some money, I presume.

The CHAIRMAN. Well, the Government was not at war in 1919.

Mr. MANSON. Oh, I beg your pardon. That is true. I assume they wanted to get in the money. That is the only thing I see in the explanation as I see it in the record.

Some time in 1921 Mr. Grimes, the chief of the metals valuation section of the engineering division, made some revaluations for the purpose of determining the accuracy of the provisional valuations. These revaluations by him at that time showed the original valuations to be grossly excessive, and practically all of the copper-mine property has since been revalued.

The extent to which the provisional valuations, the first valuations, were excessive is best shown by a comparison of the totals of the provisional valuations and of the revised valuations.

For depletion purposes the original valuations as of March 1, 1913, were \$1,750,024,787. The revised valuations were \$530,217,893. The difference between the original valuations and the revised valuations as of March 1, 1913, was \$1,219,806,894. The per cent of original to revised is 330 per cent. As of January 1, 1919, the original valuations were \$1,456,327,002. The revised valuations were \$323,707,404. The difference was \$1,132,619,598. The per cent of original to revised is 449.9.

The CHAIRMAN. In other words, the higher the valuation the less the tax?

Mr. MANSON. The higher the valuation the less the tax.

I will come to an analysis of that point in just a few minutes. The figures I have just read apply to the mines whose valuations have been revised. They do not cover all copper mines. The figures that I have just read are a comparison of the original and revised valuations of only those mines whose valuations have been revised.

The CHAIRMAN. What percentage did this represent of the whole copper industry, do you know?

Mr. MANSON. Can you answer that, Mr. Wright?

Mr. WRIGHT. There were 71 copper companies and 47 were revised. The rest of them did not need revision.

The CHAIRMAN. I understand from that answer, then, that they have revised all of those that are intended to be revised?

Mr. MANSON. Our Exhibit A, which I will offer to be attached to the record, shows each of the companies, the valuation for invested capital purposes, according to the original valuation, the revised valuation, and the difference as of date of acquisition, and the same information as of January 1, 1919.

It also shows the value for purposes of depletion as of March 1, 1913, as originally valued and according to the revised valuation and the difference; the value as of January 1, 1919, according to the original valuation, the revised valuation, and the difference.

In Exhibits B-1 to B-5 we present an analysis of the provisional appraisals and of the revised appraisals, shown in parallel columns, for five companies—the Chino Copper Co., the Miami Copper Co., the Utah Copper Co., the Inspiration Consolidated Copper Co., and the Wolverine Copper Mining Co.

The CHAIRMAN. Was there any particular reason for selecting those five companies?

Mr. MANSON. I just asked Mr. Wright to select four or five companies to illustrate the methods used, to illustrate the particulars in which the revised valuations differed from the provisional valuations, and to illustrate the effect upon the tax.

The CHAIRMAN. In other words, you just picked five companies at random?

Mr. MANSON. Yes; I asked Mr. Wright to just pick five companies at random to illustrate the difference between these two valuations and the effect upon the tax.

Exhibit B-1 shows that in the case of the Chino Copper Co. the value of ores only as of March 1, 1913, under the original valuation, was \$96,274,000 and under the revised valuation it was \$16,498,099.

The depletion unit per pound under the provisional valuation was 3.15 cents plus. Under the revised valuation the depletion unit per pound was 0.8 of 1 cent plus.

The CHAIRMAN. That means in the ground?

Mr. MANSON. In the ground.

The net income of the Chino Copper Co. under the provisional valuation in 1917 was \$8,291,611.71, and under the revised valuation it would be \$10,259,771.52.

The income tax, that is, exclusive of excess profits tax, under the provisional valuation, would be \$393,812.06, and under the revised valuation it would be \$457,249.48.

The excess profits tax for 1917 under the original valuation would be \$1,560,239.59, and under the revised valuation it would be \$2,471,109.04.

The total tax, under the original valuation would be \$1,954,051.65. Under the revised valuation it would be \$2,928,358.52, the difference being about one million dollars in tax.

The CHAIRMAN. In some cases you refer to the "original valuation" and at other times you say "provisional valuation."

Mr. MANSON. I mean the same thing by both of them.

The CHAIRMAN. You mean the same thing?

Mr. MANSON. Yes; the total of the 1918 tax, under the provisional valuation, is \$1,028,570.75. Under the revised valuation, it is \$2,102,778.25. There is a difference there of about \$1,075,000 for 1918.

The 1919 tax under the original valuation would be \$6,667.02 and under the revised valuation \$140,617.03.

The CHAIRMAN. Is there anything in the record to show what the taxpayer's books show as their profits during those years? I was wondering whether their trial balances or statements filed with the bureau stated what their profits were, and what the relation of those profits was to the figures that you have just read?

Mr. MANSON. I do not know as to that. I have not investigated that.

Mr. NASH. Mr. Chairman, a part of every corporation income tax return contains a schedule that provides for a reconciliation of the income return with the books of the taxpayer, and every return must be reconciled with the books of the taxpayer. Any difference between the figures on the return and the figures on the taxpayer's book shows up in this reconciliation statement.

The CHAIRMAN. But this is not a reconciliation statement.

Mr. MANSON. No.

The CHAIRMAN. And I was wondering whether, when you fixed the tax on the provisional valuation, you had before you the claimed profit of the taxpayer. I still think it would be interesting for the committee to know what that relation was.

Mr. MANSON. I will supply the committee with any information I can in connection with each of these companies.

The CHAIRMAN. All right.

Mr. WRIGHT. Mr. Chairman, if I recall aright, the commissioner was furnished with a tabulation that showed the relation between these taxes and the profits. Mr. Grimes told me, however, it was not altogether reliable, and I did not use it as an exhibit. I have a copy of it, though. That was the best information that was gotten up at the time that this was under consideration by the commissioner. It could be put into the record, if you so desire.

The CHAIRMAN. You may bring it down at one of our future hearings.

Mr. MANSON. In the case of the Miami Copper Co., the March 1, 1913, value of ore only under the provisional valuation is \$25,287,721. Under the revised valuation is it \$11,518,058.

The depletion per pound, under the provisional valuation, is 3.29 cents plus. The depletion per pound, under the revised valuation, is 1.77 cents plus.

The total tax for 1917, under the provisional valuation, is \$2,268,919.53, and under the revised valuation it is \$3,762,583.20, a difference of about \$1,500,000.

The 1919 valuation under the provisional valuation is \$2,437,975.42 and under the revised valuation it is \$3,843,225.32, a difference of about \$1,400,000.

The 1919 tax under the provisional valuation is \$168,356 and under the revised valuation it is \$655,220.91, a difference of nearly \$500,000.

The CHAIRMAN. In that connection I understand it is not the plan of the bureau, or at least it was not the plan of the bureau, to go back and reassess the 1917 and 1918 taxes?

Mr. MANSON. That is exactly the point upon which I bring this whole matter before the committee. The provisional valuation was ordered to apply to 1919 and the subsequent years' taxes.

Mr. HARTSON. Excuse me for interrupting, Mr. Manson.

Mr. MANSON. Yes.

Mr. HARTSON. I think you inadvertently made a mistake there. The provisional valuations were not to apply for 1919 and subsequent years, were they?

Mr. MANSON. Oh, I beg your pardon. The revaluations were ordered to be made to apply to 1919 and subsequent years' taxes.

The CHAIRMAN. And not to apply to 1917 and 1918?

Mr. MANSON. And not to apply to 1917 and 1918.

The CHAIRMAN. Therefore these figures which you are calling off would be actual losses to the Government because the bureau did not include the years 1917 and 1918?

Mr. MANSON. That is it, exactly; and that is the reason I am calling it to the committee's attention at this time, before I went into a history of this matter, to show that they are more important as applied to 1917 and 1918 than as applied to any subsequent year.

The CHAIRMAN. Why are they more important in 1917 and 1918 than they are in 1919 and subsequent years?

Mr. MANSON. Because of the large incomes for those years.

The CHAIRMAN. You mean the percentage was higher in those years than in subsequent years?

Mr. MANSON. Yes; the large incomes and the high price of copper. The price of copper was something over 25 cents—between 25 and 26 cents—the price fixed by the Government.

The CHAIRMAN. And under this plan, in the years in which the companies were most able to pay, they were relieved from paying?

Mr. MANSON. Absolutely.

I do not know whether the committee desires me to go ahead and read these comparative figures for these five companies. They are contained in these exhibits.

Senator ERNST. Are you going to file the exhibits?

Mr. MANSON. I am going to file these exhibits.

Senator ERNST. Then, we will have them in exhibit form.

Mr. MANSON. And we will save time.

The CHAIRMAN. Have you summarized the figures for those 47 companies for the years 1917 and 1918?

Mr. MANSON. I have not done it, and our engineers have not done it, but we accept the statement contained in the memorandum of the bureau that it will make a difference of approximately \$60,000,000.

The CHAIRMAN. In other words, if they adopted this new valuation principle for the years 1917 and 1918 it would bring to the Government \$60,000,000 more from these 47 taxpayers?

Mr. MANSON. \$60,000,000.

I wish to call the committee's attention at this time to the fact that the new valuation is not made upon any different principle than the old valuation. The same valuation method is used in both instances. The new valuation was made with care, it was made by engineers who gathered the necessary data, and the difference between the new valuation and the old valuation is not one of method. It is not the adoption of a new principle, but it is merely correcting the errors that were contained in the old valuation. I will now go into that.

Senator KING. Have they collected any taxes and closed the accounts upon any of the old assessments?

Mr. MANSON. That is an important subject to be discussed here, and I will take that up with the Senator's permission.

Mr. WRIGHT. Mr. Chairman, at this time I would like to say that that \$60,000,000, since I wrote my report, I understand includes also the silver tax for 1917 and 1918; so it may be a little large. The silver valuations do not amount to anything like what the figures on the copper do, and I had to strike that investigation out of this report, and will handle it in a later one. But the \$60,000,000 includes the silver and the copper.

The CHAIRMAN. Will you bring the report to the committee at some later date showing the aggregate difference in these 47 companies?

Mr. WRIGHT. Yes, sir.

Mr. MANSON. Mr. Wright, our engineer, who investigated this subject, has made a very exhaustive and comprehensive report on the whole situation, which is at the same time brief, considering the size of the subject. I will offer that as our Exhibit C.

The inaccuracy of these original valuations, and the loss of tax which resulted from these valuations was called to the attention of the commissioner on January 7, 1922, by a communication which was prepared by Mr. Grimes, then assistant chief of the metals

valuation section. This memorandum was forwarded by a deputy commissioner, but the memorandum, which I will offer as our Exhibit D, was prepared by Mr. Grimes.

The CHAIRMAN. Do I understand that it was not until after 1922 that these revaluations were begun?

Mr. MANSON. The revaluations were not ordered until December 11, 1922. I will show the committee that Mr. Grimes had done considerable work prior to January 7, 1922, for the purpose of gathering the material with which to show the extent to which the original valuations were erroneous, and that on January 7, 1922, as is shown by our Exhibit D, the whole situation was laid before the commissioner. Then an opinion was requested from the solicitor as to whether this property could be revalued. It seemed that the companies questioned the right of the Government to make a revaluation. The solicitor held that they could be revalued. Again, in June or July—I have the memorandum here—Mr. Grimes goes into the subject in greater detail than it is gone into in his memorandum of January 7th, and it was not until December 11th that any action was taken by the commissioner.

I would call the committee's attention to the fact that there is no statute of limitations preventing the revaluation, but there is a statute preventing an additional assessment, and that statute, as of 1917, would begin to run at about the first of March, 1923.

Senator KING. Did we not extend that in some of our acts?

Mr. MANSON. I do not think that statute has been extended.

Mr. HARTSON. In this way, Senator, that in cases where the taxpayer files a waiver of the commissioner's right to assess, then the statute is extended. That also extends the time within which the taxpayer can claim a refund.

Senator KING. But waivers have not been secured in these cases?

Mr. MANSON. I have gone into that also. I will show to what extent they have been secured, and what waivers have been secured.

As I have just stated, the statute, as to 1917 taxes, would run on about the 1st of March, 1923.

This situation was called to the attention of the commissioner on January 7, 1922. There were still 15 months at that time within which revaluations could be made as of the 1917 taxes. No action was taken until the 11th of December, 1922, when there was only a period of less than four months within which the revaluations could be made which would apply to the 1917 taxes, unless there were waivers on file.

As to the 1918 taxes, the statute would apply one year later, in March, 1924.

The CHAIRMAN. Were these valuations completed from December 11, 1922, before the statute of limitations ran on the 1917 taxes?

Mr. MANSON. Oh, no; that would be an impossible task; they are just being completed now.

I have a schedule here showing when each valuation was completed, and whether or not waivers are on file, which I shall offer; but it is very clear, from the length of time it has taken since the valuations were authorized, that they could have been completed in time to have affected the 1917 taxes, had there not been this delay of 11 months after the situation was called to the commissioner's attention before any action was taken to authorize the revaluation.

Senator ERNST. Who was it that called his attention to that?

Mr. MANSON. The assistant chief of the Metals Valuation Section.

The CHAIRMAN. Mr. Grimes?

Mr. MANSON. Mr. Grimes.

The CHAIRMAN. He testified before the committee the other day, did he not?

Mr. MANSON. Yes; he was a witness before the committee the other day.

The CHAIRMAN. Just how long did these revaluations take? I am quite sure that it must have been within the 15 months, in view of the statement of counsel, because it has been over 2 years since they were first ordered.

Mr. MANSON. Well, there was another halt in the proceedings later, which I will come to.

The CHAIRMAN. If it took two years, or anywhere near that time, then the revaluations could not have been made from the time Mr. Grimes drew the commissioner's attention to it in 1922 up until the time of the running of the statute of limitations.

Mr. MANSON. Many of them could, Senator. I do not know that they could all have been completed, but the length of time that it would have taken to make these valuations is set forth in detail, and I will come to that in a minute. I think I can get this matter more clearly in the minds of the committee if I can present it in this way.

I offer this first memorandum of Mr. Grimes as Exhibit D.

As I have stated, after this situation was called to the attention of the commissioner and an opinion of the solicitor was requested as to whether or not the revaluation could be made, on April 13, 1922, the solicitor rendered an opinion upon the subject, and inasmuch as the whole matter turned very largely upon this question of law I am going to read the solicitor's opinion. It is not long. It is entitled:

In re assessment where deductions are tentatively allowed pending a determination of the exact amount deductible

Deputy Commissioner BATSON:

The opinion of this office has been requested upon the question as to whether or not the limitation contained in section 250 (d) of the revenue act of 1921 upon the time when assessments can be made applies to cases where depletion deductions are tentatively allowed pending a valuation of the correct amount deductible.

Section 250 of the revenue act of 1921 provides in part as follows:

"(d) The amount of income, excess profits, or war-profits taxes due under any return made under this act for the taxable year 1921 * * * shall be determined and assessed by the commissioner within four years after the return was filed, and the amount of any such taxes due * * * under prior income, excess profits, or war-profits tax acts * * * shall be determined and assessed within five years after the return was filed * * *; *Provided further*, That in cases coming within the scope of paragraph (9) of subdivision (a) of section 214, or of paragraph (8) of subdivision (a) of section 234, or in cases of final settlement of losses and other deductions tentatively allowed by the commissioner pending a determination of the exact amount deductible, the amount of tax or deficiency in tax due may be determined, assessed and collected at any time; but prior to the assessment thereof the taxpayer shall be notified and given a period of not less than 30 days in which to file an appeal and be heard, as hereinafter provided in this subdivision."

The proviso above quoted restricts the effect of the general provisions fixing the time when assessments must be made and excepts from the operation of the general provisions those cases where deductions are tentatively allowed pending a determination of the exact amount deductible. In section 214 (a) (10) and section 234 (a) (9) of the revenue act of 1921 and the corresponding sections and subdivisions of the revenue act of 1918 individuals and corporations in computing their net income are allowed a reasonable deduction for the depletion of oil and gas wells, mines, other natural deposits, and timber. The amount of the deduction in such cases is necessarily dependent upon the valuation as of the basic date of the mineral or timber properties which are being depleted. In order to determine the reasonableness of the deduction data must be furnished to or secured by the bureau to substantiate the valuations which are the basis of the deductions. This necessarily takes time. Where the deductions are tentatively allowed pending a valuation of the properties and a determination of the exact amount deductible the cases fall squarely within the provisions of the proviso, and the amount of tax due may be determined and assessed at any time.

It is suggested, however, that the valuation of the mineral properties and the determination of the exact amount deductible be ascertained as soon as practicable, so that the amount of the tax may be assessed within the time fixed by the general provisions of section 250 (d) of the revenue act of 1921.

The letter submitted with your memorandum of inquiry, which the unit proposes to send to taxpayers operating properties subject to depletion, has been considered. The letter will serve a very useful purpose in that it will notify the taxpayer of the tentative allowance of his depletion deduction and will form a valuable record of the bureau in case any question subsequently arises as to the time within which the assessment of the taxes due should have been made.

CARL A. MAPES, *Solicitor*.

Senator KING. In your opinion, does he announce the correct principle of law?

Mr. MANSON. I believe so; yes, sir.

Senator KING. Covering these cases?

Mr. MANSON. Yes, sir; it is my opinion that the solicitor's opinion was absolutely sound.

On July 25, 1922, following this opinion of the solicitor, Mr. Grimes prepared another memorandum to the commissioner, in which the whole subject is gone into in great detail and in which he points out the errors in the original valuations.

Reading from page 5 of this memorandum, Mr. Grimes says:

The law itself is specific with respect to the revision of provisional depletion deductions allowed and the assessment of additional tax, free from any statute of limitations. Such is the opinion of the solicitor.

The regulations all agree that the March 1, 1913, value sought is the cash value at which the property would be transferred from a willing seller to a willing buyer.

The regulations all recognize that the values determined by appraisal should be checked by all other available evidence of value before being accepted by the commissioner.

The provisional valuations, made chiefly by L. C. Graton, conform to but few of the requirements of the regulations. They are redundant with errors in the methods of calculation of value, even assuming the basic factors and principles of valuation to be correct. They frequently determine values several hundred per cent greater than the values which are indicated by any one of the comparative methods specified in the regulations. They were never checked by such comparative methods, or if the appraisal values were compared with the values indicated by other methods no weight was attached to the values determined by the other methods. The large majority of the big copper companies have reported one value for depletion and a small fraction of that value for capital stock purposes. In certain cases the taxpayer's own computation of value was discarded and a much higher value substituted. In other cases the taxpayer repeatedly claimed one value in excise tax returns and early income tax returns, and for later years was allowed to substitute a much greater value, in direct

violation of the regulations. In still other cases valuations were made upon data and assumptions in direct conflict with the published annual reports of the taxpayers. Seldom, if ever, had the annual reports even been read by L. C. Graton before provisional values for depletion were allowed.

The memorandum to the commissioner, dated January 7, 1922, embodies the suggestions of the metals valuation section for the correction of the provisional values for depletion and invested capital, and gives comparisons of the provisional and recommended values with value determined by methods other than appraisal. It is clearly shown that the changes recommended will still leave the values determined by appraisal at equal or higher levels than the values determined by any comparative method.

GROSS ERRORS IN VALUATION

Exclusive of judgment, there are plain mathematical errors in the majority of the computations of provisional values, principally as follows:

(1) Increasing the recoverable metal content per ton without increased cost per ton, adding 50 to 100 per cent to estimated operating profit per ton. If costs are computed per pound of copper, the added recovery may or may not be in favor of the taxpayer.

(2) Using a production cost per pound of copper attained in past operations mining a high-grade ore and using the same cost per pound as the expected future cost with much lower grade ore, adding 25 to 90 per cent to the estimated operating profit per ton.

(3) Assuming that the grade of ore would remain constant when a long period of operations had shown that the assay value of the ore was constantly decreasing and might be expected to do so in the future. It is difficult to estimate the percentage amount of this error, but it is great.

(4) Assuming large additions to plant capacity with decreased production costs attending increased capacity, and then assuming an average rate of production and an average price for the entire life of the mine. This does not increase estimated operating profit, but it does increase present worth of that profit erroneously, in one case, at least 100 per cent.

(5) Making no provision for plant replacement when the useful life of the plant is less than the life of the mine.

(6) Accepting erroneous estimates of the taxpayer without check or correction.

(7) Allowing depletion deductions for ore of such low value that it was profitable only in war times, and was not included in the valuation. Thus in one instance a ton of low-profit ore is excluded to each two tons of high-profit ore included in the computation of value. The ore excluded must be removed to permit mining of the commercial ore, and if the price of copper is such that it can be profitably treated, the ore is shipped to the mill instead of to the dump, perhaps a profit of 25 cents per ton is made and depletion of 50 cents per ton allowed for this ore. Treating this ore has an indirect effect upon the value of the commercial ore, in that it reduces the plant capacity available for the commercial ore and reduces the present value of that ore.

These are gross errors in valuation. They are in addition to any errors of judgment which appear to have been made in the determination of copper prices, and, in the case of non-operating mines, of the interest rate used in a reduction of operating profit to present worth. Any errors in estimating operating profit appears as even greater errors in the value of depletion, as the present value of the operating profit is divided into a fixed plant value and a variable value for depletion which reflects the full extent of the error. The inclusion of one error in valuation is bad enough, but when several errors appear in the same valuation, each error magnifies the result of the preceding errors. Thus, if three errors of 50 per cent each have been made, the total error is: $150\% \times 150\% \times 150\% = 337.5\%$ total error.

As every debatable point was decided in favor of the taxpayer at the time the provisional valuations were made, and as there may be many of these points in a single valuation, it is not surprising that the provisional valuations are frequently several hundred per centum in excess of any comparative value. Such a result should have been expected.

Mr. Graton submitted his first valuation for approval of the commissioner late in November, 1919, and made 50 or more valuations between then and December 31, 1919. He was urged to do so by the commissioner. It was impossible to collect and assimilate the data necessary for accurate valuation

in such a brief time. That Mr. Graton knew this, is a matter of official record, as each of the provisional valuations is called "Provisional," and, it is stated in the opening paragraph that: "This case has been hurriedly examined." The only subsequent review of the provisional valuation permitted by the bureau was at the request of the taxpayer.

I offer this memorandum as Exhibit E.

Senator ERNST. Do you want the entire exhibit to go into the record?

Mr. MANSON. No; I do not want any of it to go into the record.

Senator ERNST. Just what you read?

Mr. MANSON. Just what I have read; yes.

The CHAIRMAN. Was there not some complaint made to the bureau before Mr. Grimes wrote that report on the valuation and the high price that was given to copper?

Mr. MANSON. Yes; the lead companies protested the valuation that had been placed on their properties, and cited in connection with that protest the high price that had been allowed to the copper properties, in comparison to the prices that had been allowed to them.

The CHAIRMAN. Was that before Mr. Grimes wrote that report that you read, or afterwards?

Mr. MANSON. I think it was before either of these reports was written. Is not that right, Mr. Wright?

Mr. WRIGHT. Yes, sir; it was before the January 7 letter. In July, 1921, the lead people made their protest.

Mr. MANSON. In July, 1921?

Mr. WRIGHT. Yes, sir.

The CHAIRMAN. So that there were other means of knowing this condition before January 22, even?

Mr. MANSON. That protest was received from the lead people and was turned down by the commissioner, upon the ground that the fact that they had made an error in copper would not justify making a similar error in the case of lead.

The CHAIRMAN. It might have suggested, however, to the commissioner to look into the error on copper, might it not?

Mr. MANSON. That might have been what caused this investigation to be made, because it is very clear that considerable investigation had been made by Mr. Grimes prior to writing the January 7 memorandum, because that memorandum goes into the subject quite exhaustively and presents considerable data showing errors in the provisional valuations, and that work could not have been done in a few minutes. Considerable work had been done on this subject by the metals valuation section before the memorandum of January 7, 1922, as is shown by the contents of that memorandum.

Senator KING. If this does not interrupt the continuity of your presentation, and if you intend to refer to it later, do not take the time to do so now. Does the memorandum presented by Mr. Grimes present, in your view, the correct view with respect to the matter of assessment?

Mr. MANSON. Oh yes; he makes a very exhaustive presentation of the subject, both suggestions as to proper methods of valuation and a vast amount of data, a large part of which is reduced to graphic charts which show the errors as to price. For instance, he shows that the basis for estimating the price of copper as of March

1, 1913, was entirely wrong, and he shows that the discount factors were wrong, in addition to showing the purely mathematical errors to which he calls attention in that portion of this report which I have just read. That portion of this report which I have just read involves no question of judgment at all. That is just straight mathematics. In addition to pointing out these mathematical errors which have resulted in increasing the valuation by two or three hundred per cent—

The CHAIRMAN. Did Mr. Graton make these mathematical errors, or were they made by an auditor?

Mr. MANSON. Oh, no; those were made in the valuations.

The CHAIRMAN. Is this Mr. Graton who is criticized still in the employ of the bureau?

Mr. MANSON. No; the last record there appears to be of him is an affidavit made by him on behalf of the Anaconda Copper Co. in connection with their appeal. He left the bureau immediately after making these valuations, I believe.

Mr. HARTSON. Mr. Chairman, for the committee's information it should be stated that Mr. Graton is an engineer engaged in educational work at Harvard University. He is connected with Harvard University and left the employ of the bureau to go back to Harvard, as I understand it, and he is still there.

The CHAIRMAN. God help the students then.

Mr. HARTSON. He is not engaged in private employment as an engineer.

Mr. MANSON. On December 11, 1922, the commissioner acted by an order which I have marked "Exhibit H," and which I will read into the record:

DECEMBER 11, 1922.

Memorandum for Deputy Commissioner Batson:

(Attention Mr. Fay, head National Resources Division.)

Reference is made to the memorandum prepared by Mr. Grimes to the commissioner, dated January 7, to Mr. Fay's memorandum to you, dated February 7, to your memorandum to Mr. Fay, dated February 16, and to the various memoranda regarding the tax liability of copper companies for 1917 and subsequent years.

Full consideration has been given to the question and it is concluded that for 1919 and subsequent years the valuation of the ore bodies of copper mines should be revised. The price of approximately 15 cents a pound, recommended by the natural resources division, and the 10 per cent interest rate, are approved for the purpose of discounting to the present worth. The Income Tax Unit is authorized and instructed immediately to proceed to the revaluation of the copper and silver mining companies for the purpose of determining their tax liability for 1919 and subsequent years in accordance with the recommendations heretofore made by it.

D. W. BLAIR,
Commissioner of Internal Revenue.

Approved:

A. W. MELLON,
Secretary of the Treasury.

The CHAIRMAN. That was after the opinion of the solicitor?

Mr. MANSON. Yes; the opinion of the solicitor was in April.

The CHAIRMAN. In understood that following that there was another opinion requested, was there not?

Mr. MANSON. Yes; I will come to that in just a second.

Work was immediately commenced in the Metals Valuation Section, and proceeded until November 28, 1924, when the files disclose the following memorandum:

ENGINEERING DIVISION,
INCOME TAX UNIT,
November 28, 1924.

Memorandum to Solicitor of Internal Revenue:
In re: Chile Copper Co., Anaconda Copper Co., and copper revaluations in general.

Reference is made to the accompanying formal appeal filed by the above-named companies (three paper bound volumes) in the matter of copper revaluation, special reference being made to memorandum of the Secretary of the Treasury dated December 11, 1922. [Copy attached.]

That is the order ordering these revaluations.

There are indications that the bureau's position, as outlined in the above-mentioned memorandum, and actions already taken thereunder are open to strong contest by taxpayers.

The questions of the right of the Secretary of the Treasury to reopen valuations made by his predecessor in office and to make such revaluations retroactive to January 1, 1919, appear never to have been examined and formally decided by a proper legal authority.

In view of the fact that taxpayers whose values and taxes have been changed under the above-mentioned memorandum are voicing almost unanimous objection thereto, it is requested that a written opinion be given on the right to reopen valuations, and that this opinion be submitted before further time, labor, and money are expended on a matter which promises protracted controversy and litigation for the bureau.

J. G. BRIGHT, *Deputy Commissioner.*

The CHAIRMAN. What is the date of that?

Mr. MANSON. That is dated November 28, 1924.

The CHAIRMAN. That was nearly two years after the revaluations had been ordered?

Mr. MANSON. Nearly two years after they had been ordered.

Senator KING. And after that opinion that was given by—

Mr. MANSON. By the same authority, although a different individual in the office. An opinion had been given by the same authority to which he is now appealing for an opinion.

The CHAIRMAN. Did the new individual in the solicitor's office give an opinion?

Mr. MANSON. I do not know. How about that, Mr. Hartson?

Mr. HARTSON. Mr. Chairman, it was not called to our attention that there had been a reference of this matter to my office until possibly 10 days or 2 weeks ago, and I then returned the case immediately to the source from which it came with the statement that the question had already been disposed of by a specific order of the secretary and the commissioner. I rendered no further opinion on it, because it seemed to me that the matter was out of my hands, the revaluation having been definitely ordered by the Secretary and the commissioner. The delay between the date of November 28, 1924, and its being returned, 10 days or 2 weeks ago, is accounted for by the fact that it came to the office, as any other case would, and the lawyer to whom it was assigned had not yet had an opportunity, due to other matters, to get into the records and realize the nature of this inquiry.

The CHAIRMAN. After Deputy Commissioner Bright wrote that memorandum, when did he make the request upon the solicitor's office for an opinion?

Mr. HARTSON. In this memorandum, Mr. Chairman, in the memorandum that is dated November 28, 1924.

The CHAIRMAN. Oh, was that sent to the solicitor's office?

Mr. HARTSON. Yes; that is directed to the solicitor.

Mr. MANSON. Yes, sir.

Mr. HARTSON. That is the deputy commissioner's request for an opinion, apparently?

The CHAIRMAN. After November 28, 1924, when the new valuations were stopped by order of the deputy commissioner, when did they start again?

Mr. HARTSON. I do not know that the new valuation was stopped by that reference of the deputy commissioner, dated November 28, 1924.

The CHAIRMAN. I understood that it was stopped.

Mr. MANSON. I have here a memorandum dated December 5, 1924, which is our Exhibit J, signed by Mr. John Alden Grimes, chief of the metals valuation section, in which it is stated:

At the present time the 1919 returns of seven copper mining companies are held in the metals valuation section under instructions from the head of the engineering division, until such time as an answer to the above memorandum is received from the Solicitor of Internal Revenue.

The memorandum he has reference to is the memorandum which I have just read. He quotes it in full.

The CHAIRMAN. So they were held up.

Mr. HARTSON. The point I had in mind is this, Mr. Chairman, that, if my understanding is correct, most of these revaluations had already been made when the Chile case was referred to the solicitor, under date of November 28, 1924.

The CHAIRMAN. Is that correct? Is that your understanding, Mr. Manson?

Mr. MANSON. I think most of them had been made.

Mr. HARTSON. So that the work of revaluation was not postponed by reason of the reference to the solicitor's office, but it is true that the action looking toward the levying of an additional assessment was postponed until this memorandum was answered.

The CHAIRMAN. In other words, the letters that you were sending out to taxpayers for their new assessments were held up on this? I think in one of the previous hearings we requested a copy of one of those letters.

Mr. HARTSON. I think we have one here.

The CHAIRMAN. Showing how you proceeded to assess those different amounts, and in what language. If convenient, I would like to have a copy of that letter inserted in the record at this point.

Mr. MANSON. That is the A-2 letter (Exhibit I).

Mr. NASH. Mr. Chairman, I have brought a copy of that letter down here a half a dozen times, but I do not have it with me to-day.

Mr. MANSON. I have one we can put in the record. It is in the appeal in the Anaconda Copper case.

Mr. NASH. I showed it to Mr. Manson one morning before the hearing, and he said he had one in another case.

The CHAIRMAN. I would like to see that. Have you got it here?

Mr. MANSON. I have not got it with me. It is over in my office.

The CHAIRMAN. You may proceed, Mr. Manson.

Mr. MANSON. I have called attention to this memorandum of Mr. Grimes, dated December 5, 1924, in which he states that several cases are held up in his office under instructions from Mr. Greenidge, the head of the engineering division. I have read this memorandum to the solicitor. I wish to place emphasis upon the fact that this memorandum contains a recital which is not true, when it says that the questions of the right of the Secretary of the Treasury to reopen valuations made by his predecessor in office, and to make such revaluations retroactive to January 1, 1919, appear never to have been examined and formally decided by a proper legal authority.

I have just shown, and it is not disputed, that that very question had been passed upon by the same authority to which he is now appealing.

The CHAIRMAN. And before the revaluation had been ordered?

Mr. MANSON. And before the revaluation had been ordered.

The CHAIRMAN. So that they had competent legal advice before they proceeded?

Mr. MANSON. Yes, sir; they not only had competent legal advice but legal advice by exactly the same legal authority to which they were then appealing. There may have been no formal order here to hold up this whole matter of the assessment of a tax based upon these revaluations, but I believe that I am warranted in saying that the language contained in the last paragraph of this memorandum of November 28, 1924, to the solicitor, is tantamount to an order, wherein the deputy commissioner in charge of the Income Tax Unit

SAYS—

Senator KING. Is he still a deputy commissioner?

Mr. MANSON. Yes.

The CHAIRMAN. Deputy Commissioner Bright, is it not?

Mr. MANSON. Mr. Bright. [Reading:]

In view of the fact that taxpayers whose values and taxes have been changed under the above-mentioned memorandum are voicing almost unanimous objection thereto, it is requested that written opinion be given on the right to reopen valuations and that this opinion be submitted before further time, labor, and money are expended on a matter which promises protracted controversy and litigation for the bureau.

Senator KING. I think it speaks for itself.

Mr. MANSON. Yes.

Senator KING. I think it is tantamount to an order to hold it.

Mr. MANSON. I wish to say, in justice to Mr. Bright, that Mr. Bright did not originate the idea of getting out this memorandum. While this memorandum is signed by the deputy commissioner in charge of the Income Tax Bureau, it is on the letterhead of the engineering division and bears the initials "S. M. G.," which I take to be the initials of Mr. Greenidge.

The CHAIRMAN. You think Mr. Greenidge prepared the memorandum and Mr. Bright just signed it?

Mr. MANSON. I think so; yes, sir.

Senator KING. Is that true, Mr. Greenidge? Did you prepare that?

Mr. GREENIDGE. Yes. That memorandum was subjected to some discussion before it was written.

The CHAIRMAN. Discussion with whom?

Mr. GREENIDGE. I talked with Mr. Bright on several occasions, and I talked with Mr. Grimes, and I talked it over with the commissioner either before or shortly after it was written. I remember that on one occasion I asked if we could get an opinion as soon as possible.

The CHAIRMAN. When you consulted with Mr. Grimes, Mr. Grimes already knew that the opinion had been rendered?

Mr. GREENIDGE. No doubt he did. It was not made as apparent to me as the reading of the opinion that has just been read by Mr. Manson, signed by Mr. Mapes, would seem to indicate. It being a matter of very great importance, I thought it would be well if we all discussed it pretty freely and pretty thoroughly before we took any action that would tend to cause any great deal of delay. I do not think there was anything about it that was not known by everyone connected with the cases.

Senator KING. How could you take the position that you needed legal advice when you had legal advice which had been given by Mr. Mapes and Mr. Batson two years before, unless you discredited that, and why did you, in the memorandum which you prepared, and which Mr. Bright signed, state that you already had a memorandum that this procedure was authorized, but you questioned it, questioned its validity and the interpretation placed upon it by Mr. Mapes and Mr. Batson, and you wanted further authority on the subject?

Mr. GREENIDGE. I could not say, Senator, that at any time I ever discredited it, but the taxpayers' briefs are very extensive and very detailed, and they attacked that very phase of the case.

The CHAIRMAN. Did Mr. Grimes object to this memorandum at the time you consulted him?

Mr. GREENIDGE. No.

The CHAIRMAN. As Mr. Grimes is here, I would like to ask him if he concurred in that memorandum at the time?

Mr. GREENIDGE. I know he did not object to it.

Mr. GRIMES. Mr. Greenidge brought the memorandum in to me to read over before he took it to Mr. Bright for signature.

This memorandum of the solicitor to which reference has been made refers to provisional valuations. Some of the valuations for 1917 and 1918 were not marked "provisional valuations." All of those that Mr. Graton wrote are marked "provisional valuations," but after Mr. Graton left the bureau Mr. Dick became head of the engineering division. He was chief of the metals valuation section at the time that Mr. Graton was employed. Mr. Dick expressed the desire that no further provisional valuations be made, that all the valuations be made, omitting any reference to "provisional" or anything of that kind; so that, from the time that Mr. Graton left the bureau, which was some time, I think, about the end of January, 1920, none of the valuations by any of the sections, were marked "provisional."

Mr. MANSON. Mr. Grimes, there was no doubt in your mind, when you wrote this memorandum of July 25, 1922, in which you asked this former solicitor's opinion as to the right of the Secretary and the commissioner to order revaluations, was there?

Mr. GRIMES. Not on the provisional valuations, but, Mr. Manson, there were some of the cases that were not marked "provisional," to start with. Now—

Mr. MANSON. Well, they were provisional, even if they were not so marked.

Senator ERNST. Let him finish his answer. Go ahead and finish your answer.

Mr. GRIMES. In addition to those that were not marked "provisional," assessment letters, in many cases, that were based upon provisional revaluations, did not state that the depletion allowed was provisional. They simply stated "depletion allowed," and did not state "provisional" or otherwise. In those cases in which the taxpayer had not been notified that they had a provisional allowance, in the assessment letter, and in the cases where there were no designations of valuation reports, that they were provisional, there was a very strong legal doubt, as I understand it, as to whether or not the commissioner had the authority to reassess additional taxes on the basis of revaluations for years in which the tax had been assessed and paid by the taxpayer.

Mr. MANSON. What I am asking you is, did you entertain that doubt; did that doubt exist in your mind?

Mr. GRIMES. I never had any doubt personally that the Solicitor of Internal Revenue was perfectly correct.

The CHAIRMAN. Just at this point. I do not recall that there was anything in Solicitor Mapes's letter that required the valuations to be marked "provisional."

Mr. MANSON. No, sir; there was not.

The CHAIRMAN. And, therefore, whether they were marked "provisional" or not, the revaluations were valid under that opinion, were they not?

Mr. MANSON. I do not like—

Mr. HARTSON. Excuse me, Mr. Manson.

The law itself, which is quoted in the memorandum of Mr. Mapes, under date of April 13, 1922, refers, in section 250 (d) to "deductions tentatively allowed." With that language in the act itself, the provisional valuation is and does become material. In other words, a tentative allowance would doubtless be based on a provisional valuation, but if the valuation were finally made, then there would be no tentative allowance. It would be a final allowance and the statute would run then.

The CHAIRMAN. I understand, but I do not understand that the determination of the tentative or provisional allowance is simply by marking on the valuation that it is such. I do not understand that the mere omission of the word "provisional" or "tentative" on the valuation itself prohibits the commissioner from making another valuation, or that it does completely designate the original valuation as being final.

Mr. HARTSON. I think the mere writing of the word "tentative" or "provisional" means nothing of itself, but the facts and all the circumstances surrounding what was actually done, together with an understanding, possibly, by the taxpayer that it was a preliminary action, in a sense, would then be a tentative determination, and it would not be final. In other words, I think a court, in con-

struing that, would look through the mere identification mark on the paper, as to whether it was tentative or not, and could determine from all the facts just what the action was, whether it was a preliminary one or one that was finally closed.

The CHAIRMAN. I would like to ask Mr. Grimes if, when he was consulted by Mr. Greenidge on this communication which has just been read, he thought that that was dealing only with those cases which were not marked "provisional"?

Mr. GRIMES. I thought it was dealing with the whole question of the revaluation.

In fairness to Mr. Greenidge, I should mention at this time that, to the best of my recollection, Mr. Greenidge asked me if I knew of any written opinion by the solicitor covering the subject of revaluation, upon which the commissioner based his memorandum of December 11, 1922, and that I overlooked the matter of this memorandum on the provisional allowance because it was so clear that there never was any argument on the matter. The whole question was as to whether the other valuations not marked "provisional" could or could not be reopened.

The CHAIRMAN. But I understood you to say that you did not draw Mr. Greenidge's attention to this opinion of Mr. Mapes.

Mr. GRIMES. No, sir; I did not.

The CHAIRMAN. You overlooked that?

Mr. GRIMES. I forgot to.

The CHAIRMAN. I think that is clear.

Senator ERNST. Will you continue? I would like to have your continued explanation there.

Mr. GRIMES. The other valuations, where there had been no provisional valuation or even if there had been a mention of provisional in the valuation report and the word "provisional" had been omitted in writing the assessment letter. They were the ones which were given most consideration, because there was a strong legal question raised as to whether those could be opened or not.

In a number of cases the taxpayers produced letters from the deputy commissioner, or the assistant commissioner, Mr. Callan and Mr. Newton, I believe, at that time, which stated that the audit of their returns in 1917, and I think in some cases 1918, had been finally disposed of and that the tax assessed was the final consideration of the bureau.

Now, in those cases, I think there was very grave doubt as to whether the Government could do anything about reopening the cases, and if they could not do anything about those cases, there seemed to be doubt as to the advisability of assessing taxes against a portion of the competitors in an industry on one basis and assessing taxes against another portion of those competitive taxpayers on another basis.

Senator KING. That is, if A and B rob the Government, let C and D do it. That was the theory?

Senator ERNST. Senator, I do not think that is a fair statement of the case.

Senator KING. Well, if A and B, through the failure of the Government to properly interpret the law, had failed to pay a just tax, X, Y, and Z, who were in the same competing business, ought not to have applied against them a proper interpretation of the law?

The CHAIRMAN. Mr. Grimes is not a lawyer, Senator. Senator KING. I mean that is what the theory was?

Mr. GRIMES. As I understand it; yes.

Senator KING. Yes; that is it.

Mr. GRIMES. I did not have full knowledge of these proceedings, and I can not speak authoritatively on that subject.

Mr. MANSON. Mr. Grimes, are you the one who suggested to Mr. Greenidge that there was a doubt about this?

Mr. GRIMES. No, sir.

Mr. MANSON. Did you interpret this request for an opinion as being tantamount to not to proceed until that opinion was received?

Mr. GRIMES. No, sir.

Mr. MANSON. You advised Mr. Parker, I believe, by a memorandum, that you were holding up some cases until it was received?

Mr. GRIMES. There was one group of cases, which included 7 or 8 companies—the Calumet & Hecla Co. and associated companies in Michigan—for which we had a conference arranged. At the request of Mr. Peterman, the representative of these companies, that conference was postponed by Mr. Greenidge until action upon this legal question could be considered. That conference is now arranged for, I think, about 30 days from now.

The CHAIRMAN. I would like to ask Mr. Hartson, in view of what has been developed by Mr. Grimes, whether when he disposed of the matter, because of the order having been issued by the Secretary of the Treasury, you considered what now appear to be the determining factors as to whether the taxpayer had been notified that it was a preliminary assessment, or whether he had been notified that it was a final closing of his case?

Mr. HARTSON. No; it was not referred to me, Mr. Chairman, in any way that permitted of going into the merits of this right of the Secretary and the commissioner to reopen and redetermine these valuations. As soon as I learned that it was over in my office I sent it back without studying it and without attempting to form any legal views of my own with regard to the merits of the question, because the commissioner, with the approval of the Secretary, had ordered a thing to be done, and I did not believe that it was appropriate for me to pass upon it again, so I turned it back, Mr. Chairman, without the consideration of some of these things that you have suggested here.

The CHAIRMAN. Yes; I understand, but even the way it was presented to you, it was not presented to you in such form that you could have determined the validity of the revaluations based upon the principles enumerated by Mr. Grimes; namely, that in some cases the taxpayer had had his case closed, and in other cases he had only had it tentatively closed.

Mr. HARTSON. I would not want to answer that in the affirmative, Mr. Chairman.

The CHAIRMAN. Well, there is nothing in the record here that shows that?

Mr. MANSON. Let me answer that—

Mr. HARTSON. Now, just a minute, Mr. Manson.

The CHAIRMAN. I want to know if there is anything in the record that brings that question up?

Mr. HARTSON. I would like to answer that question by saying that the memorandum transmitted the files of the Chile Copper case and also the Anaconda Copper case, and that an examination of those files no doubt would show just what the letters sent out by the Unit to the taxpayer contained, which, as Mr. Grimes indicates, may carry a tentative determination or may not. I mean the files in those cases no doubt would answer the question which you raise.

The CHAIRMAN. Yes; that answers it.

Mr. MANSON. I might call the committee's attention to the fact that this memorandum is entitled not only in the Chile case and in the Anaconda case, but copper revaluations in general.

Senator KING. All of them?

Mr. MANSON. Yes.

The CHAIRMAN. Yes; but I think Mr. Hartson is right, though, that the files themselves might have indicated the exact question in the minds of the engineers.

Mr. MANSON. Our Exhibit K, which I offer to be attached to the record—

Senator KING. Before proceeding with that, may I ask Mr. Greenidge whether proceedings have been stopped under the letter of Mr. Bright?

Mr. GREENIDGE. Oh, no, sir. No proceedings have been stopped that I know of. The only proceedings that may be thought to be stopped is the conference that Mr. Peterman, of the Calumet & Hecla Co., came here for. He asked that it be deferred because he had some other matters to attend to at the time, and I think that memorandum either had been sent out or was under consideration. I told him certainly, that his case was properly waived, and we would grant him that favor, which is the custom in the department.

Senator KING. Have all the corporations that would come legitimately under the work of revaluation been revalued and the computations made, so that if it is legal to proceed to enforce the tax, no step remains to be taken except to collect the tax?

Mr. GREENIDGE. I can not think of any, Senator. I believe, from what I have been told by Mr. Grimes and the other engineers, that far in excess of 90 per cent of the revaluations—that is, valuations representing over 90 per cent of the copper industry have been made. I think I am correct in that, am I not, Mr. Grimes?

Mr. GRIMES. All but one, I think, have been revised, and there is a waiver on that case which is in the solicitor's office on the inventory question. We are waiting for that question to be settled before taking up the revaluation.

Senator KING. That applies to those cases marked "provisional" as well as those cases where there was no mark or no indication?

Mr. GRIMES. Every copper producing company, so far as I know.

Senator KING. Not only the revaluations, but the computations have been made?

Mr. GRIMES. I do not think the computation of the tax has been made in every case, but there will be no delay on that, or loss to the Government.

Mr. MANSON. We have all of that data here.

Exhibit K shows the name of the company, the date the revaluation was completed, the date the report was forwarded from the engi-

neering division, to what division it was forwarded—that is, to what audit division—the date it was received in the audit division, the auditor's name, date that the audit was completed, the date that the A-2 letter was sent out, the address of the company, whether or not waivers for 1917 are on file, and, if so, the date they expire, and whether or not the waivers for 1919 are on file, and, if so, the date that they expire.

I offer that exhibit.

I would call attention, in connection with that exhibit to the fact that in the case of some of these companies what appears to be an unaccountable lapse of time between the time the case is finished in the engineering division and the time it is received in the audit division occurs.

In the case of the Anconda Copper Co. the report was made and forwarded on the 26th of January, 1924, and it was received in the audit division on the 30th of June, 1924.

In the case of the Champion Copper Co., the report was completed in the engineering division and forwarded on the 9th of May, 1924, and received in the audit division on the 28th of November, 1924.

In the case of the Chino Copper Co. the report was completed in the engineering division on the 24th of September, 1923, and received in the audit division on the 16th of April, 1924.

The CHAIRMAN. Are there any steps which these go through?

Mr. MANSON. There is probably an explanation of this, but I do not know what it is.

The CHAIRMAN. You do not know of any steps that they take before they reach audit?

Mr. MANSON. No. I do not mean to say that there is not a proper explanation for it, but I simply am calling the committee's attention to it.

The CHAIRMAN. Mr. Nash, could you tell us why that is?

Mr. NASH. Mr. Chairman, when these valuations are completed, the cases are returned to what we call our records division. They are held in the records division until there is an opening in the audit division, to put them out into the machine for audit. I think the dates that are enumerated in this column are the dates that they are assigned from the records division to the audit division for audit, and assigned to an auditor.

The CHAIRMAN. In other words, these are held up, after the engineers are through with them, until you can get a vacancy in the audit division to take care of them?

Mr. NASH. Yes, sir.

The CHAIRMAN. No matter how important they are, as far as the statute of limitations is concerned, or otherwise.

Mr. NASH. There is a memorandum on top of the files that gives the particulars as to the status of the cases, and if it looks as though a case can not be gotten to audit before the statute of limitations expires, then a letter has to be written to the taxpayer asking for a waiver. There is what we call a flag on every case that the statute is running on, so that it is not lost sight of.

Senator ERNST. A danger signal?

Mr. NASH. Yes, sir.

Senator ERNST. I move we adjourn, Mr. Chairman, it is 12 o'clock.

Mr. MANSON. Let me place this in the record.

Senator ERNST. Put them all in. There is nobody objecting to what you have to offer.

Mr. MANSON. Exhibits L-1 to L-5 are graphic illustrations of the provisional valuation, the revaluation, and other valuation data, comparing these valuations to stock prices, convertible bond prices, and other data, reflecting the value of the five properties.

The CHAIRMAN. I wish you would bring in to-morrow a computation of the aggregate difference in taxes based on the valuations, provisional and final, so that we can get a picture of how it affects the Treasury Department and the copper industry as a whole.

I wish you would also bring a copy of one of these assessment letters and put that in the record.

Mr. MANSON. Yes; I will do that.

The CHAIRMAN. I would like to see what those letters look like.

Mr. MANSON. Yes.

The CHAIRMAN. We will adjourn until to-morrow morning at 10.30 o'clock, Mr. Manson, if you are through.

Mr. MANSON. I want to offer this Exhibit F, which is an explanation of a matter which I read from the memorandum of Mr. Grimes, of July 25, 1922. It furnishes hypothetical cases, which illustrate the errors to which he calls attention in the report, beginning on page 6. That is just an attempt to clear up his technical language.

(The exhibits referred to by Mr. Manson in the matter of copper valuations and introduced by him, are as follows:)

EXHIBITS

VALUATION OF COPPER MINES

The first valuation of copper mines was made late in 1919. These valuations were hurriedly made and were marked "provisional valuations." Subsequent revaluation by the metal section of the engineering division of the Income Tax Unit discloses that the original valuations placed upon the revalued property were grossly excessive.

For depletion purposes

	As to Mar. 1, 1913	As to Jan. 1, 1919
Original valuations.....	\$1,750,024,787	\$1,456,327,002
Revised valuations.....	530,217,893	323,707,404
Difference.....	1,219,806,894	1,132,619,598
Per cent original to revised.....	330	449.9

A summary showing the original and revised valuations for the purpose of determining invested capital as of date of acquisition and as of January 1, 1919, and for the purpose of determining depletion as of March 1, 1913, and as of January 1, 1919, is shown in Exhibit A.

Exhibit A also shows the difference in the amount of each of these valuations and the percentage of difference.

Exhibit B-1 to B-4 show the analysis of the original and revaluations of four companies. These exhibits show the valuation methods and the factors used in making the two valuations of these properties and the effect upon the taxes for 1917, 1918, and 1919.

NEW VALUATIONS FOR 1919 AND SUBSEQUENT YEARS ONLY

The new valuations have been ordered to be applied to taxes for the year 1919 and subsequent years. So far as appears from the record, the tax upon these copper companies, based upon the excessive provisional valuations is to be permitted to stand. I am informed that the difference in tax for the years prior to 1919 is about \$60,000,000. In other words, these companies have escaped about \$60,000,000 of tax due to the excessive valuations of their properties for the purposes of invested capital and depletion.

GENERAL SUBJECT

This whole subject is briefly and comprehensively covered by the report of Mr. Edward T. Wright, valuation engineer for this committee. This report is approved by the chief engineer, Mr. Parker, and it has my approval. I offer it as Exhibit C.

The fact that the valuations of copper mines were grossly excessive and contained gross errors was called to the attention of the commissioner by a memorandum prepared by Mr. Grimes and forwarded through his chief, Mr. Fay. This memorandum is dated January 7, 1922. It is offered as Exhibit D.

Mr. Grimes stated that the solicitor had held that these properties could be revalued. The solicitor's ruling referred to by Mr. Grimes is dated April 13, 1922. For some reason this ruling has never been published. We offer this ruling as Exhibit G.

This was followed by another memorandum by Mr. Grimes dated July 25, 1922, which is offered as Exhibit E.

Read pages 3 and 5-8.

That the committee may more clearly understand the statement of gross errors, contained in Exhibit E, beginning on page 5, I have asked Mr. Wright to prepare a statement of hypothetical cases illustrating Mr. Grimes' statements. Read Exhibit F.

On December 11, 1922, the commissioner, by an order approved by the Secretary of the Treasury, ordered a revaluation to be applied to the 1919 and subsequent years' taxes. Read Exhibit H.

The work proceeded under this order, but on November 28, 1924, the deputy commissioner in charge of the Income Tax Unit, Mr. J. G. Bright, by a memorandum to the solicitor, requested another opinion from the solicitor as to the right of the commissioner to reopen these valuations. This memorandum is on a letter head of the engineering division and bears the initials of Mr. Greenidge. Read Exhibit I.

On December 5, 1924, Mr. Grimes, chief of the metal valuation section, after referring to the memorandum, Exhibit I, stated in a memorandum to Mr. Parker: "At the present time the 1919 returns of seven copper mining companies are held in the metals valuation section under instructions from the head of the engineering division, until such time as an answer to the above memorandum is received from the Solicitor of Internal Revenue." Offer Exhibit J.

Exhibit K shows the date upon which each revaluation was completed, the date the report was forwarded from the engineering to the auditing division, the date it was received there, the name of the auditor to whom it was assigned, the date the audit was completed, the date the A-2 letter was sent out, and whether waivers are on file and if so the date of their expiration. Read from page 3 of memorandum attached to Exhibit K.

Exhibits L-1 to 5 show graphically the provisional valuations and the revaluations as of March 1, 1913, compared with the average price of the stock and other data as to value in the case of five companies.

EXHIBIT A

Record of copper mining revaluations

1919 A2 letters sent to taxpayer		Invested capital					
		As of date of acquisition			As of Jan. 1, 1919		
		Original	Revised	Difference	Original	Revised	Difference
	1. Vein mines and other underground mines with ore deposits comparable to veins:						
Yes	Amazonda Copper Mining Co.	\$135,825,197	\$135,825,197		\$76,283,320	\$76,283,320	
No	Kennecott Copper Co.	31,823,000	11,591,353	\$20,231,647	11,964,499		\$11,964,499
No	Cerie DePasco Copper Corporation	31,523,687	21,710,216	9,813,471	21,027,913	13,326,629	7,701,284
Protest A2	North Butte Mining Co.	7,517,174	7,517,174		817,461	817,461	
(?)							
Closed	Davis Daly Copper Co.	(a)	(a)		(a)	(a)	
Closed	Old Dominion Co.	6,814,061	6,814,061		6,450,383	6,450,383	
(?)	Penn Mining Co.	1,324,333	274,096	1,050,237	859,687	177,931	681,756
Closed	Calaveras Copper Co.	629,313	629,313		489,818	489,818	
Closed	Consolidated Arizona Smelting Co.	258,871	258,871		124,157	124,157	
Bankrupt	East Butte Copper Mining Co.	1,000,000	850,000	150,000	734,216	460,586	273,630
No	Pittsmt Copper Co.	2,613,273	2,613,273		1,560,708	1,560,708	
(?)	Ellamar Mining Co.	(a)	(a)		(a)	(a)	
Closed	Iron Cap Copper Co., discovery	1,000,007	1,000,007		820,712	820,712	
(?)	Magma Copper Co.	597,241	597,241		426,278	426,278	
Closed	First National Copper Co. (Balakiala Cons. Copper Co.)	1,936,977	1,936,977		1,243,118	1,243,118	
(?)	Granby Consolidated Mining and Smelting Co.	(a)	(a)		(a)	(a)	
Closed	Gray Eagle Copper Co.	721,250	721,250		721,250	721,250	
Closed	Arizona United Mining Co.	(a)	(a)		(a)	(a)	
Closed	Arizona Commercial Mining Co.	(a)	(a)		(a)	(a)	
(?)	Eighty-Five Mining Co.	(a)	(a)		(a)	(a)	
	Total values revised	65,671,020	34,425,665	31,245,355	34,586,315	13,955,146	20,621,169
	Total values not revised	157,913,364	157,913,364		88,937,205	88,937,205	
	Total revised values only; no originals; no revaluation	223,584,384	192,339,029	31,245,355	123,523,520	102,902,351	20,621,169
	2. Open Pit and Underground porphyry mines:						
Yes	Utah Copper Co.	31,488,280	23,085,152	8,403,128	27,353,892	17,281,917	10,071,975
Yes	Chino Copper Co.	13,252,015	2,134,817	11,117,198	11,407,709	1,680,367	9,727,342
Yes	Nevada Consolidated Copper Co.	8,045,820	5,920,820	2,125,000	5,712,663	4,203,877	1,508,786
Yes	Ray Consolidated Copper Co.	13,467,826	13,467,826		10,814,970	10,814,970	
No	Inspiration Cons. Copper Co.	68,311,134	13,456,168	54,854,966	54,943,064	11,636,681	43,306,383
Yes	Miami Copper Co.	13,569,285	1,512,804	12,056,481	7,030,791	784,536	6,246,255
No	New Cornelia Copper Co.	12,935,897	7,848,165	5,087,732	12,052,221	3,322,311	5,729,447

Record of copper mining revaluations—Continued

1919 A2 letters sent to taxpayer		Invested capital					
		As of date of acquisition			As of Jan. 1, 1919		
		Original	Revised	Difference	Original	Revised	Difference
	2. Open Pit and Underground porphyry mine:—Continued						
No	Braden Copper Co.	(a)	(f) \$27,162,893		(a)	(f) \$25,570,074	
Closed	Consolidated Copper Mines Co. (Giroux Cons. Mng. Co.)	(a)			(a)		
Yes	Chile Copper Co.	\$96,595,389	82,397,137	\$14,198,252	\$94,905,882	78,274,836	\$16,631,046
Yes	Porphyry Cons. Copper Co. (Porphyry Cop. Co.)	(a)	(a)		(a)	(a)	
(?)	Greene Cananea Copper Co.	(a)	(a)		(a)	(a)	
Closed	Ohio Copper Co.	811,643	811,643		698,927	698,927	
(?)	Democrata Canama Copper & Iron Co.	235,603	235,603		84,881	84,881	
	Total values revised	244,197,820	136,355,063	107,842,757	213,406,262	120,185,028	93,221,234
	Total values not revised	14,515,072	14,515,072		11,598,778	11,598,778	
	Total	258,712,892	150,870,135	107,842,757	225,005,040	131,783,806	93,221,234
	Revised values only, no originals		27,162,893			25,570,074	
	No revaluation		27,162,893			25,570,074	
	Total	258,712,892	178,033,028	107,842,757	225,005,040	157,353,880	93,221,234
	3. Limestone replacement type of mines:						
No	Phelps Dodge Corporation	62,492,904	29,162,314	33,330,590	38,215,264	18,363,481	19,851,783
(?)	Calumet & Arizona Mining Co.	27,507,778	27,507,778		20,848,175	20,848,175	
(?)	Shattuck Arizona Copper Co.	3,022,500	3,022,500		1,074,360	1,074,360	
Closed	Mammoth Mining Co.	863,221	863,221		531,063	531,063	
(?)	Estate of Thomas Higgins	(a)	(a)		(a)	(a)	
(?)	New Planet Copper Mining Co.	(a)	(a)		(a)	(a)	
No	United States Smelting, Refining & Mining Co.	7,380,880	7,380,880		908,398	908,398	
No	Utah Consolidated Mining Co.	2,178,854	1,434,165	744,689	460,363	39,524	420,839
Closed	Utah Metal & Tunnel Co.	(a)	(a)		(a)	(a)	
	Total values revised	64,671,758	30,596,479	34,075,279	38,675,627	18,403,005	20,272,622
	Total values not revised	38,774,379	38,774,379		23,361,996	23,361,996	
	Total	103,446,137	69,370,858	34,075,279	62,037,623	41,765,001	20,272,622
	Revised values only, no original		69,370,858			41,765,001	
	No revaluations						
	Total	103,446,137	69,370,858	34,075,279	62,037,623	41,765,001	20,272,622
	4. Mines with massive lenticular ore deposits:						
	United Verde Copper Co.	26,500,000	26,500,000		13,176,201	13,176,201	
(?)	United Verde Extension Copper Co.	(a)	(a)		(a)	(a)	
(?)	Arizona Copper Co. (Ltd.)	2,497,565	2,497,565		1,432,692	1,413,185	19,507

Closed	Engels Copper Mining Co.	(a)	(a)		(a)	(a)	
Closed	Mountain Copper Co. (Ltd.)	(a)	(a)		(a)	(a)	
Closed	Tennessee Copper & Chemical Corporation	14,800,000	14,800,000		12,620,080	12,620,080	
No.	Ducktown Sulphur, Copper & Iron Co.	(a)	350,000		(a)	86,725	
(?)	Island Copper Co. of California	177,255	138,562	38,693	70,639	31,946	38,693
	Total, values revised	177,255	138,562	38,693	1,503,331	1,445,131	58,200
	Total, values not revised	43,797,565	43,797,565		25,796,281	25,796,281	
	Total	43,974,820	43,936,127	38,693	27,299,612	27,241,412	58,200
	Revised values only, no original		350,000			86,725	
	No revaluations						
	Total	43,974,820	44,286,127	38,693	27,299,612	27,328,137	58,200
	5. Mines with contact metamorphic deposits:						
(?)	Gila Copper Sulphide Co.	807,508	807,508		554,930	554,930	
(?)	Great Western Copper Co.	(a)	(a)		(a)	(a)	
Closed	Mason Valley Mines Co.	921,496	921,496		629,204	629,204	
	Total, values revised						
	Total, values not revised	1,729,004	1,729,004		1,184,134	1,184,134	
	Total	1,729,004	1,729,004		1,184,134	1,184,134	
	6. Lake Superior Native Copper Mines:						
No.	Calumet & Hecla Mining Co.	(a)	(a)		(a)	(a)	
Closed	Ahmeek Mining Co.	500,000	500,000		58,739	58,739	
(?)	Allouez Mining Co.	(a)	(a)		(a)	(a)	
Closed	Isle Royal Copper Co.	6,456,931	1,956,931	4,500,000	4,362,446	1,345,055	3,017,391
Closed	La Salle Copper Co.	(a)	(a)		(a)	(a)	
Closed	Osceola Consolidated Copper Co.	1,540,532	978,532	562,000	678,108	448,442	229,666
(?)	Superior Copper Co.	(a)	(a)		(a)	(a)	
Closed	Centennial Copper Mining Co.	(a)	(a)		(a)	(a)	
Closed	White Pine Copper Co.	(a)	(a)		(a)	(a)	
No tax	Quincy Mining Co.	4,255,838	4,255,838		2,658,477	2,658,477	
No.	Mohawk Mining Co.	(a)	450,000		(a)	246,456	
No.	Wolverine Copper Mining Co.	1,375,000	731,819	643,181	825,766	113,325	712,441
No.	Champion Copper Co.	(a)	(a)		(a)	(a)	
No.	Copper Range Co.	(a)	14,461,200		(a)	13,489,965	
Closed	Franklin Mining Co.	(a)	(a)		(a)	(a)	
(?)	Massachusetts Consolidated Mining Co.	(a)	(a)		(a)	(a)	
	Total values revised	9,372,463	3,667,282	5,705,181	5,866,320	1,906,822	3,959,498
	Total values not revised	4,755,838	4,755,838		2,717,216	2,717,216	
	Total	14,128,301	8,423,120	5,705,181	8,583,536	4,624,038	3,959,498
	Revised values only, no original		14,911,200			13,736,421	
	No revaluations						
	Total	14,128,301	23,334,320	5,705,181	8,583,536	18,360,459	3,959,498
	7. Copper tailings:						
No.	Colusa Parrot Mining & Smelting Co.	(c)	(c)		(c)	(c)	
	Total values revised						

Record of copper mining revaluations—Continued

RECAPITULATION

	Invested capital							
	As of date of acquisition				As of Jan. 1, 1919			
	Original	Revised	Difference	Percentage original to revaluation	Original	Revised	Difference	Percentage original to revaluation
CASES WITH VALUES REVISED								
1. Vein mines.....	\$65,671,920	\$34,425,665	\$31,245,355	190.765	\$34,586,315	\$13,965,146	\$20,621,169	247.661
2. Porphyry copper mines.....	244,197,820	136,355,063	107,842,757	179.090	213,406,262	120,185,028	93,221,234	177.564
3. Limestone replacements.....	64,671,758	30,528,479	34,075,279	211.371	38,675,627	18,403,005	20,272,622	210.159
4. Massive lenticular deposits.....	177,255	138,562	38,693	127.925	1,503,331	1,445,131	58,200	194.030
5. See C. M. Deposits.....								
6. Lake Superior copper mines.....	9,372,463	3,667,282	5,705,181	255.569	5,866,320	1,906,822	3,959,498	307.649
7. Copper tailings.....								
Total.....	384,090,316	205,183,051	178,907,265	187.194	294,037,855	155,905,132	138,132,723	212.867
CASES WITH VALUES NOT REVISED								
1. Vein mines.....	157,913,364	157,913,364			88,937,205	88,937,205		
2. Porphyry copper mines.....	14,515,072	14,515,072			11,598,778	11,598,778		
3. Limestone replacements.....	38,774,379	38,774,379			23,361,996	23,361,996		
4. Massive lenticular deposits.....	43,797,565	43,797,565			25,796,281	25,796,281		
5. Contact metamorphic deposits.....	1,729,004	1,729,004			1,184,134	1,184,134		
6. Lake Superior copper mines.....	4,755,838	4,755,838			2,717,216	2,717,216		
Total.....	261,485,222	261,485,222			153,595,610	153,595,610		
REVISED VALUES ONLY, NO ORIGINAL								
2. Porphyry copper mines.....		27,162,893				25,570,074		
4. Massive lenticular deposits.....		350,000				86,725		
6. Lake Superior copper mines.....		14,911,200				13,736,421		
Total.....		42,424,093				39,393,220		
SUMMARY								
Cases with values, revised.....	\$384,090,316	\$205,183,051	\$178,907,265	187.194	\$294,037,855	\$155,905,132	\$138,132,723	188.601
Cases with values, not revised.....	261,485,222	261,485,222			153,595,610	153,595,610		
Revised values only, no originals.....		42,424,093				39,393,220		
Grand total.....	645,575,538	509,092,366	178,907,265	126.826	447,633,465	348,593,962	138,132,723	128.301

1919 A2 letters sent to taxpayer		Invested capital as of Mar. 1, 1913 (E)					Value for depletion					Remarks
		Original	Risk rate	Revised	Risk rate	Difference	As of Jan. 1, 1919			Approximate Mar. 1, 1913, stock quotation at value		
							Original	Revised	Difference			
	1. Vein mines, and other underground mines with ore deposits comparable to veins:											
Yes.....	Anaconda Copper Mining Co.	\$188,713,192	8	\$54,865,822	10	\$133,847,370	\$129,276,845	\$17,783,114	\$111,493,731	\$126,060,974	(E) Zinc discovery Jan. 1, 1919, \$7,283,240; \$4,555,733 value for tailings disallowed; not final.	
No.....	Kennecott Copper Co.....	31,823,000	8	11,591,353	10	20,231,647	11,964,499	None.	11,964,499	27,663,286	(E) Acquisition May 27, 1915.	
No.....	Cerie DePasco Copper Corporation.	25,067,240	(*)	25,067,240	(*)	None.	19,398,443	19,398,443	None.	21,771,425	(E) July 31, 1917, liquidation of subsidiary companies.	
Protest A2 (?)	North Butte Mining Co.....	5,735,587	8	3,683,490	10	2,052,097	2,103,581	725,831	1,377,750	10,306,410		
Closed.....	Davis Daly Copper Co.....	4,015,000	8	2,537,626	8	1,477,374	3,540,227	2,115,778	1,424,449	654,488	(a) Determined by audit.	
Closed.....	Old Dominion Co.....	10,207,701	8	10,207,701	8	None.	9,662,898	9,662,898	None.	13,052,172	(E) Valuation 1917.	
(?)	Penn Mining Co.....	2,478,642	8	1,041,500	10	1,437,142	1,895,393	623,200	1,272,193			
Closed.....	Calaveras Copper Co.....	629,313	(*)	141,938	(*)	487,375	489,818	None.	489,818	1,925,216	Value based on cost of development after Nov. 1, 1913.	
Bankrupt..	Consolidated Arizona Smelting Co.	258,871	8	258,871	(*)	None.	124,157	124,157	None.	1,859,641	Not revalued; company bankrupt and dissolved.	
No.....	East Butte Copper Mining Co.	272,000	8	211,617	8	60,383	69,934	91,798	21,864	6,521,448		
(?)	Pittsmt Copper Co.....	4,432,000	8	2,516,868	8	1,915,132	3,123,725	1,355,640	1,768,085			
Closed.....	Ellamar Mining Co.....	337,672	9	106,062	10	231,610	86,640	32,823	53,817		(a) Determined by audit.	
(?)	Iron Cap Copper Co.....	1,006,067	8	1,000,007	8	None.....	820,712	820,712	None.....	337,286		
(?)	Discovery.....	1,562,427		1,562,427		None.....	1,427,542	1,427,542	None.....	2,425,165	Depletion on cost; discovery Jan. 1, 1916.	
(?)	Magma Copper Co.....	9,034,798	8	3,816,779	10	5,218,019	7,145,853	2,129,692	5,016,161	646,193		
Closed.....	First National Copper Co. (Balaklala Cons. Copper Co.)	1,502,608	(*)	1,502,608	(*)	None.....	1,243,118	1,243,118	None.....	1,611,222	Based on depleted cost, stock quotation, and assessed value.	
(?)	Granby Consolidated Mining and Smelting Co.	(a) (d)	(*)	(a) (d)	(*)		(a) (d)	(a) (d)			(a) Determined by audit. (d) No valuation made.	

¹ Earnings estimated, using gravity concentration.

² Earnings estimated, using flotation concentration.

³ No analytical appraisal made.

Record of copper mining revaluations—Continued

1919 A2 letters sent to taxpayer		Invested capital as of Mar. 1, 1913 (E)					Value for depletion				Remarks
		Original	Risk rate	Revised	Risk rate	Difference	As of Jan. 1, 1919			Approximate Mar. 1, 1913, stock quotation at value	
			Original		Revised		Difference				
	1. Vein mines, and other underground mines with ore deposits comparable to veins—Con.										
Closed	Gray Eagle Copper Co.	\$721,250		\$721,250		None	\$721,250	\$721,250	None		(a) Determined by audit, no valuation made.
Closed	Arizona United Mining Co.	84,116	10	84,116	10	None	6,442	6,442	None	(a) Determined by audit.	
Closed	Arizona Commercial Mining Co.	1,538,208	8	495,476	15	\$1,042,732	1,121,261	149,294	\$971,967		
(?)	Eighty-Five Mining Co.	506,213	8	506,213	8	None	176,120	176,120	None		(a) Determined by audit; sold in 1920 for \$1,030,000.
	Total values revised	249,009,412		81,008,521		168,000,881	160,817,776	25,007,179	135,810,606		
	Total values not revised	40,930,433		40,930,433		None	33,580,682	33,580,682			
	Revised values only; no originals; no revaluation.	289,939,845		121,938,964		168,000,881	194,398,458	58,587,852	135,810,606		
	2. Open Pit and Underground porphyry mines:										
Yes	Utah Copper Co.	337,300,000	7	74,591,783	7	262,708,217	294,582,561	49,142,729	245,439,832	\$81,493,300	
Yes	Chino Copper Co.	98,274,374	7	16,498,099	8	79,776,275	83,743,126	7,902,059	75,841,067	33,875,218	
Yes	Nevada Consolidated Copper Co.	91,676,196	7	18,899,060	8	72,777,138	77,117,648	8,119,842	67,997,806	31,814,902	
Yes	Ray Consolidated Copper Co.	93,677,234	7	19,520,126	8	74,357,108	82,448,899	11,262,933	71,185,966	31,665,499	
No	Inspiration Cons. Copper Co.	92,134,730	7	17,292,074	10	74,842,656	81,165,604	6,924,348	74,240,656	14,017,314	(E) Keystone, \$3,435,930—1915.
Yes	Miami Copper Co.	25,287,721	7	11,518,058	8	13,769,663	17,150,880	4,635,367	12,515,513	16,110,242	(E) Acquisition Ajo Mine Aug. 1, 1917.
No	New Cornelia Copper Co.	29,206,107	7	7,848,165	7	21,417,942	27,740,756	6,322,814	21,417,942	3,500,000	(a) Determined by audit.
No	Braden Copper Co.	159,811,000	8	23,706,988	10	136,104,012	154,756,449	19,386,611	135,369,838	45,000,900	(f) cost of stock Dec. 31, 1918.

Closed.....	Consolidated Copper Mines Co. (Giroux Cons. Ming. Co.)	2,775,572	(¹)		(¹)	2,521,029					(a) Determined by audit.
Yes.....	Chile Copper Co.	224,116,595	7	82,397,137	10	141,719,458	219,994,294	78,274,836	141,719,458	100,000,000	(E) April, 1913.
Yes.....	Porphyry Cons. Copper Co. (Porphyry Cop. Co.)	(a)	(¹)	(a)	(¹)		(a)	(a)			(a) Determined by audit.
(¹).....	Greene Cananco Copper Co.	(d)	(¹)	(d)	(¹)		(d)	(d)			(a) Determined by audit; (d) foreign corporation; no value made.
Closed. (²)	Ohio Copper Co.	511,643	7	811,643	7	None.	698,927	698,927	None.		(E) Acquisition cost 1916.
	Democratia Canania Copper & Iron Co.	1,659,101	10	658,048	10	401,053	324,202	89,983	234,219		(³)
	Total values revised.....	1,150,003,060		272,729,538		877,873,522	1,039,024,419	193,062,122	845,962,297		
	Total values not revised.....	811,643		811,643		None.	698,927	698,927			
	Total.....	1,151,414,703		273,541,181		877,873,522	1,039,723,346	193,761,049	845,962,297		
	Revised values only, no originals.....										
	No revaluation.....	2,775,572					2,521,029				
	Total.....	1,154,190,275		273,541,181		877,872,522	1,042,244,375	193,761,049	845,962,297		
3. Limestone replacement type of mines:											
No. (²)	Phelps Dodge Corporation.	121,085,000	(⁴)	47,735,800	(⁴)	73,349,200	90,300,786	27,664,304	62,642,482	71,889,256	(E) Superior & Pittsburg, Feb. 1916, Cost on reorganization, \$19,703,619. Valuation held up. Includes tailings and undeveloped claims.
	Calumet & Arizona Mining Co.	27,462,755	10	26,675,664	10	737,091	21,551,345	20,989,076	562,269	23,355,287	
Closed. (²)	Shattuck Arizona Copper Co. Mammoth Mining Co.	5,721,930 276,318	8 (³)	 75,318	(⁶) (³)	 None.	2,580,911 164,605	 164,605	 None.	7,859,972	(a) Determined by audit. Do.
Closed. (²)	Estate of Thomas Higgins	600,000	(³)	600,000	(³)	None.	377,108	377,108	None.		
Closed. (²)	New Planet Copper Mining Co.	250,000	(³)	45,000	(³)	205,000	202,970	None.	202,970		
No. (²)	United States Smelting, Refining & Mining Co.	9,053,761	8	7,183,847	8, 12	1,869,914	2,892,711	2,232,238	660,473		
No. (²)	Utah Consolidated Mining Co.	3,179,757	8	2,286,398	10	893,559	636,609	400,777	235,832		
Closed. (²)	Utah Metal & Tunnel Co.	(b)	(³)	(b)	(³)		(b)	(b)			(E) 1914; (a) determined by audit; (b) no valuations made.
	Total values revised.....	161,051,273		83,926,709		77,104,564	115,590,421	286,395	64,304,026		(⁵)
	Total values not revised.....	876,318		876,318			541,713	541,713			
	Total.....	161,907,591		84,803,027		77,104,564	116,132,134	51,828,108	64,304,026		

¹ No analytical appraisals made.

² Approximately.

³ Original 7 and 8 per cent revaluations not completed.

Record of copper mining revaluations—Continued

1919 A2 letters sent to taxpayer	Invested capital as of Mar. 1, 1913 (E)					Value for depletion				Remarks					
	Original	Risk rate	Revised	Risk rate	Difference	As of Jan. 1, 1919			Approximate Mar. 1, 1913, stock quotation at value						
						Original	Revised	Difference							
	3. Limestone replacement type of mines—Continued														
	Revised values only, no original.														
	No revaluations.....					\$5,721,930				\$2,580,911					
	Total.....					167,629,521	\$84,803,027		\$77,104,564	118,713,045	\$51,828,108	\$64,304,026			
	4. Mines with massive lenticular ore deposits:														
	United Verde Copper Co.....					41,546,687	8	19,180,782	8	22,365,905	29,349,620	9,237,956	20,111,664	\$23,000,000	
	United Verde Extension Copper Co.					31,600,000	7	31,600,000	10	None.	26,097,822	26,097,822	None.	50,343,332	(a) Determined by audit (E) Discovery value Dec. 31, 1916.
	Arizona Copper Co. (Ltd.).....					13,172,000	8	8,844,661	(1)	4,327,339	9,582,307	5,578,359	4,003,948	13,653,407	
	Engels Copper Mining Co.....					3,508,125	8	330,925	10	3,177,220	2,941,672	None.	2,941,672		(a) Determined by audit.
	Mountain Copper Co. (Ltd.).....					1,105,697	8	775,657	8	330,040	591,441	560,113	31,328	8,686,111	Do.
	Tennessee Copper & Chemical Corporation.					14,800,000	8	14,800,000	(2)	None.	12,620,080	12,620,080	None.	7,031,042	(E) Acquisition Value Jan. 1, 1916, \$16 per share.
	Ducktown Sulphur, Copper & Iron Co.					940,500		940,500	8	None.	908,041	908,041	None.	2,735,000	(a) Determined by audit.
	Island Copper Co. of California.					177,255	8	128,562	10	38,693	70,639	31,946	38,693		(E) Acquisition Nov. 1915.
	Total, values revised.....					59,509,784		29,270,557		30,239,197	42,535,679	15,408,374	27,127,305		
	Total, values not revised.....					47,340,500		47,340,500			39,625,943	39,625,943			(2) (5) (9)
	Total.....					106,850,284		76,611,087		30,239,197	82,161,622	55,034,317	27,127,305		
	Revised values only, no original.														
	No revaluations.....														
	Total.....					106,850,284		76,611,087		30,239,197	82,161,622	55,034,317	27,127,305		

5. Mines with contact metamorphic deposits:										
(?)	Gila Copper Sulphide Co.	867,708	(1)	807,508	(1)	None.	754,936	554,990	None.	Mine in development stage.
(?)	Great Western Copper Co.	614,481	8	284,811	10	329,673	432,662	161,530	268,132	(a) Determined by audit.
Closed	Mason Valley Mines Co.	1,098,339	7	1,098,339	8	None.	830,181	830,181	None.	2,627,115
	Total, values revised	614,481		284,811		329,673	432,662	161,530	268,132	
	Total, values not revised	1,965,838		1,905,838			1,375,111	1,375,111		
	Total	2,520,322		2,190,649		329,673	1,807,773	1,539,641	268,132	
6. Lake Superior Native Copper Mines:										
No.	Calumet & Hecla Mining Co.	53,784,145	8	15,341,221	8	18,442,944	25,961,449	9,322,169	16,639,280	26,000,000 (a) Determined by audit.
Closed	Ahmeek Mining Co.	20,719,343	8	14,497,340	8	6,222,063	16,592,597	10,809,722	5,782,875	
(?)	Allouez Mining Co.	4,901,923	8	1,365,647	8	3,536,276	3,875,955	632,502	3,223,593	3,704,436 Do.
Closed	Isle Royal Copper Co.	5,392,116	8	2,615,374	8	2,906,742	4,277,528	1,574,029	2,703,499	3,192,257 Do.
Closed	La Salle Copper Co.	197,282	8	67,174	8	540,108	414,035	None.	414,035	1,122,736 Do.
Closed	Oscoda Consolidated Copper Co.	12,753,927	8	3,768,769	10	8,985,138	8,747,582	1,350,370	7,397,212	6,746,592
(?)	Superior Copper Co.	583,929	7	None.	(3)	None.	None.	None.	None.	2,875,216 No revaluation necessary; value depleted Dec. 31, 1918. (a) Determined by audit.
Closed	Centennial Copper Mining Co.	1,480,658	8	103,768	8	1,376,890	1,279,757	None.	1,279,757	1,749,900 (a) Determined by audit.
Closed	White Pine Copper Co.	1,065,205	8	346,453	10	658,752	654,875	41,209	613,666	Do.
No tax	Quincy Mining Co.	6,510,988	8	4,467,341	8	2,043,647	3,840,169	2,165,057	1,675,082	6,366,722 Do.
No	Mohawk Mining Co.	9,188,936	8	3,218,032	8	5,970,904	6,874,768	1,531,723	5,343,045	4,115,184 Do.
No	Wolverine Copper Mining Co.	2,658,260	7	1,075,474	8	1,622,786	1,388,404	191,971	1,196,523	3,271,966 Do.
No	Champion Copper Co.	20,439,708	8	13,686,000	8	6,753,708	15,547,180	9,467,501	6,079,679	(E) Baltic \$4,146,227 May, 1917.
No	Copper Range Co.	7,592,039	8	2,081,312	8	5,510,727	6,938,969	1,518,979	5,419,990	13,773,826 (a) Determined by audit.
Closed	Franklin Mining Co.	144,598		None.		144,598	122,988	None.	122,989	Do.
(?)	Massachusetts Consolidated Mining Co.	1,490,150	8	351,674	8	1,138,476	1,215,345	153,991	1,061,354	(a) Determined by audit.
	Total values revised	128,839,298		62,985,599		65,853,699	97,731,692	38,778,813	58,952,879	(?)
	Total values not revised									
	Total	128,839,298		62,985,599		65,853,699	97,731,692	38,778,813	58,952,879	
	Revised values only, no original									
	No revaluations	583,929								
	Total	129,423,227		62,985,599		65,853,699	97,731,692	38,778,813	58,952,879	
7. Copper tailings:										
No.	Colusa Parrot Mining & Smelting Co.	417,476	7	12,118	7	405,358	194,353	None.	194,353	(c) Tailings carry no cost on books.
	Total values revised	417,476		12,118		405,358	194,353	None.	194,353	

¹ No analytical appraisal made.
² Book value, 1916.

* Earnings estimated on ores.
 * Earnings estimated on slags.

- Record of copper mining revaluations—Continued
RECAPITULATION

	Invested capital as of Mar. 1, 1913				Value for depletion as of Jan. 1, 1919			
	Original	Revised	Difference	Percentage original to revaluation	Original	Revised	Difference	Percentage original to revaluation
CASES WITH VALUES REVISED								
1. Vein mines.....	\$249,069,412	\$81,008,531	\$168,000,881	307.387	\$160,817,776	\$25,007,170	\$135,810,606	643.088
2. Porphyry copper mines.....	1,150,603,060	272,729,538	877,873,522	421.900	1,039,024,419	193,062,122	845,962,297	538.182
3. Limestone replacements.....	181,031,273	83,926,709	77,104,564	191.871	115,590,421	51,286,395	64,304,026	225.383
4. Massive lenticular deposits.....	59,509,784	29,270,587	30,239,197	203.310	42,535,679	15,408,374	27,127,305	276.057
5. Contact metamorphic deposits.....	614,484	284,811	329,673	215.751	432,662	164,530	268,132	262.968
6. Lake Superior copper mines.....	128,839,258	62,985,599	65,853,659	204.554	97,731,692	38,778,813	58,952,879	252.024
7. Copper tailings.....	417,476	12,118	405,358	3,445.09	194,353	None.	194,353	-----
Total.....	1,750,024,787	530,217,893	1,219,806,894	330.058	1,456,327,002	323,707,404	1,132,619,598	449.90
CASES WITH VALUES NOT REVISED								
1. Vein mines.....	40,930,433	40,930,433	-----	-----	33,580,682	33,580,682	-----	-----
2. Porphyry copper mines.....	811,643	811,643	-----	-----	698,927	698,927	-----	-----
3. Limestone replacements.....	876,318	876,318	-----	-----	541,713	541,713	-----	-----
4. Massive lenticular deposits.....	47,340,500	47,340,500	-----	-----	39,625,943	39,625,943	-----	-----
5. Contact metamorphic deposits.....	1,905,838	1,905,838	-----	-----	1,375,111	1,375,111	-----	-----
Total.....	91,864,732	91,864,732	-----	-----	75,822,376	75,822,376	-----	-----
NO REVALUATIONS								
2. Porphyry copper mines.....	2,775,572	-----	-----	-----	2,521,029	-----	-----	-----
3. Limestone replacements.....	5,721,930	-----	-----	-----	2,580,911	-----	-----	-----
6. Lake Superior copper mines.....	583,929	-----	-----	-----	-----	-----	-----	-----
Total.....	9,081,431	-----	-----	-----	5,101,940	-----	-----	-----

SUMMARY

Cases with values, revised.....	\$1,750,024,787	\$530,217,893	\$1,219,806,894	330.058	\$1,456,327,002	\$323,707,404	\$1,132,619,598	449.89
Cases with values, not revised.....	91,864,732	91,864,732	-----	-----	75,822,376	75,822,376	-----	-----
No revaluations.....	9,081,431	-----	-----	-----	5,101,940	-----	-----	-----
Grand total.....	1,850,970,950	622,082,625	1,219,806,894	297.545	1,537,251,318	399,529,780	1,132,619,598	384.765

EXHIBIT B
CHINO COPPER

	Provisional	Revised
ANALYSIS OF ANALYTICAL APPRAISAL		
Ore reserves (tons).....	¹ 124,358,689	100,000,000
Grade (per cent).....	² 1.614	1.578
Gross copper content (pounds).....	4,028,229,420	3,156,000,000
Mill recovery (per cent).....		66.03
Smelter recovery (per cent).....		95.00
Combined recovery (per cent).....	75.718	62.728
Total recoverable copper (pounds).....	3,050,094,752	1,979,695,680
Life (years).....	27	40
Gross receipts per ton (plus Au and Ag).....		\$2.97
Gross receipts per pound of copper, all ores.....	\$0.1740	\$0.1492
Cost per ton open-pit ores, excluding stripping.....		\$1.80
Cost per ton underground ores, excluding stripping and development.....		\$2.20
Total cost per pound of copper.....	\$0.06983	
Profit per ton, open-pit.....		\$1.17
Profit per ton, underground.....		\$0.77
Profit per pound of copper (excluding Au and Ag).....	\$0.06417	
Tonnage, open pit, 85.57 per cent.....	(³)	85,570,000
Tonnage, underground, 14.43 per cent.....	(³)	14,430,000
Exp. profit open-pit ores, including add plant and stripping development.....	(⁴)	\$100,116,900
Open-pit deductions (plant additions based on 1913 depreciation rate).....	(⁵)	\$3,236,954
Stripping (85,570,000 at 30 cents less \$906,361).....	(⁶)	\$24,764,639
Net export profit open-pit ores.....	(⁷)	\$72,115,307
Risk rate—both open-pit and underground ores (per cent).....	7.4	8.4
Present worth open-pit ore, Mar. 1, 1913.....	(⁸)	\$19,916,156
Export profit underground ores, excluding development and underground plant.....	(⁹)	\$11,111,100
Development.....	(⁹)	\$5,050,500
Underground plant.....	(⁹)	\$500,000
Net export profit underground ore.....	(⁹)	\$5,560,600
Recoverable gold and silver value.....	\$2,611,532	(⁹)
Present worth underground ore, Mar. 1, 1913.....	(⁹)	\$1,535,676
Total Mar. 1, 1913 value of open-pit and underground ores.....	\$105,274,374	\$21,451,832
Less Mar. 1, 1913 book value stripping and plant.....	\$9,000,000	\$4,953,733
Value of ores only Mar. 1, 1913.....	\$96,274,000	\$16,498,099
Depletion per pound.....	\$0.031564	\$0.00833654
Date of valuation report.....	(⁹)	(⁷)
ANALYSIS OF TAX COMPUTATIONS		
1917 taxes:		
Income tax.....	\$393,812.06	\$457,249.48
Excess-profits tax.....	1,560,239.59	2,471,109.04
Total tax.....	1,954,051.65	2,928,358.52
Net income.....	8,291,611.71	10,259,771.52
1918 taxes:		
Income tax.....	394,256.97	419,885.96
Excess-profits tax.....	427,215.25	818,674.06
War-profits tax.....	207,098.53	864,218.21
Total tax.....	1,028,570.75	2,102,778.23
Net income.....	3,938,840.21	5,200,993.56
1919 taxes:		
Income tax.....	\$ 6,667.02	140,617.03
Excess-profits tax.....	None.	None.
Total tax.....	\$ 6,667.02	140,617.03
Net income.....	\$ 142,828.71	1,482,328.78

¹ Includes ores which, on basis of production rate of revised valuation, will not be mined for over 40 years and would have a negligible value.

² Provisional percentage of copper in ore is based on drill hole assays without allowance for diminution on account of waste mixture. Revised valuation is based on the performance record.

³ Provisional valuation made no segregation of open-pit and underground ores, but lumped these two classes together as one, both as to value and recovery.

⁴ Included in gross receipt per ton.

⁵ P. and E. only.

⁶ Dec. 5, 1919.

⁷ Sept. 18, 1923.

⁸ As computed by taxpayer on return filed.

1620 INVESTIGATION OF BUREAU OF INTERNAL REVENUE

MIAMI COPPER CO.

	Provisional	Revised
ANALYSIS OF ANALYTICAL APPRAISAL		
Ore reserve (tons) Mar. 1, 1913 (statement by consulting engineer of company)	20,626,197	20,626,197
Average grade (per cent). (Estimated recovery 66 per cent early years; 80 per cent later years; average recovery estimated at 75 per cent of 49.6 pounds per ton)	2.48	
Recoverable copper (pounds per ton) from above	37.2	
Expected yield copper per ton (statement by consulting engineer of company)		31.5
Total pounds of recoverable copper (found by multiplying tons of ore in reserve by pounds of recoverable copper per ton)	767,293,528	649,725,205
Selling price per pound of copper	\$0.174	\$0.1492
Estimated cost of production (9.5 cents plus 1.15 cents)	\$0.1065	
Estimated cost of production (statement consulting engineer of company)		\$0.095
Estimated profit per pound (by difference)	\$0.0075	\$0.0542
Total expense gross receipts (649,725,205 × \$0.1492)		\$96,939,001
Total expense future cost, at \$0.095 = \$61,723,894		\$60,166,416
Less prepaid development 1,557,478		482,878
Future plant additions		
Total expected operating profits (difference)		\$36,280,707
Same (767,293,528 × \$0.0075)	\$51,792,313	
Life (estimated years)	15	
Life (consulting engineer of company, producing 1,030,000 tons per year)		20
Risk rate (per cent)	7	8
Mar. 1, 1913, value exp. val. op. profits	\$28,787,721	\$15,975,128
Less plant (Mar. 1, 1913 book value)	\$2,893,578	\$2,899,592
Additional plant reduced to Mar. 1, 1913	\$606,422	
Prepaid development		\$1,557,479
Sum of deductions	\$3,500,000	\$4,457,071
Mar. 1, 1913 value ores only	\$25,287,721	\$11,518,053
Depletion per pound	\$0.032957	\$0.0172758
Date of valuation report	(⁹)	(¹⁰)
ANALYSIS OF TAX COMPUTATIONS		
1917 taxes:		
Income tax	\$285,363.54	\$237,368.22
Excess-profits tax	1,983,555.99	3,525,214.98
Total tax	2,268,919.53	3,762,583.20
Net income	6,746,615.10	7,504,276.38
1918 taxes:		
Income tax	263,490.23	192,727.06
Excess-profits tax	1,269,909.15	2,747,191.72
War-profits tax	904,576.04	903,308.54
Total tax	2,437,975.42	3,843,225.32
Net income	4,438,037.74	5,324,357.68
1919 taxes:		
Income tax	* 168,356.00	206,169.77
Excess-profits tax	None.	449,051.14
Total tax	* 168,356.00	655,220.91
Net income	* 1,864,271.54	2,691,460.32

* As computed by taxpayer on return filed.

⁹ Dec. 4, 1919.

¹⁰ Sept. 5, 1923.

UTAH COPPER CO.

	Provisional	Revised
ANALYSIS OF ANALYTICAL APPRAISAL		
Ore reserves (tons).....	¹² 445,068,075	230,000,000
Grade (per cent copper).....	¹³ 1.3838	¹⁴ 1.346
Recoverable gold and silver, per ton.....		\$0.12
Mill recovery (per cent).....		64.69
Smelter recovery (per cent).....		95.00
Combined recovery (per cent).....	¹⁵ 80.7	61.75
Recoverable copper (pounds per ton).....	22,335	18.62
Total value per ton.....	\$3.63	\$2.59
Total cost, per ton.....	\$1.61	\$1.475
Profit per ton.....	\$2.02	\$1.115
Annual production, tons.....	15,895,300	7,000,000
Life, years.....	28	40
Risk rate (per cent).....	7.4	7.4
Total expected profit as of Mar. 1, 1913.....	\$900,538,000	\$312,600,000
Less: Future stripping cost at 7.5 cents per ton ¹⁶		\$18,512,717
Future plant and equipment cost ¹⁷		\$12,000,000
Total expected operating profit.....	\$900,538,000	\$282,087,282
Present worth, total exp. op. profit Mar. 1, 1913.....	\$337,000,000	\$87,579,075
Less, stripping cost at Mar. 1, 1913.....		\$2,487,282
Plant and equipment.....	20,000,000	\$10,500,000
Value of ores only Mar. 1, 1913.....	\$337,300,000	\$74,591,783
Total recoverable pounds of copper Mar. 1, 1913 reserve.....	9,940,808,767	4,633,600,000
Depletion per pound.....	\$0.03393	\$0.0160288
Date of valuation report.....	(¹⁸)	(¹⁹)
ANALYSIS OF TAX COMPUTATIONS		
1917 taxes:		
Income tax.....	\$1,139,513.67	\$1,200,404.24
Excess-profits tax.....	4,199,410.90	7,406,708.54
Total tax.....	5,338,930.57	8,607,112.78
Net income.....	26,492,528.15	27,373,167.45
1918 taxes:		
Income tax.....	1,154,979.92	1,125,715.57
Excess-profits tax.....	2,159,543.09	3,368,496.93
War-profits tax.....	2,121,968.63	3,934,460.07
Total tax.....	5,436,491.64	8,428,672.57
Net income.....	14,191,874.45	16,969,450.14
1919 taxes:		
Income tax.....	210,189.38	486,835.44
Excess-profits tax.....	None.	None.
Total tax.....	210,189.38	486,835.44
Net income.....	2,716,951.25	5,482,511.87

¹² Includes excessive tonnage of prospective ore, and ore too low grade to be commercially profitable at Mar. 1, 1913.

¹³ Drill hole assays without correction for diminution.

¹⁴ Performance record includes diminution.

¹⁵ Includes oil flotation before it was adopted or installed.

¹⁶ No deduction on provisional valuation for this item.

¹⁷ See deduction from provisional valuation at Mar. 1, 1913.

¹⁸ December, 1918.

¹⁹ June 1, 1923.

INSPIRATION CONSOLIDATED COPPER CO.

	Provisional	Revised
ANALYSIS OF ANALYTICAL APPRAISAL		
Reserves as determined by drilling (tons).....	²⁰ 89,643,000	²⁰ 89,643,000 147,198,610
Loss of ore (tons) (block covering method).....		²⁰ 8,964,300 14,719,861
Recoverable ore (tons).....		²⁰ 80,678,700 132,478,749
Gain in tonnage by dilution (tons).....	²¹ 20	²¹ 17,928,600
Total tonnage to be mined (tons).....	²⁰ 89,643,000	²⁰ 98,607,300 132,478,749
Milling recovery (per cent).....		80
Smelting recovery (per cent).....		96
Milling and smelting recovery (per cent).....	80	78.8
Copper in reserves (pounds).....	2,943,972,200	2,649,574,980
Recoverable copper (pounds).....	2,352,232,320	2,034,874,000
Selling price per pound (cents).....	17.40	14.92
Operating cost per pound (cents).....	9.15	9.5
Operating profit per pound (cents).....	8.25	5.42
Indicated operating profit before adjustment below.....	\$194,059,166.40	\$110,290,171
Plus prepaid development.....		2,250,000
		\$112,540,171
Less plant replacements.....		\$3,600,000
Operating profit.....	\$194,059,166.40	\$108,940,171
Life (years).....	²² 14	²³ 32
Deferment.....	²⁴ 2	²⁵ 2
Combined factor.....		\$0.222740
Present worth.....	\$97,123,038.29	\$24,265,334
Less cost of plant.....	8,905,093.04	6,000,000
Less prepaid development.....		2,250,000
Value of ores only.....	88,217,943.25	16,015,334
Depletion per pound.....	\$0.0376039	\$0.0076704
ANALYSIS OF TAX COMPUTATIONS		
1917 taxes:		
Income tax.....	\$461,093.42	\$541,598.10
Excess-profits tax.....	1,762,837.80	2,850,628.99
Total tax.....	2,213,931.22	3,392,227.09
Net income.....	9,439,028.11	11,878,564.10
1918 taxes:		
Income tax.....	385,761.72	437,136.03
Excess profits tax.....	2,908,905.39	4,300,292.70
War-profits tax.....	1,456,077.31	1,777,106.68
Total tax.....	4,750,744.42	6,514,595.41
Net income.....	7,661,618.23	9,802,214.08
1919 taxes:		
Income tax.....	144,143.24	322,243.29
Excess-profits tax.....	None.	2,341.80
Total tax.....	144,143.24	324,585.09
Net income.....	1,504,810.07	3,348,152.39

²⁰ 1.64 per cent Cu.

²¹ Per cent.

²² Tons.

²³ 1.34 per cent Cu.

²⁴ Present worth factor at 7 per cent and 4 per cent, 0.57801

²⁵ Present worth factor, at 10 per cent and 4 per cent, 0.299816.

²⁶ Present worth factor at 7 per cent, 0.87344.

²⁷ Present worth factor at 10 per cent, 0.826443.

WOLVERINE COPPER MINING CO.

	Provisional	Revised
ANALYSIS OF ANALYTICAL APPRAISAL		
Ore reserves (tons).....	3,800,000	3,811,924
Total recoverable copper (pounds).....	63,500,000	59,976,212
Per ton (pounds).....	15,711	15,734
Sale price, per pound.....	¹⁸ 0.1715	0.1512
Estimated production cost, per pound.....	\$0.087	\$0.10
Operating profit, per pound.....	\$0.0845	\$0.0512
Total estimated operating profit.....	\$5,365,750	\$3,070,782
Life (years).....	10	15
Risk rate (per cent).....	7	8
Present worth of total expected operating profit Mar. 1, 1913.....	\$3,500,615	\$1,575,474
Mar. 1, 1913, value of plant.....	1,324,416	500,000
Value of ores only Mar. 1, 1913.....	2,176,199	1,075,474
Depletion per pound.....	\$0.03427	¹⁹ \$0.01793167
Date of valuation report.....	(²⁰)	(¹⁹)
ANALYSIS OF TAX COMPUTATIONS		
1917 taxes (year ending June 30, 1917):		
Income tax.....	\$29,729.32	\$32,490.04
Excess-profits tax.....	96,386.87	123,310.37
Total tax.....	126,116.19	155,790.41
Net income.....	839,619.62	935,311.41
1918 taxes (year ending June 30, 1918):		
Income tax.....	16,684.52	22,097.20
Excess-profits tax.....	None.	3,772.63
War-profits tax.....	None.	None.
Total tax.....	16,684.52	25,869.83
Net income.....	186,716.91	251,887.83
1919 taxes (year ending June 30, 1919):		
Income tax.....	None.	6,830.29
Excess-profits tax.....	None.	None.
Total tax.....	None.	6,830.29
Net loss.....	10,452.04	64,093.52

¹⁸ Sale price used 17.40 cents less, 25 cents penalty per arsenic.

¹⁹ Dec. 11, 1919.

²⁰ Mar. 1, 1924.

EXHIBIT C

JANUARY 6, 1925.

Mr. L. C. MANSON,
Counsel Senate Committee for Investigation,
Bureau of Internal Revenue:

Office report No. 8.
 Subject: Copper mine revaluations.

HISTORY OF PROVISIONAL VALUATIONS

The history of the original or "provisional" valuations of copper mines dates back to 1919, at which time Mr. Daniel C. Roper was Commissioner and Head of the Income Tax Unit and Dr. Ralph Arnold, head, natural resources subdivision, shortly thereafter succeeded by Mr. J. L. Darnell.

Mr. L. C. Graton was induced, by Mr. Roper and Mr. Arnold, to undertake mines valuation work and on June 12, 1919, became a valuation engineer in charge of the valuations of copper properties. In July, 1919, Mr. J. C. Dick became a valuation engineer and was concerned chiefly with the valuations of lead and silver properties.

There being no established method of valuation or plan of procedure in the metal mining section of the natural resources subdivision, Mr. Graton, assisted by Mr. Dick, proceeded to investigate the requirements of the situation and to the establishment of a systematic procedure. The present value method, endorsed by the profession, was adopted and a procedure outlined and approved by Mr. Callan. These proposed plans of procedure were incorporated into a paper, which was presented by Mr. Graton at the Chicago meeting of the American Institute of Mining and Metallurgical Engineers in September, 1919. Attention was given to the study of factors entering into analytical

appraisals such as rates of profits, interest rates and operating costs, and the selling prices of copper and other metals were fixed. Some five (5) months were spent on these preliminary investigations before individual mine valuations were taken up.

In order to facilitate the determination of 1917 tax liabilities and at the urgent request of the commissioner, work was begun on individual valuations of copper properties about the 20th of November, 1919. These valuations were hurriedly made in order that assessments might be made, if possible, by the end of the year and were designated "provisional." The companies were advised that before final determinations were made, they would be accorded hearings, as data for many of them were not in wholly satisfactory condition. Mr. Graton, having applied such "provisional" valuations to practically all of the important copper companies, whose cases were then before the bureau, resigned on January 19, 1920.

In December, 1919, the metals valuation section of the natural resources subdivision was organized, with some 18 valuation engineers, and Mr. Dick was appointed chief. Practically all valuations made by the metals valuation section up to February 1, 1920, were called "provisional" valuations, and so marked. At about this date Mr. Dick, chief of the metals valuation section, requested that valuations in the future should not be called "provisional." Up to July, 1921, however, when Mr. A. H. Fay became head of the natural resources subdivision, the same basis of determining metal prices and discounting interest rates as in the "provisional" valuations were continued, and an expected selling price for copper of 16.25 cents per pound was used.

Hearings with the copper companies began February 6, 1920, before Mr. Darnell and Mr. Dick, and proceeded until agreements were effected with all of the large copper producers. In March, 1920, Mr. Darnell resigned and Mr. Dick became head of the natural resources subdivision.

PROTEST BY LEAD INDUSTRY

In July, 1921, the St. Joseph Lead Co. and the Doe Run Lead Co. submitted a protest on the expected average selling price assigned to lead by the metals valuation section. Printed briefs were filed to show the inequitable treatment of the lead and zinc industries in comparison with the copper and silver industries.

"We respectfully ask that the 'expected average selling price' of pig lead established by the metals valuation section as of March 1, 1913, at 4.35 cents per pound f. o. b. St. Louis, and used for computing the Federal taxes of our companies, be increased to 5 cents, which amount we maintain is the minimum to which we are equitably entitled.

"In the prediction of the 'expected average selling price' of lead no less weight should be given to the past average prices and trend of yearly prices than has been the case with copper, zinc, and silver, and the statistical positions of these metals as of March 1, 1913, justified the expectation that with lead the future price would exceed the past average price by a greater ratio than with the other three metals.

"For valuation purposes the metals valuation section has established the following 'expected average selling prices' for copper, zinc, silver, and lead.

	Expected average	10-year average March 1, 1903, to March 1, 1913
Copper.....per pound..	Cents 16.25	Cents 14.912
Zinc.....do.....	5.70	5.572
Silver.....per ounce..	65.00	57.768
Lead.....per pound..	4.35	4.469

"The ratio of the expected average price for copper, of 16.25 cents per pound to the ten-year average price of copper, 14.912 cents per pound is 108.97 per cent. Applying this percentage of 108.97 per cent for copper, to the ten-year average price for lead of 4.469 cents per pound, would give an expected average price for lead of 4.87 cents per pound.

"The comparison of the trends of the yearly prices of lead, copper, zinc and silver shows clearly that 5 cents per pound f. o. b. St. Louis, is relatively and actually a fair prediction, as of the basic date, for the future price of lead."

The St. Joseph Lead Co. was informed that errors might have been made in the determination of copper and silver prices but such an argument would not be permitted to be the foundation for other errors.

DEPARTMENT INVESTIGATION

Under Mr. Fay's direction the metals valuation section began a thorough investigation of the "provisional" valuations. Data was gathered and comparative valuations made which showed many errors in the methods of calculating values and that they conformed with but few of the requirements of the regulations. (Exhibit E, p. 5.) They frequently determine values several hundred per cent greater than the values which are indicated by any one of the comparative methods specified in the regulations. They were apparently not checked by such comparative methods or if the appraisal values were compared with such values, no weight was attached to the values determined by the other methods. It developed that a large majority of the big copper companies have reported one value for depletions and a small fraction of that value for capital stock tax purposes. In certain cases the taxpayer's own computation of value was discarded and a much higher value substituted. In other cases the taxpayer repeatedly claimed one value in excise tax returns and early Income Tax Returns, and for later years was allowed to substitute a much greater value, in direct violation of the regulations. In still other cases, valuations were made upon data and assumptions in direct conflict with the published annual reports of the taxpayers. Enormous paid-in surpluses were allowed the copper companies at organization. Valuations submitted to the capital stock tax unit were found to be far less than the "provisional" valuations allowed for Income Tax purposes. Investigation showed that the expected selling price of copper used in the "provisional" valuations was undoubtedly high and that proper consideration had not been given to the question of interest rates used in discounting to present worth.

GROSS ERRORS IN VALUATION

"Exclusive of judgment, there are plain mathematical errors in the majority of the computations of provisional values, principally as follows (Exhibit E, p. 6):

"(1) Increasing the recoverable metal content per ton without increased cost per ton, adding 50 to 100 per cent to estimated operating profit per ton. If costs are computed per pound of copper, the added recovery may or may not be in favor of the taxpayer.

"(2) Using a production cost per pound of copper attained in past operations mining a high-grade ore, and using the same cost per pound as the expected future cost with much lower grade ore, adding 25 to 90 per cent to the estimated operating profit per ton.

"(3) Assuming that the grade of the ore would remain constant when a long period of operations had shown that the assay value of the ore was constantly decreasing and might be expected to do so in the future. It is difficult to estimate the percentage amount of this error, but it is great.

"(4) Assuming large additions to plant capacity with decreased production costs attending increased capacity, and then assuming an average rate of production and an average price for the entire life of the mine. This does not increase estimated operating profit, but it does increase present worth of that profit erroneously, in one case, at least 100 per cent.

"(5) Making no provision for plant replacement when the useful life of the plant is less than the life of the mine.

"(6) Accepting erroneous estimates of the taxpayer without check or correction.

"(7) Allowing depletion deductions for ore of such low value that it was profitable only in war times, and was not included in the valuation. Thus in one instance a ton of low-profit ore is excluded to each two tons of high-profit ore included in the computation of value. The ore excluded must be removed to permit mining of the commercial ore, and if the price of copper is such that it can be profitably treated, the ore is shipped to the mill instead of to the dump. Perhaps a profit of 25 cents per ton is made and depletion of 50 cents per ton allowed for this ore. Treating this ore has an indirect effect upon the value of the commercial ore, in that it reduces the plant capacity available for the commercial ore and reduces the present value of that ore."

RECOMMENDATIONS TO THE COMMISSIONER

The metals valuation section, as a result of their investigation of the "provisional" valuation, concluded that the copper industry was receiving preferential treatment and that a large amount of taxes was being lost by the Government. It was developed also that uniform procedure should be adopted for the analytical valuations of mining properties.

On January 7, 1922, a memorandum (Exhibit D) was prepared by Mr. J. A. Grimes, chief of the metal valuation section and forwarded by the head of the natural resources division, Mr. Fay, to the commissioner, which included certain recommendations for his consideration. Subsequently other memoranda were written to him and various charts and tables submitted which placed the entire subject in comprehensive shape before the commissioner.

During the early summer of 1922, a committee, representing some of the copper companies waited upon the Secretary of the Treasury and entered a protest against any revaluation of copper mines for depletion purposes. Subsequent thereto, on June 30, 1922, a hearing was held before the Commissioner of Internal Revenue. Representatives of the large copper producers, including the Michigan copper companies, Anaconda Copper Co., Phelps-Dodge interest, Chile Copper Co., and the porphyry copper properties attended this hearing. The verbal testimony of Mr. Graton was taken and affidavits of Mr. Graton and Mr. Dick presented and the matter was thoroughly discussed. No conclusions were reached, but the various representatives of the copper producers were requested to submit briefs covering their side of the question within 10 days. Comprehensive briefs were filed as requested and have been duly considered and are on file.

COMMISSIONER'S REVALUATION ORDER

On December 11, 1922, the Commissioner of Internal Revenue, D. H. Blair, with the approval of the Secretary of the Treasury, A. W. Mellon, authorized (Exhibit H) the revaluation of copper and silver mines for the purpose of determining their tax liability for 1919 and subsequent years in accordance with the recommendations of the metals valuation section.

DECEMBER 11, 1922.

MEMORANDUM FOR DEPUTY COMMISSIONER BATSON

(Attention Mr. Fay, Head, Natural Resources Division):

Reference is made to the memorandum prepared by Mr. Grimes to the commissioner, dated January 7, to Mr. Fay's memorandum to you, dated February 7, to your memorandum to Mr. Fay, dated February 16, and to the various memoranda regarding the tax liability of copper companies for 1917 and subsequent years.

Full consideration has been given to the question and it is concluded that for 1919 and subsequent years the valuation of the ore bodies of copper mines should be revised. The price of approximately 15 cents a pound, recommended by the natural resources division, and the 10 per cent interest rate, are approved for the purpose of discounting to the present worth. The Income Tax Unit is authorized and instructed immediately to proceed to the revaluation of the copper and silver mining companies for the purpose of determining their tax liability for 1919 and subsequent years in accordance with the recommendation heretofore made by it.

D. H. BLAIR,
Commissioner of Internal Revenue.

Approved.

A. W. MELLON,
Secretary of the Treasury.

COPPER MINES REVALUATION

Pursuant to the above order, the metals valuation section proceeded immediately with the revaluation of copper mines, and have practically completed same both for invested capital and for depletion. Tabulation (Exhibit A) herewith shows the results for the individual companies with recapitulations of group totals and summary of all groups.

The methods of valuation previously adopted for the lead, zinc and other mining industries, and approved by the commissioner on December 11, 1922, for the revaluation of copper and silver mines give appraised values of from approximately 100 to 125 per cent of the cash values indicated by commercial transactions.

Invested capital.—The total “provisional” values for invested capital at date of acquisition of 71 copper companies is \$645,575,538. In the case of 54 companies the “provisional” values in the amount of \$261,485,222 were approved and remained unchanged. The remaining 17 companies having “provisional” values for invested capital in the amount of \$384,090,316 have been reduced, through revaluation, to \$205,183,050. The “provisional” values for invested capital, therefore, are indicated as being 187.19 per cent of the revised values for cases where revaluation was possible.

Values for depletion as of March 1, 1913.—The total “provisional” values for depletion as of basic date of 71 copper companies is \$1,850,970,950. In the case of 24 companies the “provisional” values in the amount of \$100,946,163 were approved and remained unchanged. The remaining 47 companies having “provisional” values for depletion in the amount of \$1,750,024,787 have been reduced through revaluation to \$530,217,893. The “provisional” values for depletion, therefore, are indicated as being 330.06 per cent of the revised value for cases where revaluation was possible.

It is interesting to note this percentage for the various classes of mines, as follows:

	Per cent
Limestone replacements deposits.....	101. 87
Massive lenticular deposits.....	203. 31
Lake Superior copper mines.....	204. 55
Contract metamorphic deposits.....	215. 75
Vein mines.....	307. 39
Porphyry copper mines.....	421. 90
Copper tailings.....	3, 445. 09
Total.....	330. 06

Values for depletion as of January 1, 1919.—The revised values for depletion as of March 1, 1913, amounting to \$530,217,893 show sustained depletion from that date to January 1, 1919 of \$206,510,489 or 38.95 per cent.

As of January 1, 1919, the provisional values for depletion \$1,456,327,002 are reduced through revision to \$323,707,404, a difference in ultimate depletion deductions of \$1,132,619,598.

It is the opinion of the chief of the metals valuation section that the revised values can be finally established in conference with taxpayers within 15 per cent of the amount \$323,707,404 indicated. Assuming an increase of 15 per cent in this amount the ultimate figure for revised values for depletion as of January 1, 1919 would be \$380,832,240 a reduction in ultimate depletion deductions or in other words, increase in ultimate taxpayer's net incomes of \$1,075,494,762. This reduction reflected in taxes at 12½ per cent indicates additional taxes during the life of the copper properties of \$134,436,845.

An attempt has been made to ascertain the status of these revaluation cases in the auditing division, but a number of cases could not be located and there was not time to trace them. For 1919 taxes the following is a record:

	Number of cases
Cases held in metals valuation section.....	9
Cases unable to locate.....	17
Cases closed for 1919 taxes.....	21
Cases being audited.....	16
Cases auditing completed and A-2 letter sent out.....	8
Total cases.....	71

STATUS OF COPPER REVALUATIONS

(Exhibit J, p. 2)

All of the revaluations for copper mining companies having income in 1919 have been completed with the exception of the March 1, 1913, values of the Shattuck Arizona Copper Co. The returns of this company are at present in the office of the Solicitor of Internal Revenue for interpretation of legal contracts in relation to copper inventories for the year 1918, and the revaluation can not be completed until the inventory issue of 1918 is decided. A few copper mining companies have accepted or indicated their intention to accept the revaluation for 1919 and subsequent years, but others are contesting the authority of the

Secretary of the Treasury or the Commissioner of Internal Revenue to authorize revaluation and urging a review of this issue preferably by the Attorney General. The following memorandum has been submitted to the Solicitor of Internal Revenue (Exhibit I):

ENGINEERING DIVISION,
INCOME TAX UNIT,
November 28, 1924.

Memorandum to SOLICITOR OF INTERNAL REVENUE.

In re: Chile Copper Co., Anaconda Copper Co., and copper revaluations in general.

Reference is made to the accompanying formal appeal filed by the above-named companies (three paper-bound volumes) in the matter of copper revaluation, special reference being made to memorandum of the Secretary of the Treasury dated December 11, 1922. (Copy attached.)

There are indications that the bureau's position, as outlined in the above-mentioned memorandum, and actions already taken thereunder, are open to strong contest by taxpayer.

The question of the right of the Secretary of the Treasury to reopen valuations made by his predecessor in office and to make such revaluations retroactive to January 1, 1919, appear never to have been examined and formally decided by a proper legal authority.

In view of the fact that taxpayers, whose values and taxes have been changed under the above-mentioned memorandum, are voicing almost unanimous objection thereto, it is requested that written opinion be given on the right to reopen valuations and that this opinion be submitted before further time, labor, and money are expended on a matter which promises protracted controversy and litigation for the bureau.

J. G. BRIGHT,
Deputy Commissioner.

At the present time the 1919 returns of seven copper mining companies are held in the metals valuation section under instructions from the head of the engineering division, until such time as an answer to the above memorandum is received from the Solicitor of Internal Revenue. If the legal issues raised by the taxpayers are not conceded or sustained, no difficulty is anticipated by the metals valuation section in the final settlement of the valuations of the copper mines within 10 per cent or 15 per cent of the amounts shown for revaluations in the tabulations.

Possibly 30 or 40 cases of copper or silver mining companies have been closed through 1919 without revaluation before instructions were given on December 11, 1922, authorizing revaluation. The total amount of tax involved could not be estimated by the metals valuation section, but it would not be large. It is suggested that no returns which have been audited and closed be reopened since most of them are small companies and have paid a much higher rate than the large ones.

SILVER MINES REVALUATIONS

On April 11, 1924, the commissioner, with the approval of the Secretary of the Treasury, rescinded his order of December 11, 1922, as relating to silver mining companies (Exhibit N):

TREASURY DEPARTMENT,
Washington, April 11, 1924.

Memorandum for Mr. BRIGHT
(Attention Mr. Greenidge):

Under date of December 11, 1922, the Secretary of the Treasury approved an order of the commissioner to revalue copper mining companies for the purpose of determining their tax liability for 1919 and subsequent years. In said order silver mining companies were inadvertently mentioned. In view of the fact that numerous hearings were granted to copper mining companies and the silver mining companies were not notified of such hearings and had no hearing and that silver mining was not discussed in the various meetings and it was the intention at the time to revalue only copper mining companies, you will therefore ignore all reference to silver mining companies to said order.

D. H. BLAIR, *Commissioner.*

Approved.

A. W. MELLON,
Secretary of the Treasury.

The metals valuation section had completed about 50 per cent of the silver revaluations when the above order was received. The status of this work is now being investigated and will be made the subject of a later memorandum.

PROTESTS AND APPEALS BY COPPER COMPANIES

Protests and appeals have been filed with the commissioner by several of the big companies, such as the Anaconda Copper Co., Inspiration Copper Co., Chile Copper Co., and the Phelps-Dodge Co. These appeals have been submitted to the Solicitor of Internal Revenue for opinion as to the legality of revising valuations once determined and agreed upon. It is understood that if this opinion is favorable to such revaluation the copper companies will appeal to the Attorney General for an opinion, and it is possible that the matter may eventually be placed before the courts for determination.

Briefly, the taxpayers legal objections are:

(a) As to the power of the Secretary of the Treasury, the commissioner, or the two of them, to authorize a revaluation and to make a redetermination of the depletion rate in any case where valuation as of a basic date has been "determined" and a depletion rate established thereon and such action has been once "approved."

(b) As to whether the Secretary of the Treasury has either intended to authorize or in any form has authorized the commissioner to make revaluations and fix a new depletion rate in such cases as the Anaconda, Inspiration, Chile, and other companies, if valuations have heretofore been "determined" and "approved" within the meaning of article 207 of regulations, and depletion rates established on the basis thereof.

1. Value once determined in pursuance to Law of 1918, article 207, in strict conformity to rules and regulations, and such rules prohibiting a revaluation, it would seem clear that the same can not now be legally reexamined.

2. The reenactment of law of 1918 in law of 1921 and insertion of words "or of misrepresentation or fraud or gross error, of any fact determinable on the basic date," furnishes no legal basis for setting aside the valuation of 1920. Modification of article 207 was made after passage of the act of 1921, and subsequent to the valuation of copper companies.

3. It clearly appears that said regulation was not intended to be retroactive in its effect. "We do not believe within his power to promulgate retroactive regulations which have the effect to render void an adjudication legally and solemnly made upon a question theretofore submitted to the Treasury Department for decision and thereby reopen a matter which has been finally adjudicated. No law will be constructed to have retroactive effect unless it clearly appears that such was the intention from the language of the law itself."

4. That the points suggested as a reason for revaluing said properties do not constitute "misrepresentation or fraud or gross errors as to any facts determinable on the basic date." "The errors suggested are in reference to matters which were essentially matters of judgment, upon which any two men, or sets of men, might differ, the one being in relation to the rate of profit used in computing the present value, and the other as to the probable selling price of the mineral products intermediate, March 1, 1913, and the final exhaustion of the ore reserves." "Before an error of fact is a gross error it must be such an error as to cause the person acting upon it to reach a palpably wrong result, and but for which a different decision would have been rendered."

5. Authority not vested in commissioner to overrule and reverse the decision of his predecessor.

6. By the doctrine of *res judicata*, as applied in judicial tribunals and by the executive departments of the Government, a cause of action between the same parties or their privies, once finally adjudged and decided, can not, of course, be again reexamined.

(c) The reasonableness of the amounts fixed upon revaluation by the unit, if the law permits any revaluation to be made.

Interest rates.—The question of interest rates for discounting to present value is one that must be considered for each mine and in the individual protests.

Selling price.—The copper companies contend that the future sales price of copper of 16.25 cents per pound fixed by Mr. Graton is reasonable and fair, and that the unit is not justified in adopting an arithmetical average price of copper for the 10-year period of 14.92 cents per pound as the expected future selling price over the life of properties estimated at 20, 30, and 40 years. Mr. Graton arrived at the average price of 16.25 cents per pound by a price trend method, in which

arithmetical 10-year average prices were plotted for a period of 30 years prior to 1913, and a trend-curve drawn designed to represent the mean between the curve of balanced areas as so plotted and the curve of arithmetical 10-year average prices, plotted at the end of 10-year periods. This trend curve was then projected forward from 1913 at a steadily declining rate of increase for a period of 20 years, up to 1933, and the average level of this projection was 17.4 cents. This price was modified by deducting 1.15 cents per pound for increased costs, since the future price was desired as of 1913.

LAWs AND REGULATIONS

[Regulation No. 33, laws of 1916 and 1917, article 172]

Page 88.—"Neither must the value determined as of March 1, 1913, be speculative, but must be determined upon the basis of the salable value * * *. That is, the price at which the natural deposits or mineral property as an entirety in its then condition could have been disposed of for cash or its equivalent."

Page 89.—"In any case in which a corporation uses for purposes of its income return an estimate of the value of mines or of mineral lands or properties as of March 1, 1913, as the basis of computing amounts to be deducted for depletion or return of capital, this department in passing upon the accuracy and fairness of such estimate will attach due weight to the market value of the stock of the corporation on March 1, 1913, and also to sworn statements as to the value of capital stock of the corporation filed at any time thereafter for purposes of the special excise tax on corporations * * *. No fictitious or inflated cost or price will be permitted to form the basis of any calculation of a depletion deduction * * *."

Pages 89-90.—"The value determined and set up as of March 1, 1913, or the cost of the property if acquired subsequent to that date will be the basis for determining the depletion deduction for all subsequent years during the ownership under which the value was fixed, and during such ownership there can be no revaluation for the purpose of this deduction if it should be found that the estimated quantity of the mineral deposit was understated at the time the value was fixed or at the time the property was acquired."

[Regulation No. 45, law of 1918, article 206 (a)]

"Where the fair market value of the property at a specific date in lieu of the cost thereof is the basis for depletion and depreciation deductions, such value must be determined, subject to approval or revision by the commissioner, by the owner of the property * * *. The value sought should be that established assuming a transfer between a willing seller and a willing buyer as of that particular date. The commissioner will lend due weight and consideration to any and all factors and evidence having a bearing on the market value, such as cost, actual sales, and transfers of similar properties, market value of stock or shares, royalties and rentals, value fixed by the owner for purpose of the capital-stock tax, valuation for local or State taxation, partnership accountings, records of litigation in which the value of the property was in question, the amount at which the property may have been inventoried in probate court, disinterested appraisals by approved methods such as the present value method and other factors." * * *

Article 207.—"No revaluation of a property whose value as of the basic date has been determined and approved will be allowed during the continuance of the ownership under which the value was so determined and approved except in the case of discovery as defined in Article 219 and 220."

[Regulations No. 62, law of 1921, article 206 (a); Regulations No. 65, law of 1924, article 206 (a)]

Quoted parts of law of 1918, are the same in laws of 1921 and 1924.

[Regulation No. 62, law of 1921, article 207; Regulation No. 65, law of 1924, article 206]

"No revaluation of a property whose value as of the basic date has been determined and approved will be made or allowed during the continuance of the ownership under which the value was so determined and approved except in the case of a subsequent discovery as defined in Articles, Regulation 62, 219 and 220, Regulation 65, 220-223, or of misrepresentation or fraud or gross error as to any facts determinable on the basic date. Revaluation on account of misrepresentation or fraud or such gross error will be made only with the written approval of the commissioner * * *."

[Regulation 62, law of 1921, section 250 (d)]

"* * * or in cases of final settlement of losses and other deductions tentatively allowed by the commissioner pending a determination of the exact amount deductible, the amount of tax or deficiency in tax due, may be determined, assessed, and collected at any time; but prior to the assessment thereof the taxpayer shall be notified and given a period of not less than thirty days in which to file an appeal and be heard as hereinafter provided in this subdivision."

"PROVISIONAL" VALUATIONS AND THE LAWS AND REGULATIONS

[As interpreted by Income Tax Unit, Exhibit E, pp. 3-5]

The regulations all agree that the March 1, 1913, value sought is the cash value at which the property would be transferred from a willing seller to a willing buyer, and that such value must not be speculative; it can not be maintained that the "provisional" values represent anything like a salable value as of the basic date.

The regulations all provide that the values determined by appraisal shall be checked by all other available evidence of value before being accepted by the commissioner. The "provisional" valuations apparently were never checked by such comparative methods.

Regulations No. 33 provides against revaluation for depletion by the taxpayer, in case estimated quantity of mineral deposit is understated. No such prohibition of revaluation is in force against the Government. Regulation No. 45, article 207, is clearly a mere amplification of the above prohibition against revaluation by the taxpayer and not applying to the revaluation by the Government.

Regulations No. 62 and No. 65, prohibit revaluation by the Government, unless for misrepresentation or fraud or gross error as to any facts determinable on the basic date.

As outlined heretofore, the "provisional" valuations were erroneous in a great many respects as to facts, mathematical computations, and judgment, which in effect produced inflation to the extent of as high as 300 or 400 per cent above salable values and become "gross errors."

Memoranda were prepared and placed in the files of the majority of the companies showing that the valuations were only "provisional" as, for instance, in the case of the Miami Copper Co., the memorandum signed by Mr. Graton and approved by Mr. Dick, dated December 4, 1919, was as follows:

"This case has been hurriedly examined with respect to valuation, February, 1908, and March 1, 1913, depletion for 1916 and 1917 and inventories. Fair market value of ore deposit at time of acquisition in 1908 provisionally determined to be * * *. Fair market value of ores and plant March 1, 1913 provisionally determined to be * * *."

Regulation 62, section 250 (d), is specific with respect to the revision of "provisional" depletion deductions allowed and the assessment of additional tax, free from any statute of limitation. The solicitor has ruled that this provision of the law clearly applies to "provisional" deductions for depletion. (Sol: I:I:20-5-1-13. Apr. 13, 1922; Exhibit G.)

DISCUSSION OF REVALUATION METHODS

As far as possible a uniform procedure has been adopted by the Metals Section in revaluing the copper mining companies, as ordered by the commissioner. The analytical appraisal method has been used with standard price bases, as approved, for the metal in determining values of the ore reserves and interest rates for discounting to present worth as approved and the Hoskold formula used. Revised values have been determined for invested capital and as of basic date for computing values of depletion. These values have, where possible, been checked with values as determined by stock market quotations, sworn statements of values submitted to the capital-stock division, convertible bond issues, published annual reports, etc., as provided for in the regulations. The "unit method" has been used, as provided for in the regulations, in determining the annual depletion deductions from income and also in determining the depletion to be deducted from invested capital.

Future selling price of copper.—The metals valuation section, after careful study and investigation, in arriving at a future selling price for metals, have

adopted the arithmetical average price method for the 10 years preceding the basic date, except in the case of metals for which such an average price is not available or for which the price-trend during the 10-year period is strongly and consistently up or down.

In their investigation of copper prices, a number of copper price predictions by prominent engineers were found which would appear to confirm the price factor for copper computed.

Copper price predictions

Name of engineer	Year made	Price prediction (per pound)
		<i>Cents</i>
Dr. James Douglas.....	1908	13
H. C. Hoover.....	1909	14
J. R. Finlay.....	1911	14
Douglas & Ricketts.....	1911	14
Heathe Steele.....	1913	15
W. Y. Westervelt.....	1913	13.8
Morton Webber.....	1913	14.2
A. O. Christensen.....	1913	14.5
Clinton H. Crane.....	1913	13.0
R. W. Raymond (Inspiration).....	1913	15
Julius Warner (East Butte).....	1913	15
G. G. Endicott (Calumet & Hecla).....	1913	15
W. G. McBride (Old Dominion).....	1913	14.971
Mohawk Mining Co.....	1913	14 $\frac{3}{8}$
Quincy Mining Co.....	1913	15

Interest rates for discounting present worth.—The metals valuation section have made a thorough investigation into the question of interest rates employed by mining engineers in determining the present worth of future profits. Hoskold's Formula, which is used in the section, would appear to be preferred by a large majority of the profession. The expressions of opinion are overwhelmingly in favor of at least a 10 per cent rate of interest. Valuations for which lower rates are advocated are chiefly, coal, iron, gold, and porphyry copper mines with the ore entirely developed. The engineer who would use a lower rate than 10 per cent for the valuation of a metal mine with no previous operating record, and no factors of safety in other parts of the valuation would not be considered to be competent.

The metals valuation section have adopted the following basis for applying interest rates.

"That in the case of valuations of long-life properties, based upon operating records and upon fully developed ore reserves, the present minimum risk rates of 6 per cent for lessors, 7 per cent for operating owners, and 8 per cent for lessees are reasonable, but that relatively higher risk rates, according to the peculiar conditions of each case, be used:

"In the case of mines in which the ore reserves are not fully developed.

"In the case of mines for which the cost of operating must be estimated.

"In the case of mines in which the indicated life is less than ten years.

"In the case of discovery values of short-life mines during the war period whose value is largely dependent upon war conditions.

"In the case of mines subject to interruptions of operations for any reason.

"In the case of mines or mineral deposits in which the profit to be realized depends to any extent upon manufacturing or marketing ability or upon any factor other than the intrinsic value of the mineral product.

"That a 10 per cent interest rate is the minimum rate at which the expected profits of untried mines should be discounted to present worth or cash value."

Rate of depletion procedure.—From the revised March 1, 1913, value is deducted, either the depletion sustained at the new unit rate of depletion or the depletion allowed as a deduction from income in each year from 1913 to 1918, the larger amount being deducted in each year. The amount remaining is divided by the pounds of recoverable copper remaining, the result giving the unit rate for depletion per pound of recoverable copper used in the determination of depletion to be allowed as a deduction from income in 1919 and subsequent taxable years.

The determination of the unit rate of depletion to be used in computing the depletion of invested capital sustained between date of acquisition and the taxable year is made as follows:

For properties acquired prior to March 1, 1913, the cost as at date of acquisition is divided by the sum of recoverable pounds of copper as at March 1, 1913, plus pounds of copper produced from date of acquisition to March 1, 1913. For mines purchased after March 1, 1913, the cost at date of acquisition is divided by the pounds of recoverable copper at date of acquisition. Additions, either to investment or ore reserves, at later dates will be reflected in changes in the rate at which invested capital is depleted.

COMPARATIVE RESULTS IN INDIVIDUAL CASES

Five individual copper revaluations have been charted to visualize the relations of the original and revised values and of values shown by other comparative data, such as stock market quotations, convertible bond issues, etc. Horizontally the charts show years, vertically values expressed in dollars of the companies' shares of stock. Wherever and whenever authentic values have been obtainable such evidences have been plotted on these charts and serve as a check on the analytical appraisal made both in the "provisional" and revised valuations. Charts for the following companies accompanying this report:

Exhibit	Name of company	Type of deposit
L-1	Quincy Mining Co.	Michigan Copper Co.
L-2	United Verde Extension Copper Co.	Arizona Massive Lenticular Deposit.
L-3	Inspiration Cons. Copper Co.	Arizona Porphyry Deposit.
L-4	Cerro de Pasco Copper Co.	South American Vein Mine.
L-5	Chile Copper Co.	South American Open Pit Mine.

CONCLUSION

The question of revising the provisional valuations of copper and silver properties and of finally determining their tax liabilities should be considered in its entirety, that is, as to the periods before 1919, and after:

First. As to whether additional tax liability should be determined based on the revaluations, for the years previous to 1919. The commissioners authority does not cover this and doubtless such action would involve somewhat different legal aspects and possibly moral questions. Nevertheless, the fact remains that the copper companies made enormous profits during 1917 and 1918 and paid very small taxes. With 3 and 4 cents depletion per pound of copper, they would pay but little tax even in normal years. Some \$60,000,000 in additional taxes from copper properties is estimated to be involved in this period.

Second. As to why the additional tax liabilities for 1919 and subsequent years, which have been authorized by the commission are not finally determined, assessed and collected. It might be said here that with the method of computing the depletion deductions on revaluations as described under previous heading, the unit will make up for income tax lost previous to 1919, but will not make up for excess and war profit tax. Additional tax of four or five millions of dollars annually are involved from the copper industry alone which in all equity should be forthcoming, and which in total are estimated to amount to \$134,436,845.

Respectfully submitted,

EDWARD T. WRIGHT,
Investigating Engineer.

Approved:

L. H. PARKER,
Chief Engineer.

APPENDIX I

JANUARY 21, 1925.

Memorandum to Mr. L. C. Manson, counsel.
Subject: Revaluation of copper mines.

Replying to your memorandum of January 12, 1925, the questions are taken up in order.

(a) Why were revaluations ordered for 1919 and subsequent years and not for 1917 and 1918?

In order to obtain a correct answer to this question, reference should be made to the commissioner's office. It is the impression of the metals valuation section that the period prior to 1919 was not authorized because it would be difficult to sustain the legal right of the commissioner to open cases prior to 1919, these cases having been closed and the taxes collected and that probably it would be impossible to put through such a program without protracted litigation.

From an economic standpoint it was realized that the copper industry was in bad shape and that payment of additional taxes would probably throw several of the large copper companies into bankruptcy with possibly serious affect on business generally. The country was in a more or less unstable condition and financial disaster to one or more large copper companies might have involved the whole country in a panic. Some copper companies needed financing and could not have obtained much needed money if large additional back taxes were assessed by the Government.

(b) Are waivers on file for 1917 and 1918?

A partial check-up of the matter of waivers of 1917 and 1918 has been made and is reported in column marked (b) of Tabulation Exhibit K, accompanying this memorandum. Mr. Bright, deputy commissioner, advises in a letter on subject of waivers, dated January 20, 1925, that "a complete list will be submitted in the near future."

(c) When was the work of making revaluations commenced?

Considerable revaluation work was carried on during 1921 and 1922, in connection with several of the large copper companies cases, in order to obtain data on the subject to form a basis for the recommendations made by the metals valuation section to the commissioner. Subsequent to the commissioner's authorization of December 11, 1922, the work of revaluation has proceeded as rapidly as cases could be prepared and data obtained. It is estimated that two men have been at work on these cases since the commissioner's order for the greater part of their time. A complete record of the dates on which cases were completed in the metals valuation section is shown in column (f) of Tabulation Exhibit K.

(d) Was it carried on by individual cases or as a unit?

Revaluation was carried on by individual cases under general rules of procedure and method applied to the subject as a unit.

(e) Did this work proceed without delay in the metals section, or if delays occurred, what were the causes of such?

Revaluation work in the metals valuation section proceeded with as little delay as possible. The proposal to revalue because of the abnormal values expressed in the "provisional" valuations originated within this section and they were more than anxious to complete the work. There are always delays in handling cases brought about by lack of information. I am advised that it would be impossible to name the reasons for delays in specific cases without making a very detailed analysis of each case.

(f) When were the first five cases completed in the metals section?

In column (f) of tabulation Exhibit K, a record is given for all companies in which revaluation resulted in reductions of values showing the dates when the report was completed. For five companies noted on margin as Exhibit B, 1 to 5, of Tabulation K, a detailed analysis of appraisals both "provisional" and revised has been made in parallel. This has also been extended to show the tax paid or computed for the years 1917, 1918, and 1919.

(g) Were such cases immediately passed to audit?

In column (g) of tabulation Exhibit K is a record of the dates the revised valuation reports were forwarded to audit by the metals valuation section.

(h) To what audit sections were these cases sent and to what auditor were they assigned?

Column (h) discloses the section to which the metals valuation section forwarded the revaluation report together with the date received by the auditor and the name of the auditor handling cases.

(i) Has there been any delay in auditing these cases, and if so, what has been the causes of the delay?

Specific delays in the audit section have been unreported. There would, however, appear to have been serious delays between the date forwarded to audit by the engineering section and the date of receipt by the audit in the following cases:

	Forwarded	Received
Anaconda Copper Co.....	Jan. 1, 1924	June 30, 1924
Champion Copper Co.....	May 9, 1924	Nov. 28, 1924
Chino Copper Co.....	Sept. 24, 1923	Apr. 16, 1924
Miami Copper Co.....	Sept. 5, 1923	Mar. 25, 1924
Pittsmtont Copper Co.....	June 18, 1924	Dec. 15, 1924
U. S. Smelting & Refining Co.....	Jan. 9, 1923	Oct. 14, 1924
Utah Copper Co.....	July 1, 1923	June 1, 1924
Isle Royal Copper Co.....	Apr. 20, 1923	June 26, 1924
Wolverine Copper Co.....	Mar. 4, 1924	June 30, 1924

(j) By whom was the question as to the right of the Secretary to order revaluation raised and when was the question raised?

The taxpayers first protested to the Secretary and the commissioner early in the summer of 1922 as to the right of the commissioner to order revaluations and protests were filed for all of the large copper companies. Mr. A. J. Shores, counsel for Chile, Anaconda and Inspiration, particularly desired a ruling on this question from the Attorney General. Such proposal caused considerable anxiety in the Metals Section for the reason that it was felt that attorneys in the Attorney General's Office had not had the experience to advise the Attorney General in the matter. These protests by the taxpayers appear to have been received with sympathy in the Income Tax Unit by the deputy commissioner and the head of the Engineering Division. These officials finally wrote the letter of November 28th, 1924, Exhibit "I," however, the metals Valuation Section appear to have been pleased that an opinion was requested of the solicitor rather than from the Attorney General, if a general recommendation of the legal status involved was to again be given consideration.

Respectfully submitted.

EDWARD T. WRIGHT.

Approved:

L. H. PARKER,
Chief Engineer.

EXHIBIT D

JANUARY 7, 1922.

Memorandum to the COMMISSIONER, BUREAU OF INTERNAL REVENUE:

The metals valuation section of the Income Tax Unit presents for your consideration the following recommendations for the standardization of valuations by analytic appraisal methods within the metals valuation section:

(1) That a standard basis for the determination of expected future sales prices of the common metals be adopted. The metals valuation section suggests that the arithmetical average price for the 10 years preceding the basic date be adopted as the expected future sales price, except in the case of metals for which such an average price is not available or for which the price trend during the 10-year period is strongly and consistently up or down.

(2) That in the case of valuations of long-life properties, based upon operating records and upon fully developed ore reserves, the present minimum risk rates of 6 per cent for lessors, 7 per cent for operating owners, and 8 per cent for lessees are reasonable, but that relatively higher risk rates, according to the peculiar conditions of each case, be used:

(a) In the case of mines in which the ore reserves are not fully developed.

(b) In the case of mines for which the cost of operating must be estimated.

(c) In the case of mines in which the indicated life is less than 10 years.

(d) In the case of discovery values of short-life mines during the war period whose value is largely dependent upon war conditions.

(e) In the case of mines subject to interruptions of operations for any reason.

(f) In the case of mines or mineral deposits in which the profit to be realized depends to any extent upon manufacturing or marketing ability or upon any factor other than the intrinsic value of the mineral product.

(3) That the basis of all valuations, except short-life discoveries in war times, be the expected profit as determined by pre-war costs and metal prices, rather than the expected profit as determined by costs attained and expected future prices as influenced by war conditions.

(4) That all valuations by analytic appraisal methods, based upon estimates of any factors such as operating costs, grade of ore, quantity of ore or increased rates of production, be provisional until actual operations by the taxpayer have demonstrated the essential accuracy of his estimates; in other words, that information derived from operations subsequent to the required basic date will be the test of the accuracy of analytic valuations which must be based upon estimates.

(5) That in the case of a valuation of any mining or mineral property in which the period required for the exhaustion of the ore or mineral exceeds the life of the plant or equipment utilized in its exploitation, provision shall be made in the valuation for deduction from the value of operating profit, at the date of valuation, of the value at that date of the entire amount which is expected to be returned in depreciation during the exhaustion period.

GENERAL

These improvements of method are suggested after long and careful consideration, and are the result of experience in the determination of the values of several thousand properties. Data are available for the determination of an equitable and standard method of valuation if the principles involved meet with your approval.

The changes in valuation methods outlined above will apply to all classes of metal-mine valuation. The effect of the changes, however, will be felt chiefly by the copper and silver mining industries. The valuations in the case of the copper mining industry, in particular, were hurriedly made, upon the order of the deputy commissioner, to arrive at some basis for the settlement of 1917 taxes for the copper industry. The usual time available for a single case was less than one day, while the time required for a thorough consideration of any large case is several weeks. Needless to say, the valuations upon which the 1917 tax liability was determined are rarely in accord with the facts as set forth in the annual reports of the mining companies. The engineers who made those valuations recognized that revision would be necessary when time became available, and called these valuations "provisional."

The effect upon tax liability for four typical copper mining companies for the year 1918 is determined and tabulated in this memorandum in order that the importance of the recommendations, previously suggested, may be fully appreciated.

Five different determinations of tax liability have been made, as follows:

- (1) As reported by the mining companies.
- (2) With the provisional valuations for invested capital and with the provisional valuations for depletion.
- (3) With the invested capital determined upon the recommended basis and with the provisional valuation for depletion.
- (4) With the invested capital determined upon the recommended basis and with an adjusted valuation for depletion in which the expected future sales price of copper and the risk rates are not changed from the basis upon which the provisional valuations were supposed to be made.
- (5) With a complete revision of the methods of valuation to accord with the bases recommended in this memorandum.

The values determined upon the bases recommended in this memorandum have been checked with the values as determined by other methods such as are recognized in Regulations 45, and more especially with those values as determined by market quotations of the stocks of these companies, and with the sworn statements of value submitted to the capital stock tax division by the taxpayers themselves.

Briefly, this memorandum shows:

- (1) That the valuation methods recommended result in accurate appraisals for invested capital purposes. In three of the four cases reviewed the invested capital valuation was confirmed by the par and market values of the stock issued for the mines. In the other case the value determined by similar methods was in excess of the par or market value of the stock.

(2) That the determinations of values for depletion as at March 1, 1913, by the methods recommended, result in as liberal or more liberal values than could be determined by any other method.

Comparisons have been made in each case with the aggregate value of mine and plant as reflected by the average stock quotations of 1912, less excess of current assets over current liabilities and plus indebtedness as at December 31, 1912. These comparisons show that, in the four cases considered, the value determined by appraisal are in excess of the values indicated by the average stock quotations, and that in two cases the values by appraisal are considerably in excess of the values reflected by the highest stock quotations prior to March 1, 1913.

(3) The Inspiration Consolidated Copper Co. is the only one of the four companies considered, that has endeavored to report the same values for income tax and capital stock tax purposes. Some of the other copper companies are even now protesting the assessment of additional capital stock tax, upon the ground that the values determined for income tax purposes are excessive.

(4) None of the four taxpayers for whom summaries appear in this memorandum report any excess profits or war profits tax in 1918 and in the cases of one of the taxpayers the use of the provisional basis of valuation would result in no assessment of war profits or excess profits taxes. These taxpayers are among those to whom war prices of copper were most beneficial.

The following comparison, in tabulated form, will demonstrate that upon any basis of determination the copper producing companies should pay war and excess profits tax for 1918. This comparison is made upon the basis of data prepared by the United States Geological Survey from annual reports of all of the large copper producers in the United States. The profit per pound for each year is computed from the average sales price of copper reported by all of the copper sales agencies, less costs of production including depreciation, interest on indebtedness and losses, as stated in the annual reports of the principal mining companies. In the tabulation the period 1909 to 1914, during which the arithmetical average profit was 4.6 cents per pound of copper, is the "normal period;" and the period 1911 to 1913, during which the arithmetical average profit was 5.4 cents per pound of copper, is the "pre-war period."

The columns of the tabulation show, by years:

- (a) The average yearly profit per pound of copper.
- (b) The ratio in percentage of the profit for each year to the average profit of the normal period, both exclusive of depletion.
- (c) The ratio in percentage of the yearly profit to the average profit of the pre-war period, both exclusive of depletion.
- (d) The ratio in percentage of the yearly profits to the average prewar profit with an assumed average depletion deduction of two cents per pound of copper in both the pre-war period and the taxable year.

Year	Profit per pound	Per cent of normal profit	Per cent of pre-war profit	
			With no depletion	Assuming 2-cent average depletion
1909	\$0.036	78.26	(1)	-----
1910	.041	89.13	(1)	-----
1911	.037	80.43	(1)	-----
1912	.072	156.52	(1)	-----
1913	.052	113.04	(1)	-----
1914	.038	82.61	70.37	52.04
1915	.085	184.78	157.41	191.18
1916	.141	306.52	261.11	355.88
1917	.144	313.04	266.67	364.70
1918	.102	221.74	188.89	241.18
1919	.033	71.74	61.11	38.24
1920	.034	73.91	62.96	41.18

¹ Average 1911 to 1913 is 100 per cent.
In 1921 nearly all copper mines suspended operations, as they could not produce copper at a profit.

Summaries of the determinations of tax liability with the different bases of valuation for four typical companies will be found upon the succeeding pages.

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Utah Copper Co.—Bingham & Garfield Railway Co.—March 1, 1913, values on various bases

	Provisional valuation	Adjustment of factors without change of copper price	Recommended basis with copper at 10-year average price
Ore reserves..... tons..	445,068,075	445,068,075	445,068,075
Per cent copper.....	1.3838	1.346	1.346
Per cent recovery.....	80.7	67	67
Pounds recoverable copper per ton.....	22,335	17.13	17.13
Price per pound copper..... cents..	16.25	16.25	15.00
Value per ton.....	\$3.63	\$2.60	\$2.60
Cost per ton.....	\$1.61	\$1.50	\$1.50
Profit per ton.....	\$2.02	\$1.40	\$1.19
Expected production tons per year.....	15,895,300	11,124,700	11,124,700
Life in years.....	28	40	40
Risk rate..... per cent..	7	7	7
Plant deduction.....	\$20,000,000	\$20,000,000	\$20,000,000
Value of ores only Mar. 1, 1913.....	\$337,300,000	\$173,451,153	\$144,433,480
Depletion rate per pound..... cents..	3.393	2.2750627	1.894454
Depletion in 1918.....	\$0,381,963.08	\$4,279,211.95	\$3,363,317.27
EFFECT ON TAX LIABILITY			
Net income.....	\$13,730,692.44	\$15,833,443.57	\$16,749,338.25
Operating income 1918 ¹	21,721,968.20	21,721,968.20	21,721,968.20
Depleted cost of mine.....	38,110,220.82		17,270,237.43
Tax liability with:			
(1) Provisional invested capital—			
(a) Total tax.....	4,259,191.17		
(b) Excess-profits tax.....	3,090,558.73		
(c) Income tax.....	1,252,632.44		
(2) Recommended invested capital—			
(a) Total tax.....	5,094,379.24	6,820,974.45	7,574,460.52
(b) Excess-profits tax.....	3,955,636.09	5,630,937.31	6,362,276.75
(c) Income tax.....	1,137,743.15	1,190,037.14	1,212,183.77

¹ Before deduction of depreciation and depletion.

Net income reported by company in 1918..... \$9,807,735.97
 Tax liability reported by company in 1918..... 1,142,664.71

Comparison with value of mines and plant as determined by different methods

Average stock quotation prior to Mar. 1, 1913..... \$75,000,000
 Highest stock quotation prior to Mar. 1, 1913..... 103,000,000
 Reported for capital-stock tax in 1920..... 27,835,992

*Nevada Consolidated Copper Co.—Nevada Northern Railway Co.—March 1, 1913,
values on various bases*

	Provisional valuation	Adjustment of factors without change of copper price	Recommended basis with copper at 10-year average price
Ore reserve.....tons..	100,316,601	98,636,705	98,636,705
Per cent copper.....	1.518	1.536	1.536
Per cent recovery.....	80	70	70
Pounds recoverable per ton.....	23.29	21.51	21.61
Price per pound of copper.....cents..	16.25	16.25	15.00
Life, in years.....	20	24	24
Risk rate.....per cent..	7	8	8
Plant deduction.....	\$13,000,000	\$10,000,000	\$10,000,000
Value of ores only, Mar. 1, 1913.....	\$91,976,198	\$39,398,301	\$29,146,394
Depletion rate per pound copper.....cents..	3.819	1.8566827	1.3735513
Depletion, 1918.....	\$2,925,623.70	\$1,422,350.07	\$1,062,237.30
EFFECT ON TAX LIABILITY			
Net income.....	1,014,875.18	3,118,148.81	3,488,261.58
Operating income, 1918 ¹	5,374,412.77	5,374,412.77	5,374,412.77
Depleted cost of mine.....	6,655,511.53		4,440,466.83
Tax liability with:			
(1) Provisional invested capital—			
(a) Total tax.....	180,554.19		
(b) Excess-profits tax.....	None.		
(c) Income tax.....	180,554.19		
(2) Recommended invested capital—			
(a) Total tax.....	180,554.19	470,455.87	609,765.70
(b) Excess-profits tax.....	None.	124,441.87	232,301.29
(c) Income tax.....	180,554.19	346,014.00	377,484.41

¹ Before deduction of depletion and depreciation.

Net income reported by company, 1918 ¹	\$155,298.33
Tax liability reported by company in 1918.....	5,404.97

Comparison with value of mines and plant as determined by different methods

Average stock quotation prior to Mar. 1, 1913.....	\$38,000,000
Highest stock quotation prior to Mar. 1, 1913.....	54,000,000
Reported for capital-stock tax in 1920.....	8,115,619

¹ Taxpayer reports a loss on mining operations, because of the depreciation and depletion deduction taken, which is more than balanced by railway earnings.

Chino Copper Co.—Santa Rita Store Co.—March 1, 1913, values on various bases

	Provisional valuation	Adjustment of factors without changing price	Recommended basis with copper at 10-year average price
Ore reserves..... tons..	124,368,669	125,637,504	125,637,504
Per cent copper.....	1.614	1.578	1.578
Per cent recovery.....	75.718	66.5	66.5
Pounds recoverable copper per ton.....	24.44	20.99	20.99
Price per pound of copper..... cents..	16.25	16.25	15.00
Value per ton.....	\$3.99	\$3.43	\$3.17
Cost per ton.....	\$1.91	\$2.07	\$2.07
Profit per ton.....	\$2.08	\$1.36	\$1.10
Expected production tons per year.....	4,605,000	3,140,000	3,140,000
Life in years.....	27	40	40
Risk rate..... per cent..	7	7	7
Plant deduction.....	\$9,000,000	\$9,000,000	\$9,000,000
Value of ores Mar. 1, 1913.....	\$90,274,374	\$43,896,383	\$27,545,353
Depletion rate per pound copper..... cents..	3.1564	1.6645506	1.0445196
Depletion in 1918.....	\$2,387,995	\$1,251,761	\$790,238
EFFECT ON TAX LIABILITY			
Net income.....	\$4,243,449.35	\$5,379,683.35	\$5,841,206.35
Operating income, 1918 ¹	7,153,908.58	7,153,908.58	7,153,908.58
Depleted cost of mine.....	11,853,986.36		8,832,953.24
Tax liability with:			
(1) Provisional invested capital—			
(a) Total tax.....	1,373,894.62		
(b) Excess-profits tax.....	985,189.66		
(c) Income tax.....	388,704.96		
(2) Recommended invested capital—			
(a) Total tax.....	1,558,912.85	2,495,173.66	2,875,464.61
(b) Excess-profits tax.....	1,195,437.64	2,104,428.84	2,473,643.24
(c) Income tax.....	363,476.21	390,744.82	401,321.37

¹ Before deduction of depletion and depreciation.

Net income reported by company in 1918.....	\$2,963,539.51
Tax liability reported by company in 1918 (no excess-profits tax).....	353,338.54

Comparison with value of mines and plant as determined by different methods

Average stock quotation prior to Mar. 1, 1913.....	\$27,000,000
Highest stock quotation prior to Mar. 1, 1913.....	38,000,000
Reported for capital stock tax in 1920.....	12,933,986

Inspiration Consolidated Copper Co.—March 1, 1913, values on various bases

	Provisional valuation	Adjustment of factors without change in price	Recommended basis with copper at 15 cents
Ore reserves—tons.....	97,143,000	89,043,000	84,917,800
Per cent copper.....		1.66	1.527
Per cent recovery.....		76	76
Pounds recoverable per ton.....		23,232	23.36
Price per pound of copper..... cents.....	16.25	16.25	15.00
Value per ton.....		\$4.10	\$3.50
Cost per ton.....		\$2.28	\$1.95
Profit per ton.....		\$1.82	\$1.55
Expected production tons per year.....		3,735,000	5,475,000
Life in years.....		26	18
Risk rate..... per cent.....		7	10
Plant deduction.....		\$9,185,000	\$9,185,000
Value of ores only, Mar. 1, 1913.....	\$88,218,000	\$54,412,518	\$39,032,845
Add Keystone purchase.....	3,436,000	1,392,895	1,392,805
Total value for depletion.....	91,654,000	55,805,413	40,425,740
Depletion rate per pound..... cents.....	3.75039	2.2991946	1.8811594
Depletion 1918 (on sales).....	\$2,651,312.86	\$1,625,400.88	\$1,320,872.92
EFFECT ON TAX LIABILITY			
Net income in 1918.....	\$6,807,021.82	\$7,833,834.60	\$8,129,361.76
Operating income in 1918 ¹	\$10,046,750.14	10,046,750.14	10,046,750.14
Depleted cost of mine.....	61,999,746.16		14,489,148.33
Tax liability with:			
(1) Provisional invested capital—			
(a) Total tax.....	\$876,992.51		
(b) Excess-profits tax.....	\$79,552.72		
(c) Income tax.....	\$797,439.79		
(2) Recommended invested capital--			
(a) Total tax.....	3,187,420.62	4,032,772.74	4,276,287.13
(b) Excess-profits tax.....	2,705,039.20	3,525,769.42	3,702,191.15
(c) Income tax.....	482,381.42	507,003.32	514,095.98

¹ Before deduction of depletion and depreciation.
² As reported in amended return for 1918, filed June 16, 1920.

Net income reported in 1918 (original return).....	\$5,578,310.07
Tax liability reported in 1918 (original return).....	659,432.71

Comparison with value of mines only as determined by other methods

Average stock quotation prior to Mar. 1, 1913.....	\$14,000,000
Highest stock quotation prior to Mar. 1, 1913.....	15,000,000
Reported to capital stock tax division in 1920.....	60,136,787

In order that the approximate effect of the recommended revision of valuation methods upon the copper mining industry may be appreciated, the following summaries and comparisons are made.

Copper production in 1918:	Pounds
Utah Copper Co.....	188,092,405
Chino Copper Co.....	75,635,641
Nevada Consolidated Copper Co.....	76,607,062
Inspiration Consolidated Copper Co.....	98,540,041
Total, four companies.....	438,875,149
Total, United States of America smelter production.....	1,908,500,000

Thus the four companies under consideration produced 22.996 per cent of the total production of the United States in 1918. In addition a large amount of copper is produced by American-owned companies in foreign lands. The refined primary copper produced in the United States in 1918 was 2,432,400,000 pounds, approximately all of which came from American-owned mines.

With the four companies considered, comparisons of tax liability in 1918, dependent upon methods of valuation alone, are as follows:

Tax reported on original returns (no excess profits tax is reported by any of the four companies).....	\$2,160,840.93
Tax with provisional bases of valuation.....	6,690,632.49
Tax with recommended bases of valuation.....	15,235,997.96

The value for invested capital and for depletion, as recommended, are based upon the procedure outlined in a preliminary draft of a memorandum to the commissioner, dated September 12, 1921, and summarized in this memorandum. That the values established by the procedure recommended are liberal, is demonstrated by comparisons with the values determined by other methods, such as stock market quotations, and values reported to the capital stock-tax division.

There can be no question that gross errors have been made in the provisional valuations of many of the copper mines, and that the bases of valuation for copper and silver mines will have to be changed if these industries are not to receive preferential treatment in comparison with other metal mining industries.

There is also no question that in a number of these cases the values of the mines have been misrepresented, either to the Income-Tax Unit or to the capital stock-tax division.

If these recommendations for revisions of valuation are approved for all years from March 1, 1913, to date, the additional tax indicated from the copper mining industries alone is in excess of \$60,000,000, and if approved for 1918 and subsequent years only, an additional tax in excess of \$20,000,000 is indicated. If the provisional bases of valuation are permitted to govern the determinations of tax liability in future normal years the copper companies would pay practically no income tax. Upon the bases of valuation recommended in this memorandum and at an estimated income tax rate of 10 per cent, the tax from the copper industry in future normal years would amount to approximately \$4,000,000.

The metals valuation section respectfully requests decision of the following questions:

- (1) Are the provisional values for depletion subject to revision; and, if so, for what years will the revised valuations govern the determination of tax liability?
- (2) Are the provisional values for invested capital subject to revision; and, if so, for what years will the revised valuations govern the determination of tax liability?
- (3) Are the principles of valuation recommended in this memorandum approved, subject to any limitations imposed by the answers to the two questions preceding?

Deputy Commissioner.

EXHIBIT E

JULY 25, 1922.

Memorandum to the commissioner:

Re: Revision of provisional values for depletion and invested capital.

This memorandum deals with the subject in the following numbered paragraphs:

- I. History of provisional valuations.
- II. The law and regulations with respect to the determination of March 1, 1913, values for depletion.
- III. Discussion of the provisional valuations with respect to the law and regulations, to show that these valuations are not in accord with methods provided in the regulations, and that the law permits their revision and assessment of additional tax.
- IV. Discussion of the taxpayers' arguments.
- V. Discussion of the interest rate used in discounting to present worth.
- VI. Discussion of the expected future copper price as at any date.
- VII. Summary.
- VIII. Charts and tables showing graphically the data in support of the recommendations submitted in the memorandum to the commissioner dated January 7, 1922.
 - (a) Interest rates used by authorities on mine valuation in the reduction of operating profits to a present value.
 - (b) Chart showing trends of the average prices of iron, copper, zinc, lead, and silver for 10-year periods, as percentages of the March 1, 1913, expected future metal prices now used for mine valuation. Authority to adjust these expected prices to an equitable basis has been requested.
 - (c) Chart showing sales prices of copper, costs of production and profits of the principal copper producers from 1909 to 1920, inclusive. Data from the United States Geological Survey. Costs include depreciation and interest.

(d) Chart showing index prices of commodities in the United States from 1810 to 1922, with a comparative index of Lake copper prices computed with a normal or 100 per cent price of copper at 15 cents; also showing the effects of wars, financial panics, currency inflation, and rapid increases in the rate of gold production, upon the price trends.

(e) Chart showing high, low, and average prices of lake copper from 1845 to 1921, inclusive.

(f) Chart showing average prices of copper for periods of 1, 5, 10, 20, 25, and 30 years, and the price trend lines for average period prices.

(g) Chart showing 10-year average copper prices from four sources, demonstrating that there is little difference between weighted and arithmetical averages, and that the weighted average price is lower than the arithmetical as at March 1, 1913.

(h) Table showing published predictions of engineers as to future copper prices, compared with average prices for the preceding year and the preceding 10 years.

(i) Table showing confidential data as to predictions of copper prices used in valuations submitted by the taxpayers or their engineers in connection with the determination of March 1, 1913, values, or values for invested capital at other dates.

I. HISTORY OF PROVISIONAL VALUATIONS

L. C. Graton took no responsibility for errors made in fact, judgment, or assumption in any of his valuations.

The valuations made by the metals valuation section up to February 1, 1920, were practically all called "provisional valuations." At or about this date, J. C. Dick, then chief of the metals valuation section, requested that valuation memoranda written in the future should not be called "provisional." However, the determinations of metal prices and interest rates for discounting to present worth were continued on the same basis as in the provisional valuations, in spite of strong protest from other engineers in the valuation section. While Mr. Dick and his successor, Mr. Powell, were at the head of the natural resources subdivision, repeated suggestions were made that the expected prices of metals be determined in a consistent and equitable manner, but the suggestions were not entertained.

Shortly after Mr. A. H. Fay became the head of the natural resources subdivision, the St. Joseph Lead Co. raised a strong protest against the price of lead used in the valuation of their mines. Printed briefs were filed to show the inequitable treatment of the lead and zinc industries in comparison with the copper and silver industries. The St. Joseph Lead Co. was informed that errors might have been made in the determination of copper and silver prices, but that such an argument would not be permitted to be the foundation for other errors. From that time, under Mr. Fay's direction, the metals valuation section gathered data and made comparative valuations which were brought to the attention of the commissioner in the memorandum of January 7, 1922.

The commissioner was asked to permit the revision of copper and silver valuations to a reasonable basis, consistent with the methods employed in other valuations, and to eliminate extravagant allowances of paid-in surplus previously made.

II. THE REGULATIONS WITH RESPECT TO THE DETERMINATION OF VALUES FOR DEPLETION

[Regulations No. 33, articles 171 and 172]

Page 88.—"Neither must the value determined as at March 1, 1913, be speculative, but must be determined upon the basis of salable value * * *."

Page 89.—"In any case, in which a corporation uses for purposes of its income tax returns an estimate of the value of mines or of mineral lands or properties as at March 1, 1913, as the basis of computing amounts to be deducted for depletion or return of capital, this department in passing upon the accuracy and fairness of such estimates will attach due weight to the market value of the stock of the corporation on March 1, 1913, and also to the sworn statements as to the value of capital stock of the corporation filed at any time thereafter," for capital stock tax purposes.

"No fictitious or inflated cost or prices will be permitted to form the basis of any calculation of a depletion deduction * * *." Under the heading "Records to be kept," the taxpayer is required to settle up March 1, 1913, value for depletion on his books and the taxpayer is not allowed to revalue his property for depletion on account of the discovery of additional ore bodies. No such prohibition of revaluation is in force against the Government.

[Regulations 45 with Treasury Decisions to December 2, 1910, articles 206 and 207]

Article 206 repeats Regulations 33 in stating that "the value sought should be that established, assuming a transfer between a willing seller and a willing buyer as of that particular date. * * * The commissioner will lend due weight and consideration to any and all factors and evidence having a bearing on the market value, such as cost, actual sales and transfers of similar properties, market value of stock or shares, royalties and rentals, value fixed by the owner for purposes of the capital-stock tax, valuation for local or State taxation, partnership accountings, records of litigation in which the value of the property was in question, the amount at which the property may have been inventoried in probate court, disinterested appraisals by approved methods, and other factors."

Article 207 states that "there can be no revaluation for the purpose of this deduction" (depletion). This article is clearly a mere amplification of the similar statement in Regulations 33 which is applicable to the taxpayer, not to the Income Tax Unit.

Later editions of Regulations 45 and Regulations 62 are not materially different, except that revaluation by the Income Tax Unit is prohibited, unless there has been gross error, misrepresentation or fraud, and even in such cases written application to, and approval by the commissioner is required before a revaluation is made.

[Regulations 62, page 250, section 250 (d) of the law]

"* * * In cases of final settlement of losses and other deductions tentatively allowed by the commissioner pending a determination of the exact amount deductible, the amount of tax or deficiency in tax due may be determined, assessed, and collected at any time * * *."

The solicitor has ruled that this provision of the law clearly applies to provisional deductions for depletion. (Sol. :I:I:20-5-1-13, Apr. 13, 1922.)

III. DISCUSSION OF THE PROVISIONAL VALUATIONS FOR DEPLETION WITH RESPECT TO THE LAW AND REGULATIONS

The law itself is specific with respect to the revision of provisional depletion deductions allowed and the assessment of additional tax, free from any statute of limitations. Such is the opinion of the solicitor.

The regulations all agree that the March 1, 1913, value sought, is the cash value at which the property would be transferred from a willing seller to a willing buyer.

The regulations all recognize that the values determined by appraisal should be checked by all other available evidence of value before being accepted by the commissioner.

The provisional valuations, made chiefly by L. C. Graton, conform to but few of the requirements of the regulations. They are redundant with errors in the methods of calculation of value, even assuming the basis factors and principles of valuation to be correct. They frequently determine values several hundred per cent greater than the values which are indicated by any one of the comparative methods specified in the regulations. They were never checked by such comparative methods, or if the appraisal values were compared with the values indicated by other methods, no weight was attached to the values determined by the other methods. The large majority of the big copper companies have reported one value for depletion and a small fraction of that value for capital-stock-tax purposes. In certain cases the taxpayer's own computation of value was discarded and a much higher value substituted. In other cases the taxpayer repeatedly claimed one value in excise tax returns and early income tax returns, and for later years was allowed to substitute a much greater value, in direct violation of the regulations. In still other cases valuations were made upon data and assumptions in direct conflict with

the published annual reports of the taxpayers. Seldom, if ever, had the annual reports even been read by L. C. Graton before provisional values for depletion were allowed.

The memorandum to the commissioner dated January 7, 1922, embodies the suggestions of the metals valuation section for the correction of the provisional values for depletion and invested capital, and gives comparisons of the provisional and recommended values with values determined by methods other than appraisal. It is clearly shown that the changes recommended will still leave the values determined by appraisal at equal or higher levels than the values determined by any comparative method.

Gross errors in valuation.—Exclusive of judgment there are plain mathematical errors in the majority of the computations of provisional values, principally as follows:

(1) Increasing the recoverable metal content per ton without increased cost per ton, adding 50 to 100 per cent to estimated operating profit per ton. If costs are computed per pound of copper, the added recovery may or may not be in favor of the taxpayer.

(2) Using a production cost per pound of copper attained in past operations mining a high grade ore, and using the same cost per pound as the expected future cost with much lower grade ore, adding 25 to 90 per cent to the estimated operating profit per ton.

(3) Assuming that the grade of the ore would remain constant when a long period of operations had shown that the assay value of the ore was constantly decreasing and might be expected to do so in the future. It is difficult to estimate the percentage amount of this error, but it is great.

(4) Assuming large additions to plant capacity with decreased production costs attending increased capacity, and then assuming an average rate of production and an average price for the entire life of the mine. This does not increase estimated operating profit, but it does increase present worth of that profit erroneously, in one case, at least 100 per cent.

(5) Making no provision for plant replacement when the useful life of the plant is less than the life of the mine.

(6) Accepting erroneous estimates of the taxpayer without check or correction.

(7) Allowing depletion deductions for ore of such low value that it was profitable only in war times, and was not included in the valuation. Thus, in one instance a ton of low-profit ore is excluded to each 2 tons of high-profit ore included in the computation of value. The ore excluded must be removed to permit mining of the commercial ore, and if the price of copper is such that it can be profitably treated, the ore is shipped to the mill instead of to the dump. Perhaps a profit of 25 cents per ton is made, and depletion of 50 cents per ton allowed for this ore. Treating this ore has an indirect effect upon the value of the commercial ore, in that it reduces the plant capacity available for the commercial ore and reduces the present value of that ore.

These are gross errors in valuation. They are in addition to any errors of judgment which appear to have been made in the determination of copper price, and, in the case of nonoperating mines, of the interest rate used in a reduction of operating profit to present worth. Any errors in estimating operating profit appear as even greater errors in the value for depletion, as the present value of the operating profit is divided into a fixed plant value and a variable value for depletion which reflects the full extent of the error. The inclusion of one error in a valuation is bad enough, but when several errors appear in the same valuation, each error magnifies the result of the preceding errors. Thus, if three errors of 50 per cent each have been made, the total error is: 150 by 150 by 150 per cent equals 337.5 per cent, total error.

As every debatable point was decided in favor of the taxpayer at the time the provisional valuations were made, and as there may be many of these points in a single valuation, it is not surprising that the provisional valuations are frequently several hundred per centum in excess of any comparative value. Such a result should have been expected.

Mr. Graton submitted his first valuation for approval of the commissioner late in November, 1919, and made 50 or more valuations between then and December 31, 1919. He was urged to do so by the commissioner. It was impossible to collect and assimilate the data necessary for accurate valuation in such a brief time. That Mr. Graton knew this is a matter of official record,

as each of the provisional valuations is called "provisional," and it is stated in the opening paragraph that: "This case has been hurriedly examined." The only subsequent review of the provisional valuation permitted by the bureau was at the request of the taxpayer.

IV. DISCUSSION OF THE TAXPAYERS' ARGUMENTS

One argument advanced by the attorneys for the taxpayers in the conference on June 30, 1922, was that the copper companies did not pay as great a percentage of tax as some other groups of taxpayers, because the price of copper was fixed by the Government. This is true, but the price was fixed at 23.5 cents per pound of copper and the copper producers asked but 25 cents per pound. Later upon request of 15 small producers the price was advanced to 26 cents per pound of copper. (See Crowell and Wilson's *How America Went to War*.) This argument does not explain why the average rate of tax paid in 1917 by the larger producers, making the greater profits, was approximately 22 per cent, while that paid by the smaller producers was approximately 39 per cent. It is perhaps a coincidence that the larger producers had their tax liability determined upon the basis of provisional valuations by L. C. Graton and the smaller producers had their tax liability determined upon the basis of valuations made by other engineers after L. C. Graton resigned.

Another argument advanced was that the provisional valuations were made final by discussion in conference, receipt of A-2 letters, or refunds, or other action of the Income Tax Unit. In the majority of cases the A-2 letters state that the allowance of the depletion deduction is provisional.

The allowance of invested capital and paid-in surplus was not so carefully guarded in some A-2 letters. This subject can not be discussed in a general way, but must be dealt with by specific cases. In general, the invested capital determinations by valuation are not so radically erroneous as the provisional March 1, 1913, values, but there are some notable exceptions to this statement.

In a few large cases the March 1, 1913, value has been carefully determined by J. C. Dick, or other engineers, and little or no change in such valuations could be made, unless the copper price is reduced from 16.25 or 17.4 to 15 cents per pound, or the discount rate of interest increased in the case of properties having no prior operating record as at March 1, 1913. The arguments of attorneys of the taxpayers were chiefly confined to the discussion of this type of case.

The argument that no excess profits were made, which is implied by the fact that none were or will be paid by some of the large companies, unless valuations are revised, is best combated by an examination of Chart C. This chart is also the best evidence that, with 3 to 4 cents depletion per pound of copper, there will be little or no tax from the copper industry in normal years.

The statistical data presented by the attorneys for the taxpayers are misleading, as they include the war-year prices of copper, with a very great production at the same time. No data were presented to show the average prices per pound received for copper up to March 1, 1913.

V. DISCUSSION OF THE INTEREST RATE USED IN DISCOUNTING TO PRESENT WORTH

The interest rates now in use for this purpose do not give unreasonably large values for long-life mines which had a dividend record prior to the date of valuation. For short-life mines the rates in use are sometimes too low. For valuations based entirely upon estimates of the cost of production, date of initial production, rate of production, and other essential factors the rates are much too low, even when the valuation applies to developed ores only, as in the case of invested capital valuations.

The price of a mining stock frequently doubles between the date a fully developed mine is acquired and the date it begins to be operated at a profit. This is due to the elimination of the risk inherent in estimates. As an example, 100,000 shares of unissued stock of the New Cornelia Copper Co. were sold December 9, 1913, for \$8 per share. In 1916 a bond issue of \$4,000,000 par value was floated. The bonds were convertible into stock at \$10 per share. In 1915 the stock was quoted at \$8 to \$9.50 per share and in 1921 the low quotation was \$12 per share. Little or no additional ore has been developed since 1913.

Chart A shows the interest rates employed by mining engineers in determining the present worth of future profits. This chart is based upon a perusal and abstracting of all the references to mine valuation which it has been possible to obtain, probably in excess of 90 per cent of all that has been written upon the subject in the English language.

The results show 211 expressions of preference for the Hoskold Formula, which is used by the metals-valuation section, and but 15 expressions of preference for the other valuation formula, which is a proper one to use. Of the 211 instances in which the Hoskold formula is advocated 79 engineers would discount at interest rates below 10 per cent, 55 at a 10 per cent rate, and 77 at a greater rate. The expression of opinion is overwhelmingly in favor of at least a 10 per cent rate of interest. The valuations for which lower rates are advocated are chiefly coal, iron, gold, and porphyry copper mines with the ore entirely developed. There is no published record of the use of a lower rate than 10 per cent in metal mine valuation, unless the ore body valued was entirely developed, or unless a factor of safety sufficient to make up for the low interest rate was introduced in some other factor or factors of the valuation. Such factors of safety are (1) reducing the metal price to a minimum instead of an average and (2) increasing expected costs of production to cover any unforeseen contingencies.

The subject of the rate of interest, which is proper for discounting expected future profits from mining operations to a cash value, could be discussed at any length, but has been limited in this memorandum to a summary of the results of months of reading and abstracting. The engineer who would use a lower rate than 10 per cent for the valuation of a metal mine with no previous operating record, and no factors of safety in other parts of the valuation, would not be considered to be competent, unless the mine was situated in a district where accurate comparative cost data were available and mining methods standardized. Few engineers would use a rate lower than 10 per cent under any condition unless adequate factors of safety in other parts of the valuation were sufficient to compensate for the low discount rate.

VI. COPPER PRICES

Copper prices have a trend similar to the price trend for wholesale commodities. The price trend for wholesale commodities in gold-standard countries is governed by three principal factors affecting currency appreciation or depreciation:

1. War produces a shortage of commodities and increased prices.
2. Currency inflation, frequently because of the war needs of a government, produces increased prices.
3. A rapid increase in the volume of gold production depreciates gold as a standard of value and increases prices.

The opposite causes have the opposite effect.

Copper prices in the United States have been practically free of tariff walls, and as the United States has for many years been the world's chief producer of copper, world-wide economic conditions influence the United States price of copper independently of other commodities. The more noticeable departures of the price trend for copper from that for commodities as a whole are nearly all traceable to important foreign wars or their after effects in competition for armament. Prior to 1880 in most countries, and up to 1890 or 1900 in some countries, bronze was the material of which cannon were made. After 1890 munitions still consumed an important amount of copper, naval construction a great amount, and the electrical industry grew in importance. Notwithstanding these increases in the uses to which copper was adapted, the opening of the porphyry copper mines from 1905 to 1913 and their rapid expansion had created a productive capacity for copper greatly in excess of the world's requirements, United States Geological Survey, Mineral resources, 1913, (Pt. I, p. 525), and much greater increases in productive capacity were projected, especially in Chile, Russia, and the Belgian Congo. There was no reason, then, as at March 1, 1913, to expect an increase in the price of copper on account of a shortage of supply.

No one could predict an increasing price trend as at March 1, 1913, on account of future wars.

The third cause of increased prices for commodities including copper, is an increasing rate of gold production. Gold production was increasing slowly both in the United States and in the world as at March 1, 1913. But little further increase was expected, however, as the Rand Goldfield had reached the height of its production, and it was generally predicted that old mines would be exhausted more rapidly than new ones could be opened, and that the new mines being at greater depths would not be able to mine as high grade ore as the older mines which were being depleted. In the United States increased production had been made possible by the discovery of gold in Alaska, and the introduction of dredges for working very low grade gravels which could not be worked by other methods for various reasons. No marked increase in the gold production of any important gold district in the world was confidently expected in 1913 and it was well known that within a few years the world's gold production would cease to increase and begin to decline, unless discoveries of new fields of major importance were made.

The rise in prices of all commodities in the periods 1848 to 1857, and 1890 to 1913, is ascribed by economists to the rapid increases in gold production during these periods.

But there was no reason as at 1913 to expect commodity prices in general, or the prices of copper in particular, to increase indefinitely. All factors, except the unknown factor of war, indicated a stabilization of prices for a period, followed by declining prices. Prices had been practically stable since 1910, and continued to be stable until after 1915.

A chart is attached to this memorandum showing the trend of prices for wholesale commodities in the United States from 1810 to 1920. (Data from an article in the *Annalist*, April 11, 1921, by Ralph G. Hurlin, statistician for the Russell Sage Foundation.) On the same chart is shown a comparative curve of index prices for Lake Copper computed from a price of 15 cents per pound as the normal price or the 100 per cent index figure. The data for this curve are taken from Weed's *Copper Handbook* for the period 1845 to 1912 and from *Metals Statistics* thereafter. A price of 15 cents is considered normal, because this is the price for Lake Copper (weighted average) from 1845 to 1912, inclusive, as well as the price for the years 1884 and 1913 when both the copper-price index and commodity-price index were at the normal 100 per cent index figure. On the same chart are shown gold production curves for the world and for the United States. This chart shows two major price cycles beginning and ending with major wars. The effects of currency inflation, financial panics, and rapid increases of gold production upon the general price trend are apparent. An increased volume of gold production has but slight effect upon prices provided the rate of production is constant. The effect of foreign wars upon the copper price trend is graphically shown. Copper prices respond more rapidly and fluctuate more violently with war and panic conditions than do the prices of commodities as a whole.

Statisticians generally recognize that there is little or no difference between weighted average prices and arithmetical average prices over long periods of time. This has been demonstrated repeatedly for various commodities. The metals valuation section has made comparative price determinations for copper and iron by both methods. (A weighted average price is found by multiplying yearly price by the yearly production or sales, adding total values so determined for a period, and dividing by total production for the period. An arithmetical average price is determined by dividing the sum of the yearly prices for the period by the number of years in the period.) The United States Geological Survey publishes weighted average yearly prices for copper which are usually below the arithmetical average prices. The weighted average yearly price of the United States Geological Survey for the period 1903 to 1912 inclusive, is 14.89 cents per pound of copper, and the arithmetical average price is 14.93 cents. For the same period the *Engineering and Mining Journal*, arithmetical average price is 14.86 cents per pound of electrolytic copper. The United States Geological Survey figures are slightly higher than the *Engineering and Mining Journal* average, because they include Lake Copper which sells at a premium of approximately two-tenths of a cent above the electrolytic copper price. The *Engineering and Mining Journal* price for Lake Copper during the same period is 15.14 cents per pound. For February, 1913, the price of electrolytic copper was 14.97 cents per pound.

Charts accompany this memorandum showing the average prices of Lake copper by periods of a year, 5 years, 10 years, 15 years, 20 years, 25 years, and 30 years. As at 1913, the 10-year average price of copper and the yearly average are the same, and every other average is lower. The price trends of the period averages from 1907 to 1915, inclusive, are constant or decreasing, except for the 15-year average price curve, which is increasing. In fact, since 1900, no marked increase or decrease in the trend of prices is evident, if all of the trend lines for periods of different duration are considered.

Another chart shows trend of the 10-year average prices from four sources. The United States Geological Survey and Engineering and Mining Journal prices as at March 1, 1913, are almost identical. The 10-year average price was the same in 1906 as in 1913, and had been both higher and lower at intermediate periods. A 10-year average price is considered preferable to shorter periods because fluctuations which obscure the general trend are smoothed out and practically disappear, but the period is not so long that it fails to keep in touch with the most recent tendencies of price trend. The metals valuation section has recommended that future prices used for valuation purposes as at any date, be determined for all common metals as a 10-year average of prior prices unless the trend of prices is strongly and consistently up or down. In such instances price trends must be given consideration. As at 1913 no pronounced trend in metal prices was apparent or could be predicted. Predictions of higher metal prices are all based upon the trend from 1893 to 1913 or some other date, which is the increase from rock-bottom prices during a disastrous panic, to a normal condition. Predictions that further increases would continue indefinitely were not justified by any condition existing at that time.

Two tables are attached to this memorandum, the first of which gives published predictions of copper prices by mining financiers and engineers, and the second giving expected future prices used in the valuations of their copper mines by mining companies in support of values claimed for invested capital or depletion in connection with tax returns. From an examination of these tables it is apparent that L. C. Graton's prediction of a future price of 16.25 cents to 17.4 cents per pound is not supported by a single other price prediction. A price of 14 to 15 cents per pound is almost universally accepted as "normal" and even lower prices are customarily used in valuations when interest rates as low as those accepted by the Income Tax Unit are employed in the determination of present worth or cash value.

L. C. Graton's prediction of an increasing price trend for copper is not justified by economic considerations or by the actual price trend for a period of years prior to 1913. His statement that an arithmetical average price is lower than a weighted average price is contradicted by comparison of determinations by both methods of yearly and period prices. His price predictions of 16.25 cents per pound to 17.4 cents per pound are not supported by concurrent opinion or the price predictions of a large number of equally capable men. There is no basis of fact or reason for such a prediction and it should be considered to have been a gross error to use such an expected future copper price for the valuation of copper mines. A price of 15 cents per pound would be more than liberal.

Ten-year average prices have been used in the valuation of iron, lead, zinc, and other mines. Silver and copper alone depart from this practice. The adoption of any other basis for copper valuation is inequitable to other mining industries, unless they are given similar price concessions and large refunds of taxes.

An increase of $1\frac{1}{4}$ cents per pound profit, using a 16.25 cent copper price, is equivalent to a 25 per cent increase in a valuation if the cost of copper production is 10 cents per pound. A 17.4 cent copper price, with a normal cost of production of 10 cents per pound, is equivalent to a 48 per cent increase in the valuation. In some of the provisional valuations by L. C. Graton, an expected future price of copper of 17.4 cents per pound has been used with costs of production attained in 1914 and 1915, on the assumption that costs in these years were 1.15 cents per pound above normal. This is an erroneous assumption, as shown upon Chart C, prepared from data published in the Engineering and Mining Journal and in the chapter on "Copper" in Mineral Resources for 1920, published by the United States Geological Survey.

The administration of the Income Tax Law would be almost impossible with respect to valuation if each expected price at dates from 1850 to 1922 was

predicted from price trend curves. No two men would ever agree as to the trend or to what future period it would be applicable.

There is little excuse for estimating the future from trend lines of the past in the case of the copper price (which increases the provisional values), and not figuring future trends in the same manner for other factors, which increase in direct ratio to the copper price, and which would off-set any increase in gross receipts. Such factors are (1) grade of ore, (2) cost of production, and (3) rate of interest for discounting to present worth.

Both from consideration of equity, and administration of the law, the copper price should not be estimated on the trend basis, but upon a basis consistent with that employed in the valuation of other mines.

VII. SUMMARY

This memorandum contains in brief form the arguments which the metals valuation section advances in support of the following conclusions:

(1) That the law and regulations permit the revision of provisional or erroneous valuations.

(2) That the provisional valuations were erroneous in a great many respects both as to fact, mathematical computation, and judgment.

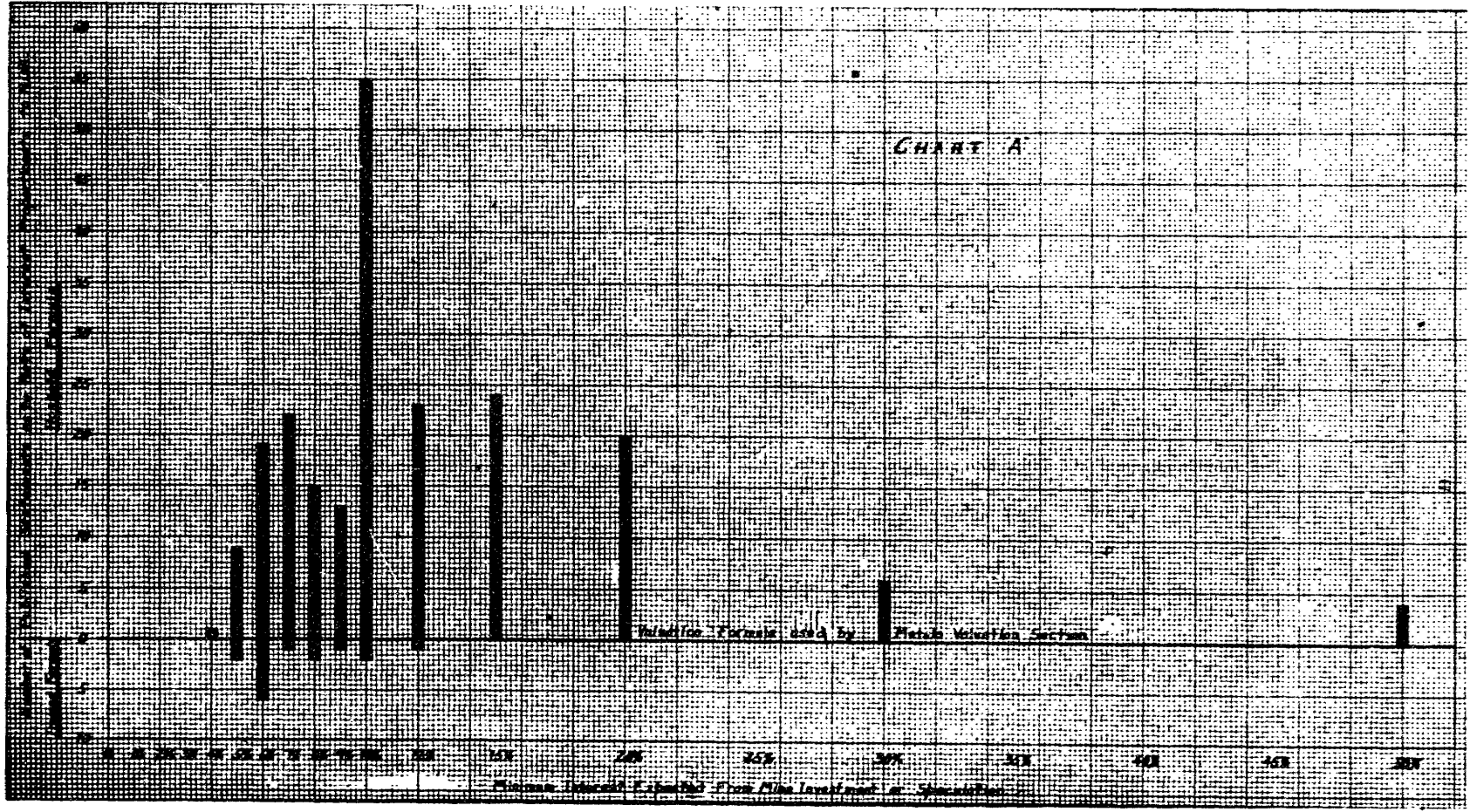
(3) That copper and silver prices used in the valuations should be revised in order that other taxpayers do not bear the burden of tax which should be borne by these industries, or that all other metal prices be computed on the "trend" theory and large refunds of taxes made by the Treasury.

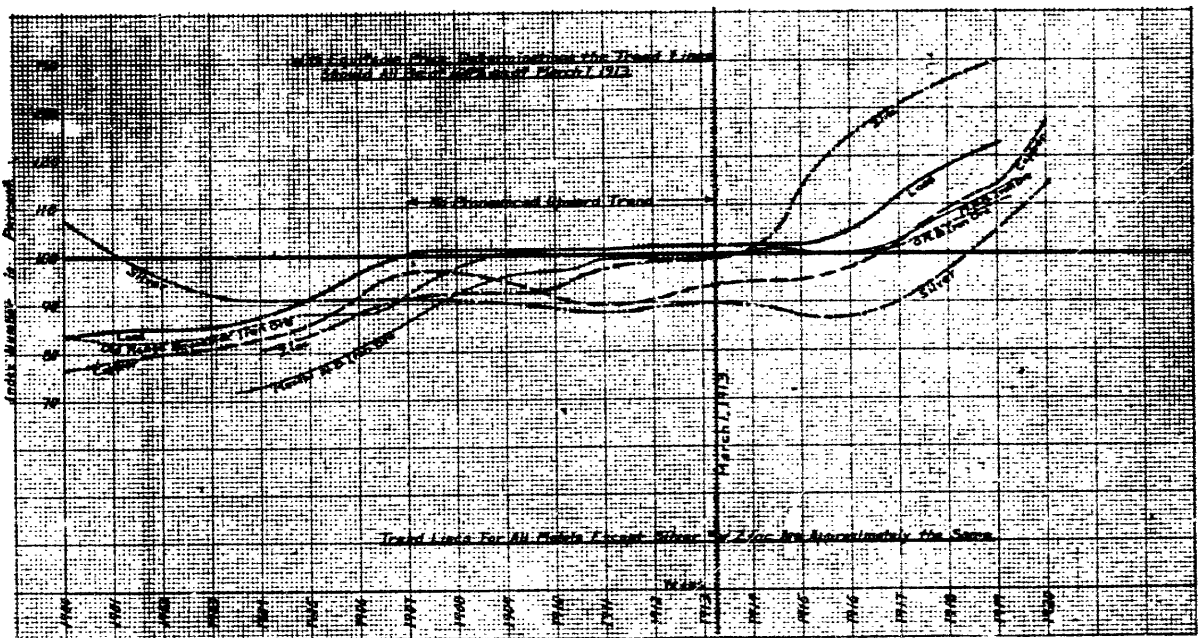
(4) That a 10 per cent interest rate is the minimum rate at which the expected profit from untried mines should be discounted to present worth or cash value.

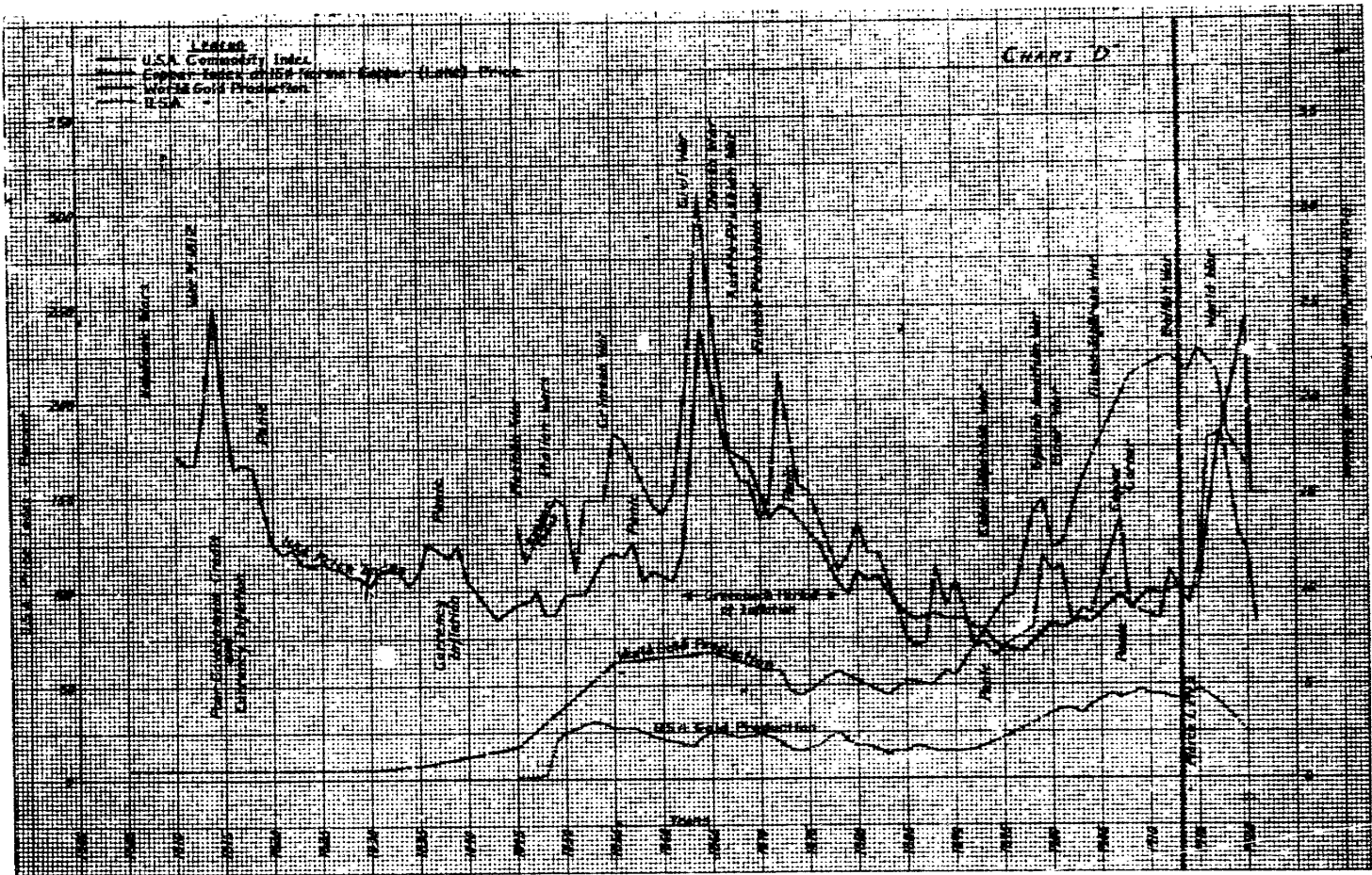
(5) That if a "price-trend" method is used, "cost trends," "interest-rate trend," and other trends should be considered in the valuations. Increasing prices represent depreciating money value, and are accompanied by corresponding increases in costs of production and interest rates. Increasing prices should not be considered as any indication of increased profits or of increased values, unless the general price trend of commodities and wages is increasing at a far less rapid rate.

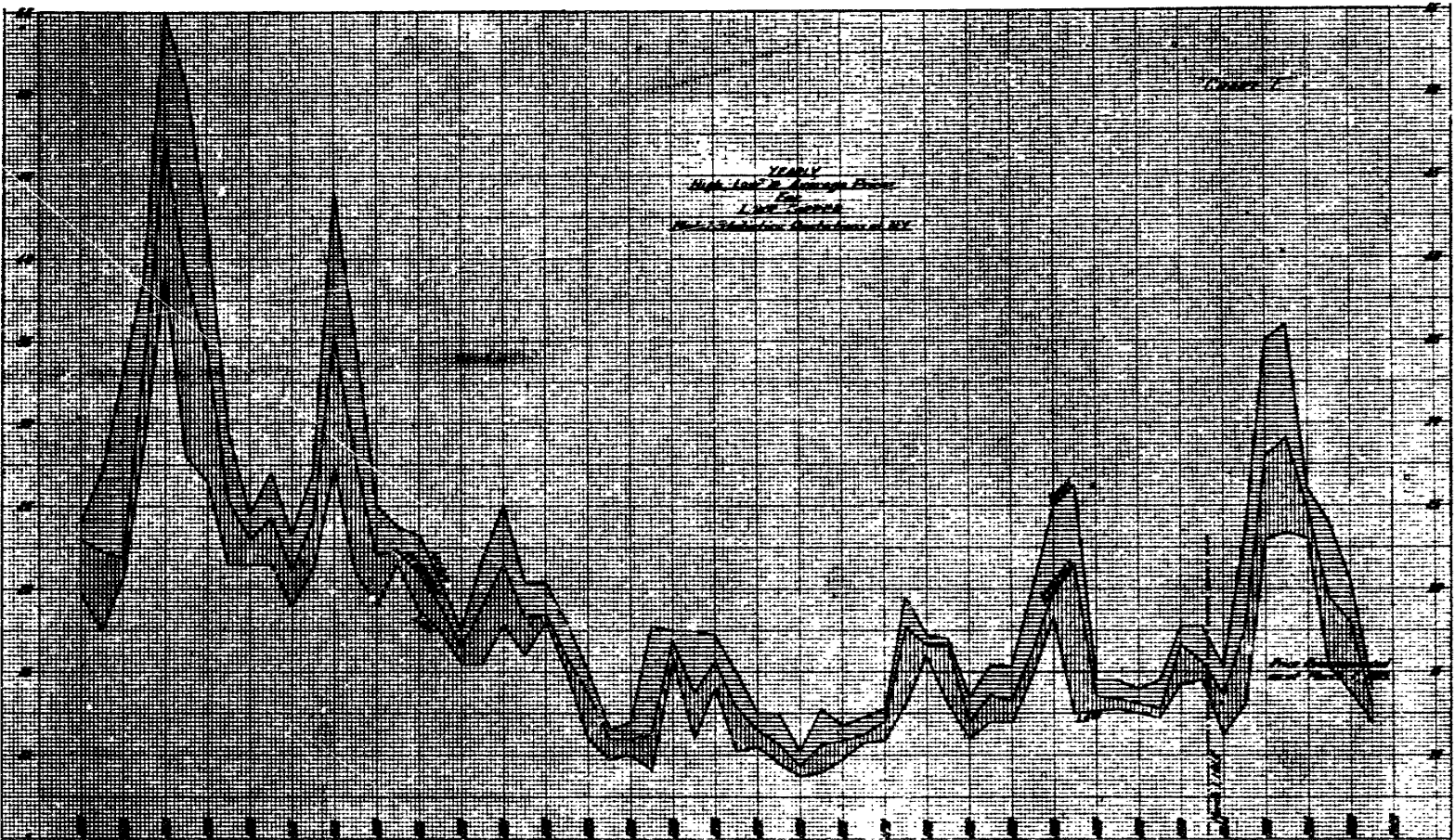
-----, *Deputy Commissioner.*

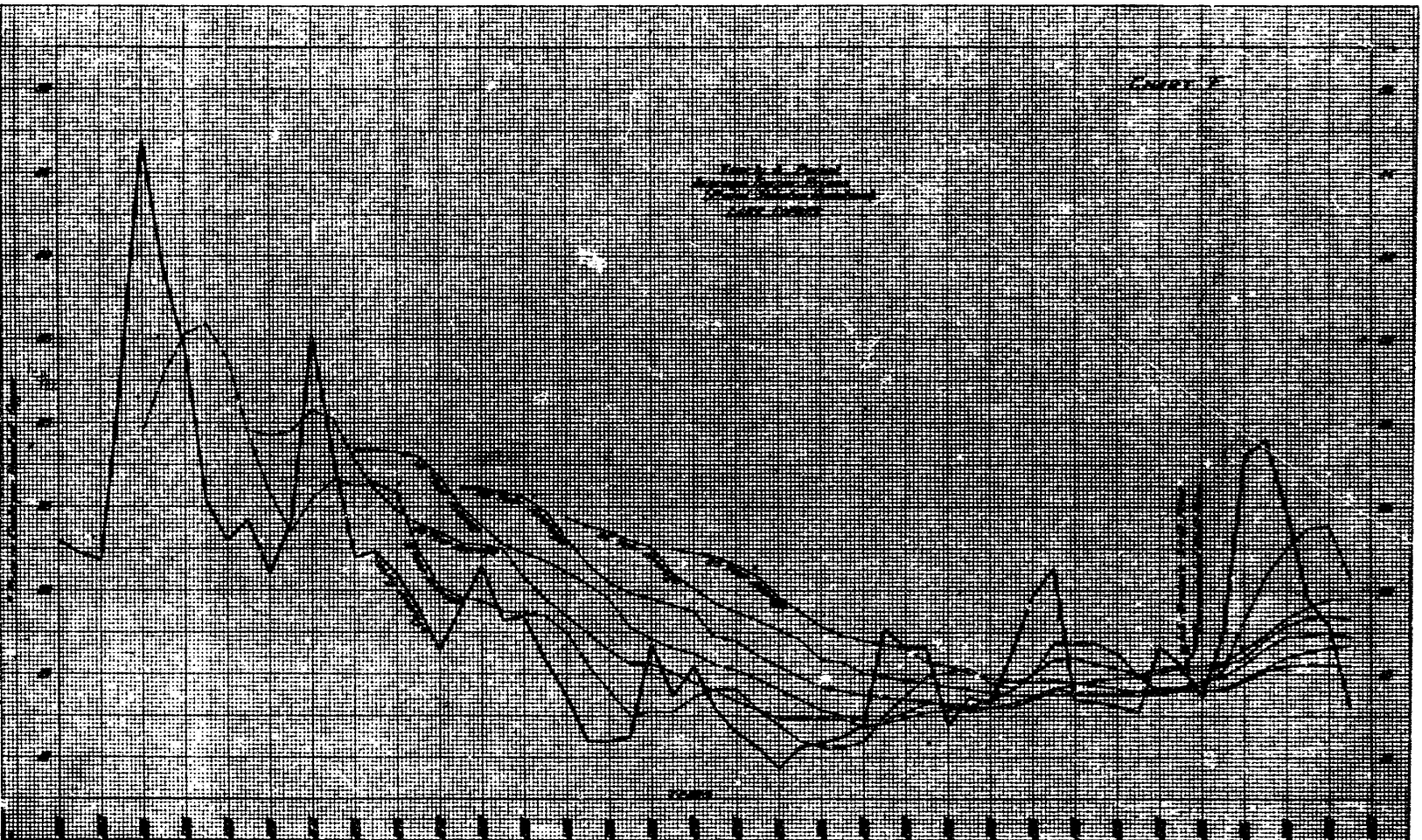
JULY 26, 1922.











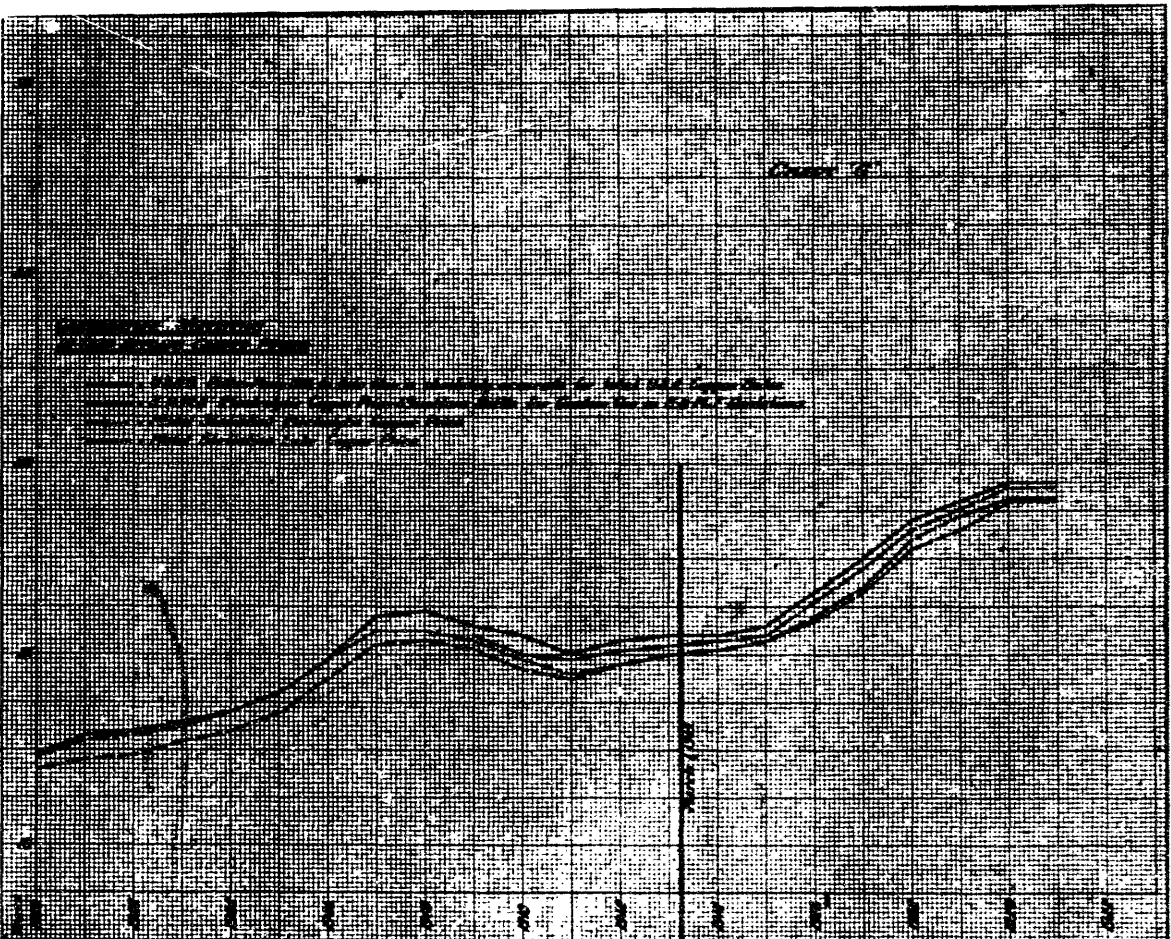


TABLE II.—Copper price predictions

Authority	Year	Price prediction	Engineering and Mining Journal, 10-year average ¹	Engineering and Mining Journal, current price
		Cents	Cents	Cents
Engineering and Mining Journal	1899	(²)	11.92	16.67
T. A. Rickard	1904	14.00	13.04	12.82
Frank H. Probert	1907	14.00	15.33	20.00
H. C. Hoover	1909	14.00	15.11	12.98
J. R. Finlay	1909	³ 15.50	15.11	12.98
Do	1911	³ 14.00	14.39	12.38
Michigan operators	1911	³ 13.50	14.39	12.38
Heath Steele	1913	15.00	15.06	15.27
William Y. Westervelt	1913	13.80	15.06	15.27
Morton Weber	1913	14.20	15.06	15.27
A. O. Christenson	1913	14.50	15.06	15.27
Clinton H. Crane	1913	13.60	15.06	15.27
L. C. Stackey	(⁴)	14.00		
J. R. Finlay	1920	15.00	19.01	17.46
Do	1922	15.00		
Percy R. Middleton	1922	15.00		
L. C. Graton "Provisional valuations"	(⁵)	16.25	⁶ 14.91	14.97
Recommended by metals valuation section as at	(⁵)	15.00	⁶ 14.91	14.97

The weighted average sales price of Lake Copper from 1845 to 1912, inclusive, is 14 221451 cents per pound (Weeds Copper Handbook, Vol. XI (1912-13), p. 1310.)

¹ Ten-year average price includes the year for which the average is given plus nine preceding years. The average is arithmetical.

² Not over 14 cents.

³ Lake Copper which sells at an average premium of 0.2 to 0.3 cent over electrolytic copper.

⁴ Normal.

⁵ Mar. 1, 1913.

⁶ For ten-year period ending Feb. 28, 1913.

⁷ Average price for February, 1913.

TABLE I.—Confidential data from engineers' reports.—Submitted by taxpayers in support of values claimed for invested capital¹

Date	Price prediction cents per pound			10-year average cents per pounds ²	Current price cents per pound ³
	High	Low	Average		
September 8, 1899	18	14		11.9	17.34
April 24, 1901			15	12.4	16.42
October 21, 1905	15	12		13.6	15.965
August 3, 1905	15	13		13.6	15.664
1906			14	14.4	19.278
March 20, 1906	15	12		14.4	17.869
1906-7			13	14.4-15.3	19 to 20
March 12, 1908	15	12		15.5	12.905
1908			13	15.5	13.208
1911			14	14.4	12.376
1911			14	14.4	12.376
Mar. 1, 1913			15	14.91	14.971
Do			15	14.91	14.971
Do			15	15.19	15.253
Do			14.971	14.91	14.971
1915	18	13		15.3	17.275
1919			15	18.5	18.608
March 1, 1913			14.875	15.19	15.253
Do			15	15.19	15.253

NOTE.—Nearly all of the taxpayers represented at the conference on June 30, 1922, have used a 10-year average in their estimates of the future copper price as at March 1, 1913, but instead of a 10-year average price prior to March 1, 1913, they have used the price for the period 1907 to 1916, inclusive, arriving at a price of approximately 16.67 cents per pound. As at March 1, 1913, it is obviously impossible to use actual copper prices of later years as a basis of price prediction.

¹ Names of engineers and companies left blank in order that confidential information should not be recorded.

² The 10-year average price given is for the 10 calendar years including the year of the prediction, except in case of March 1, 1913, prediction for which the actual 10 year prior average price is quoted.

³ Current price is the price for the preceding month, except in case the day and month of the prediction is not given, in which case the current price is for the year of the price prediction.

⁴ Electrolytic price plus premium of 0.28 cent per pound which was received for Lake Copper for the 10-year period 1903 to 1912 inclusive.

EXHIBIT F

JANUARY 22, 1925.

Memorandum to Mr. L. C. Manson, counsel.
 In re: Copper revaluations.

Referring to your inquiry as to definitions and instances of gross errors referred to on page 6 of letter dated July 25, 1922, Exhibit "E."

1. Increasing the recoverable metal content per ton without increasing the cost per ton.

A company having a normal concentrating recovery of 75 per cent planning to add an oil flotation plant which it is estimated will increase the total recovery of metal to 90 per cent. The 90 per cent recovery is used with operating costs of the existing plant without additional operating cost for flotation plant being taken into consideration. Such operating costs are material, as shown by the fact that royalties alone will amount to 8 cents to 15 cents per ton of material treated. Furthermore, the cost of additional plant was not taken into consideration.

Utah and Miami valuations were instances of the above.

2. Using a production cost per pound of copper attained in plant operations, mining a high grade ore and using the same cost per pound as the expected cost with much lower grade ore.

Past operations on 4½ per cent second-class ore, with 90 per cent recovery, later operations on lower grade ore of 3 per cent, giving an 80 per cent recovery with past operating cost of \$4.87 per ton used in the appraisal.

$$4.5 \times 20000 = 90 \times .50 = 81 \text{ pounds metal per ton: } \frac{\$4.87}{81} = \$0.06 \text{ per pound.}$$

$$3 \times 2000 = 60 \times .80 = 48 \text{ pounds metal per ton: } \frac{\$4.87}{48} = \$0.102 \text{ per pound.}$$

Increasing in cost per pound, \$0.042 per pound.

Chino, Wolverine, and Osceola are instances of the above.

3. Assuming that the grade of the ore would remain constant when a long period of operations had shown that the assay value of the ore was constantly decreasing and might be expected to do so in the future.

In the Butte district the yield in the Anaconda mine dropped in nine years from 118.5 pounds copper per ton of ore treated to 70.2 pounds, a reduction of 40¾ per cent. A chart accompanies this report showing a decline in ores mined by the Phelps-Dodge Corporation.

Phelps-Dodge Copper Queen mine is an instance of the above.

4. Assuming large additions to plant capacity with decreased production costs attending increased capacity and then assuming an average rate of production and an average price for the entire life of the mine.

For instance, a uniform grade and gross proceeds per ton assumed, property, however, increasing production at successive operating periods through increased facilities with corresponding decrease in operating costs. If computation is made for ultimate value, on the basis of averages over the entire life of the property discounted to present worth an entirely different and erroneous result will be obtained than if the valuation is made for the successive periods as follows:

Years	Total operating profit	Valuation factors	Present value
20-year life:			
Wrong basis	\$1,773,000	\$0.374302	\$663,637
Correct basis	1,773,000	0.218521	410,627

The Inspiration had an error of this kind.

5. Making no provision for plant requirement when the useful life of the plant is less than the life of the mine.

Reserves assumed 10,000,000,000 pounds.

Total assumed, ultimate plant, \$50,000,000.

Actual plant on ground, March 1, 1913, \$10,000,000.

Allowing double the rate of 1913 capacity the total cost would be \$20,000,000, leaving \$30,000,000 which should be deducted from the present worth of operating profits.

Inspiration and Chino have revisions somewhat similar to the above.

6. Accepting erroneous estimates of the taxpayer without check or correction.

The provisional valuations contained many such erroneous statements in connection with estimates of reserves and value of ores.

Chino and Kennicott cases are instances of the above.

Respectfully submitted.

EDWARD T. WRIGHT,
Investigating Engineer.

Approved:

L. H. PARKER,
Chief Engineer.

EXHIBIT G

April 13, 1922.

In re: Assessment where deductions are tentatively allowed pending a determination of the exact amount deductible.

DEPUTY COMMISSIONER BATSON:

The opinion of this office has been requested upon the question as to whether or not the limitation, contained in section 250 (d) of the revenue act of 1921, upon the time when assessments can be made, applies to cases where depletion deductions are tentatively allowed, pending a valuation of the correct amount deductible.

Section 250 of the revenue act of 1921 provides in part as follows:

"(d) The amount of income, excess profits, or war-profits taxes due under any return made under this act for the taxable year 1921 * * * shall be determined and assessed by the commissioner within four years after the return was filed, and the amount of any such taxes due * * * under prior income, excess profits, or war profits tax acts * * * shall be determined and assessed within five years after the return was filed * * * ; *Provided further*, That in cases coming within the scope of paragraph (9) of subdivision (a) of section 214, or of paragraph (8) of subdivision (a) of section 234, or in cases of final settlement of losses and other deductions tentatively allowed by the commissioner pending a determination of the exact amount deductible, the amount of tax or deficiency in tax due may be determined, assessed, and collected at any time; but prior to the assessment thereof the taxpayer shall be notified and given a period of not less than 30 days in which to file an appeal and be heard as hereinafter provided in this subdivision."

The proviso above quoted restricts the effect of the general provisions fixing the time when assessments must be made and excepts from the operation of the general provisions those cases where deductions are tentatively allowed pending a determination of the exact amount deductible. In section 214 (a) (10) and section 234 (a) (9) of the revenue act of 1921, and the corresponding sections and subdivisions of the revenue act of 1918, individuals and corporations in computing their net income are allowed a reasonable deduction for the depletion of oil and gas wells, mines, other natural deposits, and timber. The amount of the deduction in such cases is necessarily dependent upon the valuation as of the basic date of the mineral or timber properties which are being depleted. In order to determine the reasonableness of the deduction, data must be furnished to or secured by the bureau to substantiate the valuations which are the basis of the deductions. This necessarily takes time. Where the deductions are tentatively allowed, pending a valuation of the properties and a determination of the exact amount deductible, the cases fall squarely within the provisions of the proviso and the amount of the tax due may be determined and assessed at any time.

It is suggested, however, that the valuation of the mineral properties and the determination of the exact amount deductible be ascertained as soon as practicable so that the amount of the tax may be assessed within the time fixed by the general provisions of section 250 (d) of the revenue act of 1921.

The letter submitted with your memorandum of inquiry, which the unit proposes to send to taxpayers operating properties subject to depletion, has been considered. The letter will serve a very useful purpose in that it will notify the taxpayer of the tentative allowance of his depletion deduction and will form a valuable record of the bureau in case any question subsequently arises as to the time within which the assessment of the taxes due should have been made.

CARL A. MAPES,
Solicitor.

EXHIBIT H

DECEMBER 11, 1922.

Memorandum of Deputy Commissioner Batson.

(Attention Mr. Fay, head natural resources division.)

Reference is made to the memorandum prepared by Mr. Grimes to the commissioner, date January 7, to Mr. Fay's memorandum to you, dated February 7, to your memorandum to Mr. Fay, dated February 16, and to the various memoranda regarding the tax liability of copper companies for 1917 and subsequent years.

Full consideration has been given to the question and it is concluded that for 1919 and subsequent years the valuation of the ore bodies of copper mines should be revised. The price of approximately 15 cents a pound, recommended by the natural resources division, and the 10 per cent interest rate, are approved for the purpose of discounting to the present worth. The Income Tax Unit is authorized and instructed immediately to proceed to the revaluation of the copper and silver mining companies for the purpose of determining their tax liability for 1919 and subsequent years in accordance with the recommendations heretofore made by it.

D. H. BLAIR,

Commissioner of Internal Revenue.

Approved:

A. W. MELLON,

Secretary of the Treasury.

EXHIBIT I.

ENGINEERING DIVISION, INCOME TAX UNIT.

November 28, 1924.

Memorandum to Solicitor of Internal Revenue.

In re: Chile Copper Co., Anaconda Copper Co., and copper revaluations in general.

Reference is made to the accompanying formal appeal filed by the above-named companies (three paper bound volumes) in the matter of copper revaluation—special reference being made to memorandum of the Secretary of the Treasury dated December 11, 1922. (Copy attached.)

There are indications that the bureau's position, as outlined in the above-mentioned memorandum and actions already taken thereunder, are open to strong contest by taxpayers.

The questions of the right of the Secretary of the Treasury to reopen valuations made by his predecessor in office and to make such revaluations retroactive to January 1, 1919, appear never to have been examined and formally decided by a proper legal authority.

In view of the fact that taxpayers, whose values and taxes have been changed under the above-mentioned memorandum are voicing almost unanimous objection thereto, it is requested that a written opinion be given on the right to reopen valuations, and that this opinion be submitted before further time, labor, and money are expended on a matter which promises protracted controversy and litigation for the bureau.

J. C. BRIGHT,

Deputy Commissioner.

EXHIBIT J

DECEMBER 5, 1924.

Memorandum to Mr. L. H. Parker, chief engineer for Senate Committee Investigating Bureau of Internal Revenue.

Reference: Your memorandum of November 18, 1924, requesting certain information in regard to the revaluation of copper and silver mining companies.

The information requested in your subheadings (a), (b), and (c) will be found upon photostats accompanying this memorandum, as follows:

(a) Six photostats of tables submitted to the Commissioner of Internal Revenue in requesting authority to revalue the copper-mining industry.

(b) Six photostats of tables showing the results of copper revaluation.

(c) Five photostats of charts showing for typical companies the appraised values for invested capital and as at March 1, 1913, in comparison with other available evidence as to values of the same mining properties over a period of

years. Similar charts could be prepared for the majority of the other copper-mining companies and will be furnished to you for any additional companies you wish to designate. These charts will substantiate by verbal statement that the methods of valuation previously adopted for the lead, zinc, iron, and other mining industries, and approved by the commissioner on December 11, 1922, for the revaluation of copper and silver mines, give appraised values of from approximately 100 to 125 per cent of the cash values indicated by commercial transactions. The values allowed in revaluation are liberal to the taxpayer, notwithstanding the drastic reductions from the original and provisional valuations, but my experience indicates that the liberality of the allowances is just sufficient to settle the major portion of the valuations without litigations.

With respect to your fourth question as to the present status of copper revaluations, you are advised that all of the revaluations for copper mining companies having income in 1919 have been completed, with the exception of the March 1, 1913, value of the Shattuck-Arizona Copper Co. The returns of this company are at present in the office of the Solicitor of Internal Revenue for interpretation of legal contracts in relation to copper inventories for the year 1918, and the revaluation can not be completed until the inventory issue for 1918 is decided.

A few copper-mining companies have accepted or indicated their intention to accept the revaluations for 1919 and subsequent years, but others are contesting the authority of the Secretary of the Treasury or the Commissioner of Internal Revenue to authorize revaluations and urging a review of this issue, preferably by the Attorney General. The contention of these taxpayers is to the effect that the valuations once used in an audit of a tax return are binding upon the Government for all future years on the legal principle of "res adjudicata." This argument was advanced as to the principal contention of the copper-mining companies at open hearings held by the Secretary of the Treasury in June and July, 1922. The Secretary of the Treasury and the Commissioner of Internal Revenue did not act without legal advice in their authorization for copper and silver mine revaluations under date of December 11, 1922.

The following memorandum has been submitted to the Solicitor of Internal Revenue:

ENGINEERING DIVISION, INCOME TAX UNIT,
November 28, 1924.

Memorandum to Solicitor of Internal Revenue,
In re: Chile Copper Co., Anaconda Copper Co., and copper revaluations in general.

Reference is made to the accompanying formal appeal filed by the above-named companies (three paper-bound volumes) in the matter of copper revaluation, special reference being made to memorandum of the Secretary of the Treasury dated December 11, 1922. (Copy attached.)

There are indications that the bureau's position, as outlined in the above-mentioned memorandum, and actions already taken thereunder are open to strong contest by taxpayers.

The questions of the right of the Secretary of the Treasury to reopen valuations made by his predecessor in office and to make such revaluations retroactive to January 1, 1919, appear never to have been examined and formally decided by a proper legal authority.

In view of the fact that taxpayers, whose values and taxes have been changed under the above-mentioned memorandum, are voicing almost unanimous objection thereto, it is requested that written opinion be given on the right to reopen valuations and that this opinion be submitted before further time, labor, and money are expended on a matter which promises protracted controversy and litigation for the bureau.

J. C. BRIGHT,
Deputy Commissioner.

At the present time the 1919 returns of seven copper mining companies are held in the metals valuation section under instructions from the head of the engineering division until such time as an answer to the above memorandum is received from the Solicitor of Internal Revenue.

If the legal issues raised by the taxpayers are not conceded or sustained, no difficulty is anticipated by the metals valuation section in the final settlement of the valuation of the copper mines within 10 or 15 per cent of the amounts shown for revaluations on the photostats.

JOHN ALLEN GIMES
Chief Metals Valuation Section

EXHIBIT K

1662 INVESTIGATION OF BUREAU OF INTERNAL REVENUE

Name of company	Engineering division valuation report				Audit division					
	Date completed (f)	Report forwarded—		Date received (i)	Auditor's name (h)	Date completed (j)	Date A-2 letters	Address	Waivers, 1917	Date expiring, 1918 (b)
		Date (g)	To whom (k)							
Anaconda Copper Mining Co.	Jan. 25, 1924	Jan. 26, 1924	Cons. return, sec. G.	June 30, 1924	J. B. Koop	Aug. 14, 1924				
Champion Copper Co.	May 9, 1924	May 9, 1924	Corp. audit, sec. 21.	Nov. 28, 1924	C. L. Reddish			Boston, Mass.	Mar. 15, 1925	Mar. 15, 1924
Chile Copper Co.	Nov. 14, 1923	Nov. 16, 1923	Cons. return, sec. G.	Nov. 21, 1923	H. Downing	Jan. 12, 1924	Feb. 23, 1924	New York, N. Y.	No.	June 16, 1925
Chino Copper Co. "Q-(1)."	Sept. 18, 1923	Sept. 24, 1923	Natural resources, sec. G.	Apr. 16, 1924	M. P. Sholnik	Oct. 20, 1924	Nov. 7, 1924	do.	do.	Yes.
Columbia Parrot Mng. & Smelting Co.	Mar. 14, 1924	Mar. 14, 1924	do.	Mar. 20, 1924	F. P. Schlosser	Jan. 10, 1925				
Consolidated Copper Mines Co. ¹				No report	L. S. Barrows	Sept. 21, 1923		New York, N. Y.	No.	No.
Giroux Cons. Mines Co. ¹				do.	do.	do.		do.	do.	Do.
Copper Range Co.	Dec. 16, 1924	Dec. 16, 1924	Cons. return, sec. G.	Nov. 28, 1924	C. L. Reddish			Boston, Mass.	Mar. 15, 1926	Mar. 15, 1926
East Butte Copper Mining Co.	Dec. 5, 1924	Dec. 6, 1924	do.	Dec. 15, 1924	L. Bleetstein	Jan. 13, 1925		Butte, Mont.	Apr. 1, 1925	May 2, 1925
First National Copper Co.				June 10, 1922	I. Kaplan	Aug. 15, 1922	Sept. 7, 1922	New York, N. Y.	No.	No.
Balaklala Cons. Copper Co.				do.	do.	do.	do.	do.	Apr. 1, 1923	Do.
Franklin Mining Co.	Oct. 1, 1924	Oct. 1, 1924	Cons. return, sec. G.	Oct. 1, 1924	A. C. Tilton	Nov. 12, 1924	No tax	Boston, Mass.	No.	Do.
Kennecott Copper Corp.	Dec. 8, 1924	Dec. 8, 1924	do.	Dec. 10, 1924	I. Kaplan	Jan. 7, 1925		New York, N. Y.	Mar. 15, 1925	Mar. 15, 1925
Braden Copper Co.	Feb. 25, 1924	No record	No record	do.	do.	do.		do.	do.	Do.
Magma Copper Co.	July 19, 1924	July 19, 1924	Cons. return, sec. G.	July 19, 1924	C. W. Zimmer	Oct. 22, 1924	None	do.	No.	No.
Mason Valley Mines Co.				May 28, 1923	J. B. Koop	July 16, 1924	No tax	do.	do.	June 10, 1925
Grey Eagle Copper Co.				do.	do.	do.	do.	do.	do.	No.
Miami Copper Co. "Q-(2)."	Sept. 5, 1923	Sept. 5, 1923	Natural resources, sec. G.	Mar. 25, 1924	M. P. Sholnik	Apr. 1, 1924	Apr. 29, 1924	do.	Apr. 1, 1924	Do.

Mountain Copper Co. (Ltd.)	Dec. 1, 1924	Dec. 1, 1924	Cons. return, sec. G.	Jan. 14, 1925	G. J. Grommet			San Francisco, Calif.	do	Do.
Nevada Cons. Copper Co.	June 18, 1924	June 18, 1924	do	June 12, 1924	G. W. Coughlin	July 28, 1924	Aug. 19, 1924	New York, N. Y.	No	Mar. 15, 1926
New Cornelia Copper Co.	Jan. 15, 1924	Jan. 17, 1924	Corp. audit, sec. 21.	Jan. 27, 1924	L. L. Beasley	Jan. 9, 1925		Calumet, Mich.	Apr. 1, 1925	No.
Ohio Copper Co.				May 10, 1923	A. C. Tilton	June 9, 1923	No tax	New York, N. Y.	No	Do.
Pittsmtont Copper Co.	June 18, 1924	June 18, 1924	Cons. return, sec. G.	Dec. 15, 1924	L. Bleetstein	Jan. 13, 1925		Butte, Mont.	Apr. 1, 1925	May 2, 1925
Quincy Mining Co.	May 22, 1923	May 22, 1923	Natural resources, sec. G.		A. C. Birdsall	Sept. 17, 1924	No tax	New York, N. Y.	Dec. 31, 1921	No.
Ray Cons. Copper Co.	July 23, 1924	No record	Cons. return, sec. G.	July 23, 1924	C. A. Manning	Oct. 30, 1924	Nov. 11, 1924	do	No	July 1, 1925
Tennessee Copper & Coal Corp.				Nov. 24, 1922	W. S. Madder	Jan. 29, 1924	Feb. 6, 1924	do	do	No.
United States Smelt. & Ref. Co.	Jan. 9, 1923	Jan. 9, 1923	Natural resources, sec. G.	Oct. 14, 1924	C. N. Thurston			Boston, Mass.	Apr. 1, 1925	June 14, 1925
United Verde Copper Co.	Mar. 13, 1924	Mar. 13, 1924	do	Mar. 20, 1924	F. B. Schloser	Jan. 10, 1925		New York, N. Y.	do	June 16, 1925
Utah Copper Co., "Q-(3)."	July 1, 1923	July 1, 1923	do	June 1, 1924	C. W. Zimmer	Sept. 19, 1924	Dec. 8, 1924	do	No	Mar. 15, 1925
Utah Metal & Tunnel Co.				No report	W. L. Austin	1921	No tax	Salt Lake City.	do	No.
Centennial Copper Mng. Co.	Oct. 1, 1924	Oct. 1, 1924	Corp. audit, sec. 21.	Oct. 17, 1924	O'Neill	Oct. 25, 1924	do			
Inspiration Cons. Cop. Co., "Q-(4)."	Oct. 24, 1924	Oct. 24, 1924	do	Nov. 26, 1924	Ruffner					
Isle Royal Cop. Co.	Apr. 20, 1923	Apr. 20, 1923	do	June 26, 1924	Kean		Oct. 2, 1924			
Mohawk Mining Co.	Oct. 31, 1924	Nov. 7, 1924	do	Nov. 19, 1924	Ruffner	Nov. 26, 1924	Dec. 23, 1924			
North Butte Mng. Co.	Sept. 16, 1924	Sept. 16, 1924	do	June 30, 1924	Kean					
Utah Cons. Mining Co.	Jan. 7, 1925	Jan. 7, 1925	do	Nov. 19, 1924	Ruffner			New York, N. Y.	Yes	No.
Wolverine Copper Mng. Co., "Q-(5)."	Mar. 1, 1924	Mar. 4, 1924	Natural resources.	June 30, 1924	do	Aug. 15, 1924	Sept. 5, 1924			
Davis Daly Copper Co.	June 5, 1924	June 5, 1924	do	do	do	Aug. 30, 1924	Sept. 9, 1924			
Old Dominion Co.								Boston, Mass.	Dec. 31, 1923	No.
Calumet & Helca Mng. Co.	Feb. 15, 1924	Feb. 15, 1924	Cons. return, sec. G.		Now in metals section.			do	Sept. 15, 1923	Sept. 13, 1925
Ahmeek Mining Co.	Nov. 24, 1924	Nov. 24, 1924	Corp. audit, sec. 21.							
Allouez Mining Co.	Nov. 25, 1924	Nov. 26, 1924	do							
La Salle Copper Co.	Oct. 1, 1924	Oct. 1, 1924	do							
Oseola Cons. Cop. Mng. Co.	Jan. 30, 1924	Jan. 30, 1924	Natural resources, sec. G.							
White Pine Copper Co.	May 29, 1923	May 29, 1923	do							

¹ No valuation made.

EXHIBIT K—Continued

Name of company	Engineering division valuation report			Audit division						
	Date completed (f)	Report forwarded—		Date received (i)	Auditor's name (h)	Date completed (j)	Date A-2 letters	Address	Waivers, 1917	Date expiring, 1918 (b)
		Date (g)	To whom (k)							
Mass. Cons. Mng. Co.	Sept. 25, 1924	Sept. 30, 1924	Corp. audit, sec. 21.							
Penn Mining Co....	May 10, 1923	June 6, 1923								
Calaveras Copper Co.	Nov. 19, 1924	Nov. 19, 1924	Corp. audit, sec. 21.							
Ellamer Mining Co.	Jan. 31, 1922	Jan. 31, 1922	Natural resources sec.							
Arizona Commercial Mng. Co.	Apr. 2, 1924	Aug. 9, 1924	Corp. audit, sec. 21.							
Democrata Canania Cop. & Sm. Co.	Aug. 2, 1923	Aug. 2, 1923	Natural resources, sec. G.							
Phelps-Dodge Corporation. ²								New York, N. Y.	July 1, 1923	June 14, 1925
New Planet Cop. Mng. Co.	Dec. 2, 1924	Feb. 3, 1924	Corp. audit, sec. 21.							
Arizona Copper Co. (Ltd.).	Apr. 6, 1924	Apr. 22, 1924	Natural res. audit sec.							
Engles Copper Mng. Co.	Dec. 10, 1924	Dec. 10, 1924	Corp. audit, sec. 25.							
Island Copper Co. of Calif.	Apr. 10, 1923	Apr. 11, 1923	Nat. resources sec.							
Great Western Copper Co.	June 28, 1923	June 29, 1923	do.					New York, N. Y.	No.	No.
Cerro de Pasco Cop. Co.								do.	Apr. 1, 1924	Do.
Consolidated Arizona Smelt. Co.										
Calumet & Arizona Mng. Co.	Sept. 17, 1924	Sept. 17, 1924	Cons. ret., sec. G.							

² Valuation report in process.

EXHIBIT L

NOTES TO ACCOMPANY VALUATION CHART

Quincy Mining Co.

Explanation of the values used on valuation chart:

A. Provisional value per share, \$118.52, computed as follows:

Provisional valuation.....	\$6,510,988.00
Plant and equipment.....	4,977,313.40
Nonmineral property.....	316,550.00
Current assets.....	1,254,495.82
	<hr/>
	13,059,347.22
Current liabilities.....	21,217.67
	<hr/>
Net assets.....	<u>13,038,129.55</u>

Shares outstanding, 110,000.

Provisional value per share, \$118.52.

B. Revaluation value per share, \$99.95, computed as follows:

Revaluation.....	4,467,341.00
Plant and equipment.....	4,977,313.40
Nonmineral property.....	316,550.00
Current assets.....	1,254,495.82
	<hr/>
	11,015,700.22
Less current liabilities.....	21,217.67
	<hr/>
	10,994,482.59

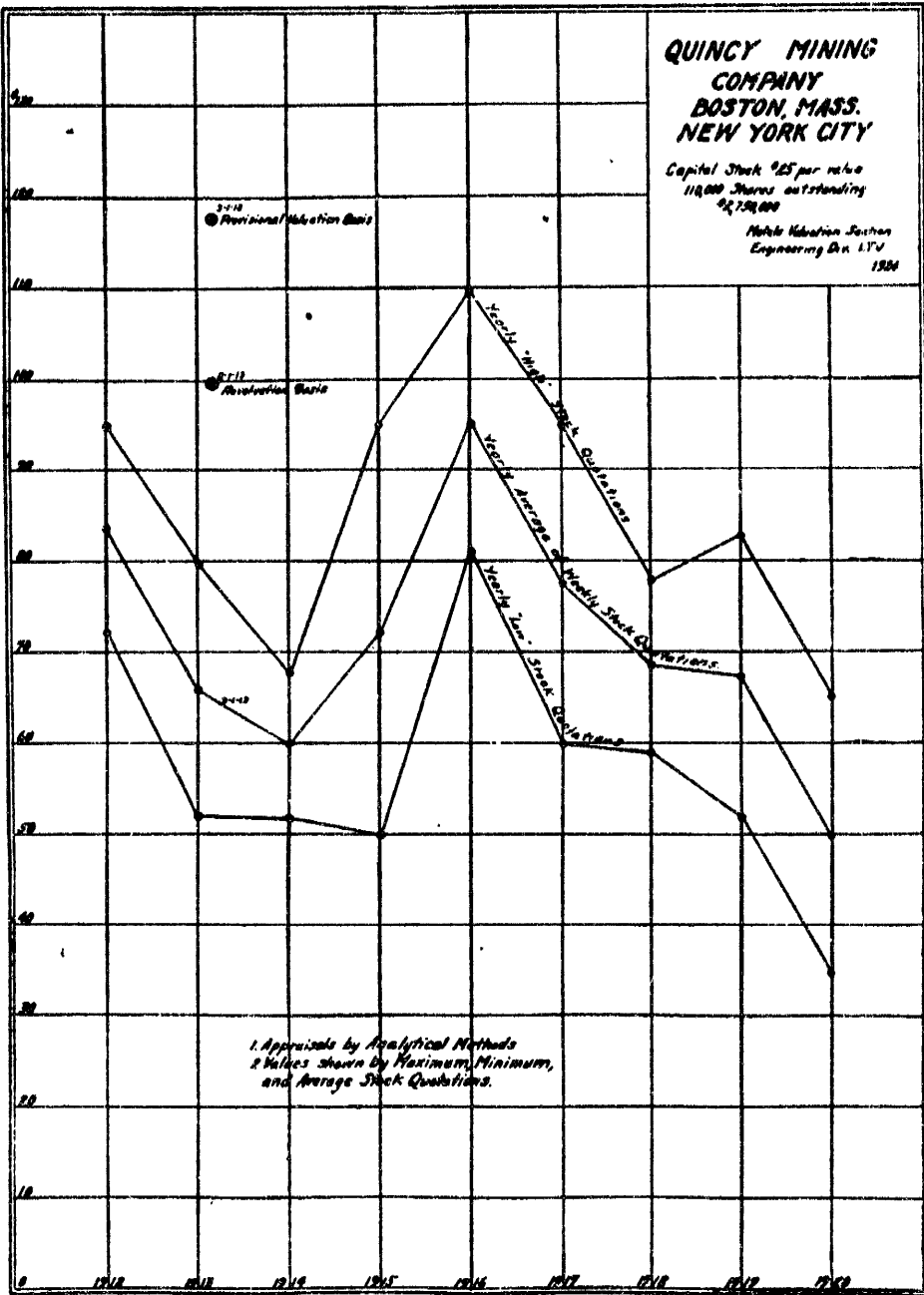
Shares outstanding, 110,000.

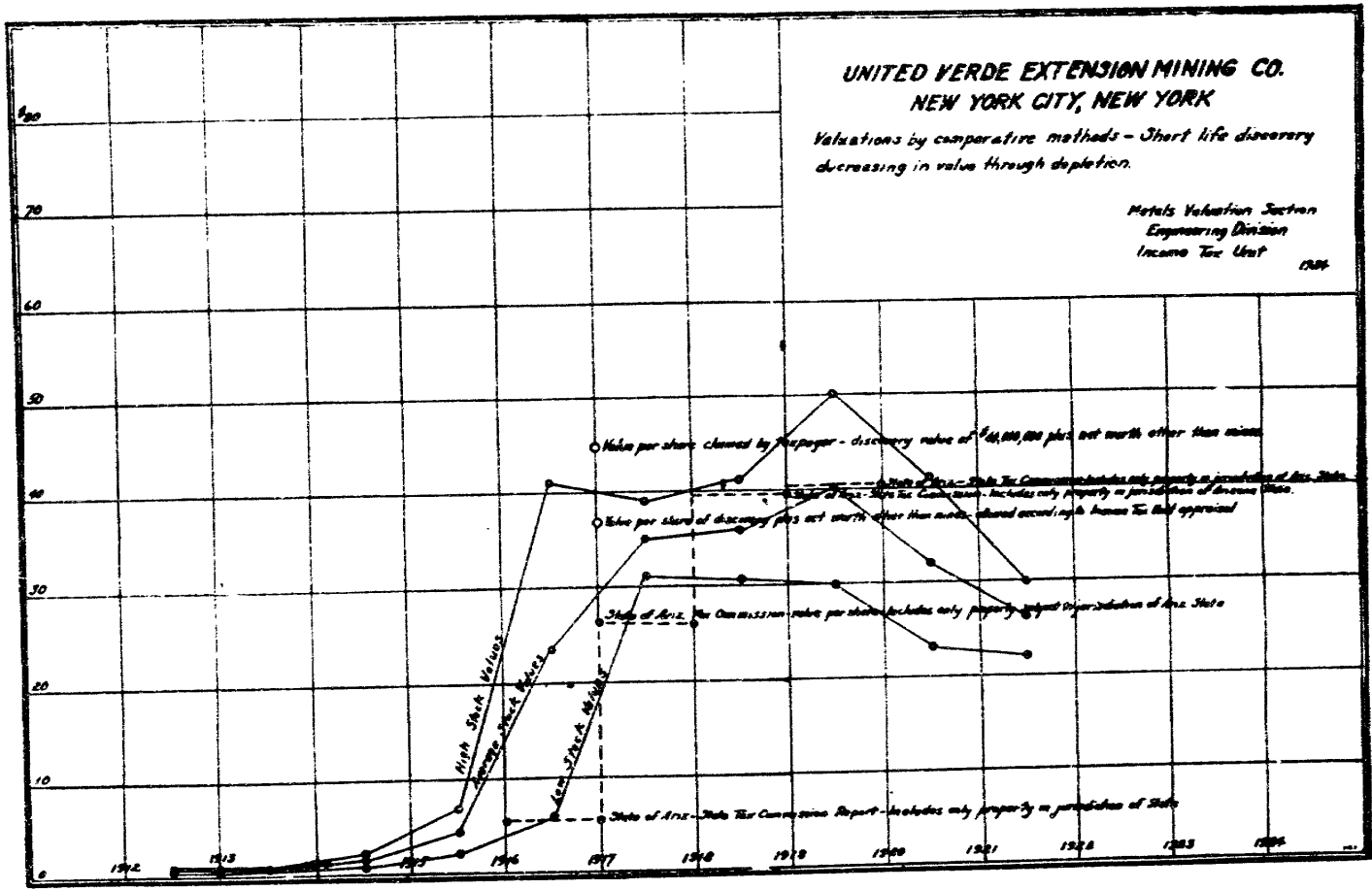
Revaluation per share, \$99.95.

**QUINCY MINING
COMPANY
BOSTON, MASS.
NEW YORK CITY**

Capital Stock \$25 per share
110,000 Shares outstanding
\$2,750,000

Mobile Vibration Section
Engineering Div. I.T.V.
1934





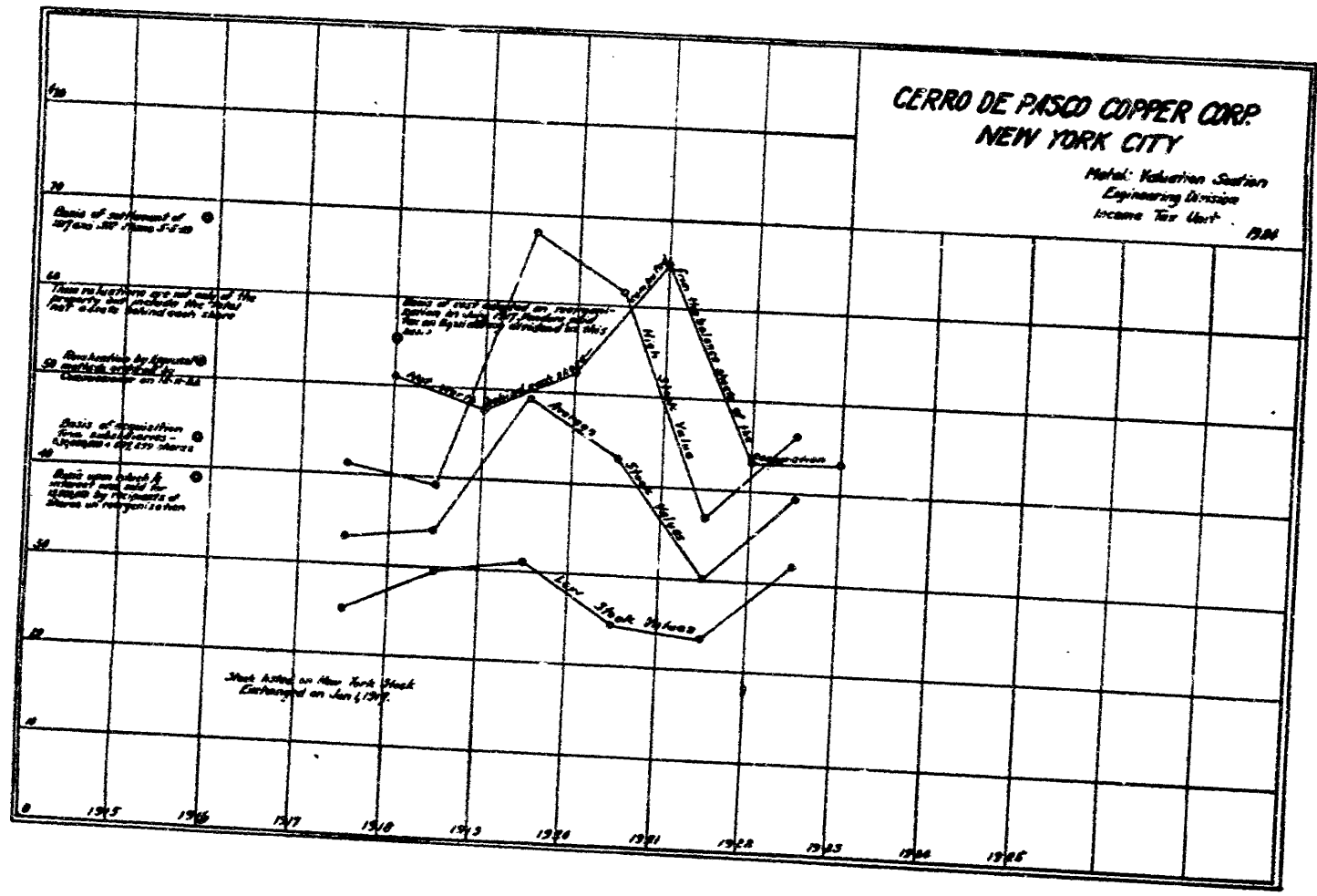
Inspiration Copper Co.

	Ores only	Net worth other than mines ¹	Total	Shares outstanding	Value per share
Acquisition:					
Original valuation.....	{ ² \$62,615,451 ³ 3,436,000	\$1,778,952	\$64,394,403 3,436,000	\$722,943 39,797	\$89.07 86.46
Revised valuation.....	{ 66,051,451 ² 12,679,008 ³ 795,940	1,778,952	67,830,403 14,458,800 795,940	762,740 722,943 39,797	88.93 20.00 20.00
Mar. 1, 1913, values and cost of subsequent acquisitions:					
Original valuation.....	{ ² 88,218,000 ³ 3,436,000	202,259	88,420,259 3,436,000	722,943 39,797	122.31 86.46
Revised valuation.....	{ 91,654,000 ² 16,015,334 ³ 795,940	202,259	91,856,259 16,217,593 795,940	762,740 722,943 39,797	120.43 22.43 20.00
	{ 16,811,274	202,259	17,013,533	762,740	22.30

¹ \$600,000 commission to bankers is carried in mine cost above. It might be carried as net worth other than mines.

² Inspiration and Live Oak ores.

³ Keystone ores acquired 1915.



Chile Exploration Co. of New Jersey.—10,000 shares, par value \$100 per share; 10 shares sold for cash; 9,990 shares issued for mines and \$40,819.73 cash.

Chile Copper Co. of Maine.—\$20,000,000 par value stock; 4,000,000 shares of \$5 par value; 3,000,000 shares issued for mines; 1,000,000 shares held in treasury for conversion of \$5,000,000 bond issue of Chile Exploration Co.

Chile Copper Co. of Delaware.—\$110,000,000 par value stock, at \$25 a share, or 4,400,000 shares; \$95,000,000 par value of stock issued for mines, or 3,800,000 shares; \$15,000,000 par value of stock held in treasury for conversion of \$15,000,000 par value bond issues.

$$\frac{80,785,813}{3,800,000} = \$21.26 \text{ per share.}$$

$$\frac{224,000,000}{3,800,000} = \$58.95 \text{ per share.}$$

No assets at March 1, 1913, other than options on mines-development expense, etc., except receipts from bond sale balanced by outstanding bond issue.

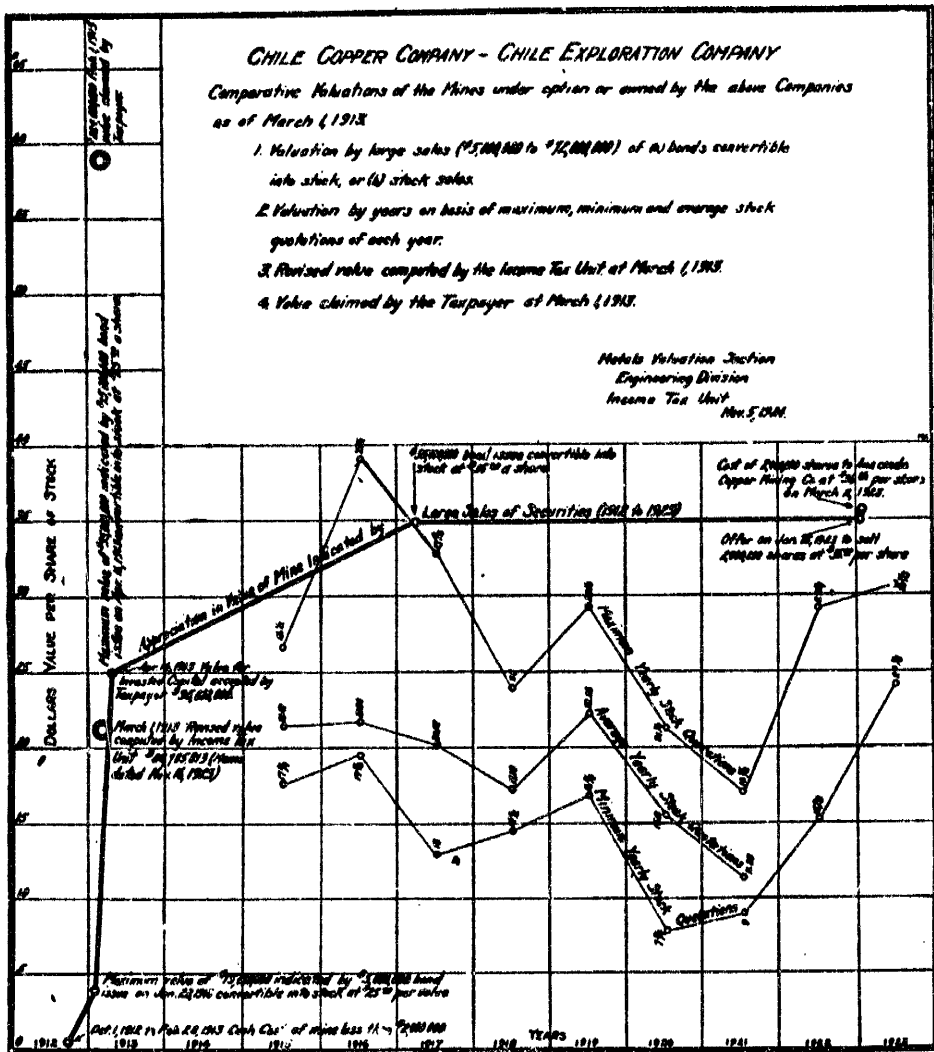


EXHIBIT M

TREASURY DEPARTMENT,
Washington, February 28, 1924.

CHILE COPPER CO.,
120 Broadway, New York, N. Y.

SIRS: An examination of your income and profits tax returns for the years 1918 and 1919 has been made and the result thereof is shown in the attached statement.

In the event that the adjustments made are not satisfactory and it is desired to perfect the appeal provided for below, it will be necessary that you execute and forward with that appeal the attached waiver form.

In accordance with the provisions of section 250 (d) of the revenue act of 1921, you are granted 30 days within which to file an appeal and to show cause or reason why this tax or deficiency should not be paid. The appeal, if filed, must be addressed to the Commissioner of Internal Revenue, Washington, D. C., for the specific attention of IT:NR—HD—2—App.

Treasury Decision No. 3492, setting forth the privileges of taxpayers in cases of appeal, is attached for your information and guidance.

Where a taxpayer has been given an opportunity to appeal and has not done so, as set forth above, and an assessment has been made, or where a taxpayer has appealed and an assessment in accordance with the final decision on such appeal has been made, no claim in abatement of the assessment will be entertained.

This assessment is in addition to all other outstanding and unpaid assessments appearing upon the collector's lists.

Payment should not be made until a bill is received from the Collector of Internal Revenue for your district, and remittance should then be made to him.

Respectfully,

J. G. BRIGHT,
Deputy Commissioner.

EXHIBIT N

TREASURY DEPARTMENT,
Washington, April 11, 1924.

Memorandum for Mr. Bright.
Attention Mr. Greenidge.

Under date of December 11, 1922, the Secretary of the Treasury approved an order of the Commissioner to revalue copper mining companies for the purpose of determining their tax liability for 1919 and subsequent years. In said order silver mining companies were inadvertently mentioned. In view of the fact that numerous hearings were granted to copper mining companies and the silver mining companies were not notified of such hearings and had no hearing, and that silver mining was not discussed in the various meetings, and it was the intention at the time to revalue only copper mining companies, you will therefore ignore all reference to silver mining companies in said order.

D. H. BLAIR,
Commissioner.

Approved:

A. W. MELLON,
Secretary of the Treasury

EXHIBIT O

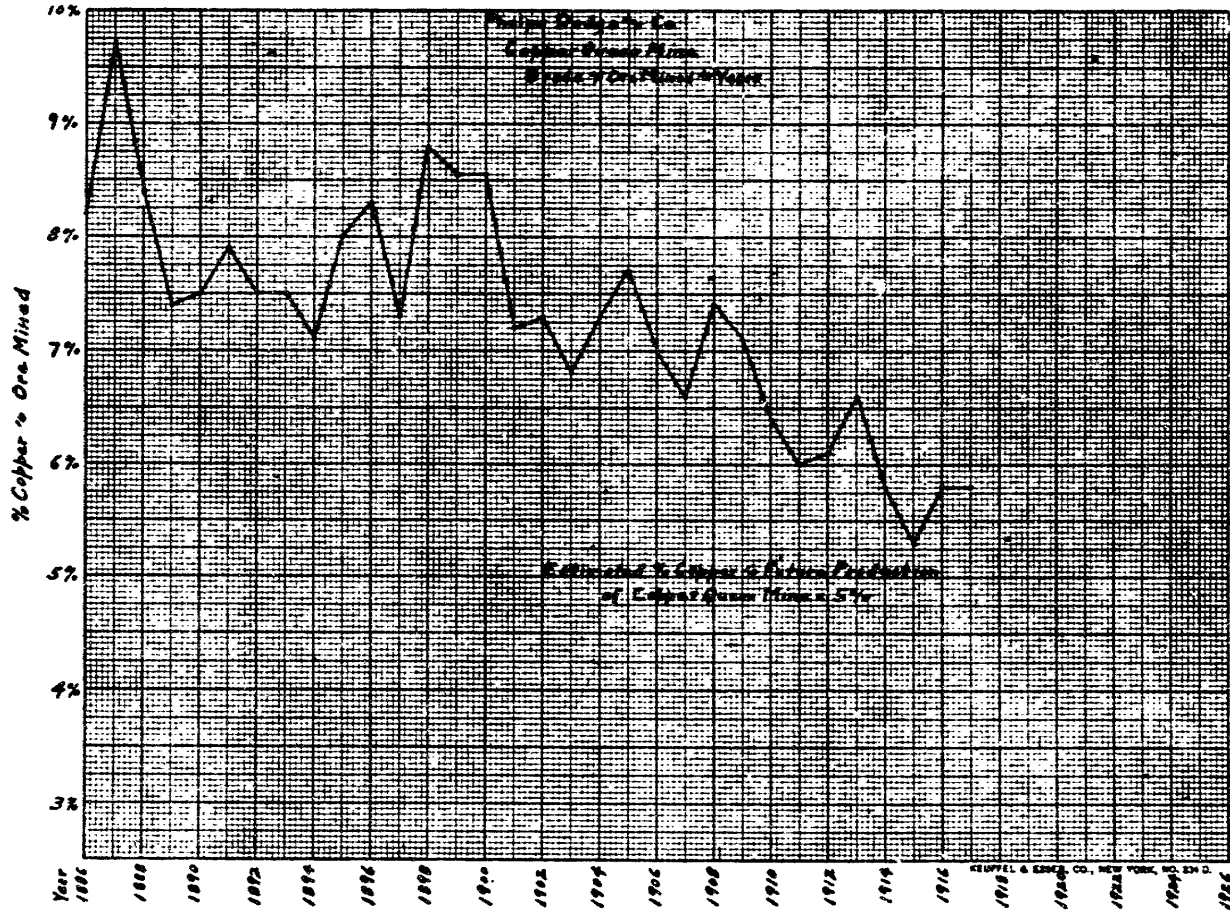


EXHIBIT P

JANUARY 24, 1925.

Memorandum to Mr. L. C. Mangson, counsel,
 Subject: Copper mines revaluations.

Referring to the questions brought up in the Senate committee's hearing yesterday, and on which further information is desired.

(1) *Correction of amount of taxes estimated as involved in the revaluation of copper mines for years 1917 and 1918.* In my office report No. 8, dated January 8, 1925, I used the estimate of the metals valuation section, as submitted to the commissioner in 1922, of \$60,000,000. I have since learned that this estimate included an estimate for 1916 additional tax of \$5,000,000, and also additional taxes that would be due from silver mines of approximately \$5,000,000. The amount of additional taxes involved in copper mines only for 1917 and 1918 should be reduced to \$50,000,000.

(2) *Profits reported by copper companies for 1917 and 1918.* There would appear to be no immediate data available as to profits reported by the copper companies themselves for years 1917 and 1918.

The following data, however, is taken from compilation entitled "Taxation of Copper Mining Companies in 1917," made by the engineering division and submitted to the commissioner in 1922. These figures involve 53 out of the 71 companies, but include all of the large and important companies, and are based on the "provisional" valuations.

Profits, 1917

		Per cent of gross income
Gross income for 1917.....	\$661,426,604	100.00
Deductions other than depletion.....	\$366,916,200	
Deductions for depletion.....	63,458,545	
 Total expense.....	 430,374,745	 65.06
Net income or profits indicated.....	231,051,859	34.94
Per cent net income to total expense, 53.69.		

Profits, 1918

The following computations are made to arrive at an estimate for 1918 profits.

From Exhibit B1 to B5, Analysis of tax computations, the total net income of five companies cited for 1917 amounts to \$51,809,402, and for 1918, \$30,417,087, or 59.87 per cent of the 1917 net income.

Applying this percentage of 59.87 per cent to 1917 profits, indicated above \$231,051,859, we have profits for 1918 estimated as \$138,330,748.

Estimated total profits for both years

1917 profits.....	\$231,051,859
1918 profits.....	138,330,748
 Total profits.....	 369,382,607

(3) *Form A 2 letters.* Attached hereto are blanks for A 2 letters, one allowing 30 days for presenting protest and the other 60 days.

Respectfully submitted,

EDWARD T. WRIGHT,
Investigating Engineer.

The CHAIRMAN. The committee will adjourn until to-morrow morning at 10.30 o'clock.

(Whereupon, at 12.05 o'clock p. m., the committee adjourned until to-morrow, Saturday, January 24, 1925, at 10.30 o'clock a. m.)

INVESTIGATION OF THE BUREAU OF INTERNAL REVENUE

SATURDAY, JANUARY 24, 1925

UNITED STATES SENATE,
SELECT COMMITTEE TO INVESTIGATE THE
BUREAU OF INTERNAL REVENUE,
Washington, D. C.

The committee met at 10.30 o'clock a. m., pursuant to adjournment of yesterday.

Present: Senators Couzens (presiding), Ernst, and King.

Present also: Mr. L. C. Manson, of counsel for the committee, and Mr. Edward T. Wright, investigating engineer for the committee.

Present on behalf of the Bureau of Internal Revenue: Mr. C. R. Nash, assistant to the Commissioner of Internal Revenue; Mr. Nelson T. Hartson, solicitor Internal Revenue Bureau; Mr. S. M. Greenidge, head engineering division, Bureau of Internal Revenue; and Mr. John Alden Grimes, chief metals valuation section, Bureau of Internal Revenue.

The CHAIRMAN. Mr. Nash, can you tell us at this point what the situation is on these contractual relations?

Mr. NASH. Mr. Chairman, I had each of the engineers interviewed who were on that work, and each of these engineers has prepared a statement. The individual statements of the engineers are quite lengthy, and there is a great deal of repetition in them. I am having those individual statements gone over this morning in order that they may be condensed into one combined statement. I think it will probably not encumber the record so much if we put in the combined statement, rather than the individual statements of the engineers. I have the engineers' individual statements here this morning, if you wish them.

The CHAIRMAN. What is embraced in those statements? Do they have to do with the progress of the work, or is it a statement of what they have found?

Mr. NASH. They discuss the progress of the work and the difficulties that they have encountered and are continually encountering. Take, for instance, the case of the General Electric Co. There are in this case, I believe, 600 contracts that have to be read, together with the correspondence relating to the contracts. I talked to Mr. Koenig this morning, and asked him as to how long he thought it would take to finish the job when it was necessary to go into all of those contracts, and he estimated it would take about three years. I have also asked Mr. Greenidge to assign five more engineers to this

work. There are 18 engineers in the amortization section, and there are now 10 of them assigned to the work of going over these contracts.

The CHAIRMAN. You do not mean to say that the records are in such condition that you have to read all of the 600 contracts with the General Electric Co., and that there is no summary of settlement anywhere showing whether there was any amortization or not?

Mr. NASH. Mr. Koenig told me this morning that it necessitates reading practically everything to determine the answers to the questions involved. There appears to have been no uniform system followed in the keeping of files of these cases. They find them different in the Navy Department than in the War Department. In many of them they have had to also go to the Department of Justice. It has necessitated running around town a great deal to follow them, and on some of them, they do not seem to find any definite end.

The CHAIRMAN. If that condition exists, it is evident that the bureau did not do it when they came to settle these cancellation claims made by the taxpayers.

Mr. NASH. It is evident that they could not have followed them up in all cases, certainly.

The CHAIRMAN. It must be evident that they could not have followed them up in many cases, if in any cases, because they must have known that that condition existed, if they had done so.

Mr. NASH. Mr. Koenig is in charge of the bureau's engineers now on that work. This sort of work has been his function in the amortization section heretofore.

The CHAIRMAN. We can not do anything with this job if you contemplate going to any such extremes as would take three years.

Mr. NASH. That is why I wanted to talk with Mr. Koenig further. I only had an opportunity to talk with him for about 10 minutes this morning before we came up here. He is coming to my office again this afternoon, and I want to get a clear picture of just what this job means.

The CHAIRMAN. All right; we will then let the matter rest until you can report further.

Mr. GREENIDGE. Mr. Chairman, in regard to the additional five engineers who are assigned to this work, they are cleaning up their work to-day and they expect to be at this work on Monday morning.

The CHAIRMAN. I hope the bureau does not get the idea that we want this to any such point of refinement that it is going to take any such long period of time.

Mr. GREENIDGE. Oh, no, sir.

The CHAIRMAN. I hope the bureau is not going to kill the project by encumbering it with too many details.

Mr. GREENIDGE. No.

Mr. NASH. We do not want to kill it. We want to produce whatever information we can. If nothing can be accomplished I want to be able to tell the committee why.

The CHAIRMAN. You have been at it long enough now to tell the committee whether it can be produced or not.

Mr. NASH. The men have told me that they have been at work on 20 cases since the 11th of December, the date when they started. They had a part of those cases about completed about 10 days or two

weeks ago, when Mr. Thomas asked them to start work on a new group of cases.

The CHAIRMAN. Why were they asked to change from one group of cases to another? That in itself would indicate that all of the work on the first group had been wasted.

Mr. NASH. I do not know just what Mr. Thomas had in mind, Mr. Chairman. It seems that a new group of cases was presented to Mr. Thomas, and it was his desire to start work on that group and to discontinue, at least temporarily, the work that had been done on the first group of cases.

The CHAIRMAN. I think that some of Mr. Manson's engineers might get together in conference with the bureau officials and have an exact understanding of how you are going to proceed, when you are going to get through, and what we are going to accomplish by it.

Mr. MANSON. I can explain that in detail from those first cases.

The CHAIRMAN. You can do that, Mr. Manson, when you get through with the negotiations with the bureau in order to ascertain what progress could be hoped for in cleaning this up.

Were you going to proceed with something this morning, Mr. Manson?

Mr. MANSON. I have a memorandum here from Mr. Wright relative to the amount of tax involved for the years 1917 and 1918, if the revised valuation of copper mines were substituted for the provisional valuations.

This memorandum is as follows:

JANUARY 24, 1925.

Memorandum to Mr. L. C. Manson, Counsel.
Subject: Copper Mines Revaluations.

Referring to the questions brought up in the Senate committee's hearing yesterday, and on which further information is desired:

(1) Correction of amount of taxes estimated as involved in the revaluation of copper mines for years 1917 and 1918: In my office report No. 8, dated January 8, 1925, I used the estimate of the metals valuation section, as submitted to the commissioner in 1922, of \$60,000,000. I have since learned that this estimate included an estimate for 1916 additional tax of \$5,000,000, and also additional taxes that would be due from silver mines of approximately \$5,000,000. The amount of additional taxes involved in copper mines only for 1917 and 1918 should be reduced to \$50,000,000.

(2) Profits reported by copper companies for 1917 and 1918: There would appear to be no immediate data available as to profits reported by the copper companies themselves for years 1917 and 1918.

The following data, however, is taken from compilation entitled "Taxation of Copper Mining Companies in 1917," made by the engineering division and submitted to the commissioner in 1922. These figures involve 53 out of the 71 companies, but include all of the large and important companies, and are based on the "provisional" valuations.

<i>Profits, 1917</i>		Per cent of gross income
Gross income for 1917.....	\$661,426,604	100.00
Deductions other than depletion.....	306,916,200	
Deductions for depletion.....	63,458,545	
Total expense.....	430,374,745	65.06
Net income or profits indicated.....	231,051,859	34.94
Per cent net income to total expense, 53.60.		

The CHAIRMAN. Is there any record, or have you come across any information, as to the amount of taxes that these companies actually paid during those years?

Mr. MANSON. I do not think there is any compilation showing what they actually paid, but I understand their tax is assessed in accordance with the basis that I have just read, for the reason that these computations are made on the basis of the provisional valuations which apply to them.

Mr. WRIGHT. Mr. Chairman and Mr. Manson, the tax assessed amounts to about 18 per cent of that indicated net income for 1917, and probably 36 per cent or double that, for 1918, as near as I can figure it.

The CHAIRMAN. That includes both excess profits tax and—

Mr. WRIGHT. Yes, sir.

Mr. MANSON. War profits.

The CHAIRMAN. And capital and other taxes.

Mr. WRIGHT. Not the capital stock tax, but the income tax, excess-profits tax, and war-profits tax.

Mr. MANSON (reading further from memorandum of Mr. Wright) :

1918 PROFITS

The following computation is made to arrive at an estimate for 1918 profits. From Exhibit Q1 to Q5, analysis of tax computations, the total net incomes of five companies cited, for 1917, amounts to \$51,809,402, and for 1918, \$30,417,087, or 59.87 per cent of the 1917 net incomes.

Applying this percentage of 59.87 per cent to 1917 profits indicated above, \$231,051,859, we have profits for 1918 estimated as \$138,330,748.

Estimated total profits

1917 -----	\$231, 051, 859
1918 -----	138, 330, 748
Total -----	369, 382, 607

(9) For A-2 letters.

Attached hereto are blanks for A-2 letters; one allowing 30 days for presenting protest and the other 60 days.

Respectfully submitted.

EDWARD T. WRIGHT,
Investigating Engineer.

The Senator also requested a copy of the form of the A-2 letter, which was furnished herewith.

The CHAIRMAN. I would like you to read that into the record. Is it addressed to any particular concern?

Mr. MANSON. This is just the form. I have a copy of one actually sent out. It will be over here in a minute.

Mr. NASH. Here is a copy of one actually used, for the Utah Copper Co.

The CHAIRMAN. Just read that into the record, please.

Mr. MANSON (reading) :

Utah Copper Co., 25 Broad Street, New York, N. Y.—

The CHAIRMAN. What is the date of that?

Mr. MANSON. December 8, 1914 (reading) :

*SIRS: An audit of your income tax returns filed for the taxable years 1917 to 1919, inclusive, has resulted in a tentative determination of a deficiency in tax amounting to \$4,858,493.38. This deficiency is a result of certain adjustments which are shown in the attached schedules.

You are granted 30 days from the date of this letter within which to present a protest, supported by additional evidence or brief, against this determination of a deficiency. Any additional evidence submitted should be under oath. Upon request submitted within the period mentioned, you will also be granted a hearing in the bureau with reference to the matter.

A request for a hearing should contain (a) the name and address of the taxpayer; (b) in the case of a corporation, the name of the State of incorporation; (c) a designation by date and symbol of the notice or notices with respect to which the hearing is desired; (d) a designation of the year or years involved and a statement of the amount of tax in dispute for each year; (e) an itemized schedule of the findings of the unit to which the taxpayer takes exception; and (f) a summary statement of the grounds upon which the taxpayer relies in connection with each exception.

If, after consideration of any additional evidence submitted and any arguments advanced by you, a deficiency is finally determined by the bureau to be due from you, you will, in accordance with the provisions of section 274 of the Revenue Act of 1921, be advised by registered mail of the final determination of the commissioner as to the amount of the deficiency, and allowed 60 days from the mailing of the letter in which to file an appeal to the United States Board of Tax Appeals in the event you do not acquiesce in such final determination.

If you acquiesce in the determination of a deficiency as disclosed in this letter and the accompanying statements, you are requested to sign the inclosed agreement consenting to the assessment of such deficiency, and forward it to the Commissioner of Internal Revenue, Washington, D. C., for the attention of _____. In the event that you acquiesce in a part of the determination, the agreement should be executed with respect to the items agreed to.

Respectfully,

That letter is signed by J. G. Bright, deputy commissioner.

There is attached to this a schedule showing the adjustments which have been made in the income as reported.

The CHAIRMAN. That schedule shows the difference in the provisional and the final valuations?

Mr. MANSON. I have not read this schedule, but I am more or less familiar with these schedules. If the income, as reported by the taxpayer, were based upon the provisional determination, which I assume was the case here, this schedule would show the new valuation and the effect of the new valuation upon the deductions for depletion, and the effect of it upon invested capital, as well as the effect of it upon the net income. In other words, the whole working out of the adjustments, either where the deductions are added to or subtracted, or where the income was added to or subtracted from, or where invested capital was changed, would all be shown in detail in this schedule. In a general way, I think I am about right on that, am I not?

Mr. NASH. The auditors work on the case after receiving the valuations from the engineering division.

The CHAIRMAN. Is the reply of the taxpayer attached to those papers there?

Mr. MANSON. No.

The CHAIRMAN. You do not know what the taxpayer said in reply to that additional assessment?

Mr. MANSON. In this Utah Copper Company case, I think there was an appeal, was there not?

Mr. NASH. I have been told that they have filed a protest, Mr. Chairman. I do not believe they have had a conference.

Mr. Grimes, do you know just what the status of that case is?

Mr. GRIMES. We have a record in our office of a conference set for the 28th of January.

The CHAIRMAN. That is a conference in your section before it goes to the Board of Appeals?

Mr. GRIMES. A conference is arranged by the audit section that is handling the case. The engineers are notified of conferences that involve engineering as well as auditing questions. The question is in audit, but it is not in the engineering division.

Mr. MANSON. There would ordinarily be attached to such a protest an argument on behalf of the taxpayer, in support of his protest, with any additional information that he saw fit to supply in support of his protest. In some instances, those protests come in in the form of printed documents, and some of them in the form of typewritten statements. I have in my possession at the present time several of those protests, and in the case of the Chile Copper Co., it is a large printed book.

The CHAIRMAN. In this connection, I understood this assessment letter to include the years 1917 to 1919.

Mr. MANSON. This does.

The CHAIRMAN. I understood they were not assessing for 1917 and 1918 in this new valuations plan.

Mr. MANSON. Of course, I have not examined the documents attached to this one, which has been handed to me by the representatives of the bureau. I do not know that the year 1917, as determined in this document, is based on the new valuation. I assume that it is not, because the commissioner's order providing for the new valuation provided that it should apply to 1919 and subsequent years. This A-2 letter applies to 1917 to 1919. I take it that that would be 1917, 1918, and 1919.

The CHAIRMAN. I would like to have you look over that record sometime and let us know whether, in that particular case, the new valuation was used for those years, 1917 and 1918. I wish you would let us have that at the next hearing.

Mr. NASH. Mr. Chairman, as I understand it, and what Mr. Manson has stated is substantially correct, the new valuations have not been ordered by the commissioner to apply to the years prior to 1919. However, other adjustments in the 1917 cases are probably being made—inventory questions, or something of that sort.

The CHAIRMAN. Does that include the new valuation for 1919?

Mr. NASH. It may or may not, at this time.

The CHAIRMAN. What I have been trying to get at is not such a case as you have submitted, but a case predicated solely on the question of the new valuation. I do not think this answers the question of the committee. What I want to see is an assessment letter sent out primarily on the basis of the new valuation. This seems to be involved with a lot of other questions.

Mr. HARTSON. Mr. Chairman—

Mr. MANSON. I doubt very much whether there is such a case.

Mr. HARTSON. I was just going to say that.

Mr. MANSON. I have never seen one. In all of these cases the valuation question will be raised in connection with innumerable other questions, the valuation question being only one of, perhaps, many. In the Chile case, which I am more or less familiar with, the protest of the taxpayer is a book, I would say, an inch thick. I think that

a very small part of that book is taken up with a discussion of the matter of valuation. Most of it refers to audit questions.

The CHAIRMAN. As I understand it, then, there is not any way of getting at the real difference in assessments based on the provisional valuation and the final valuation?

Mr. MANSON. Oh, yes; that can be done, and we have attempted to do it in several cases here. I have presented data in five cases showing the difference in the tax based upon the provisional valuation and upon the final valuation.

The CHAIRMAN. Yes; so far as our committee work is concerned, that is true, but I mean so far as the bureau itself is concerned, there is no segregation between that part of the work and the audit or other controversial questions, is there?

Mr. MANSON. I do not know that I exactly understand the Senator's question, but I will say this, that, of course, the work is carried on independently. All of the adjustments, the adjustments which result from, for instance, a revaluation, and adjustments which result from disallowances or allowances in audit, are finally concentrated down into a final adjustment of net income. That final adjustment of net income is reflected in this A-2 letter, which carries with it a schedule showing all of these adjustments.

When the taxpayer takes exception to that final determination of the tax, or the proposed final determination of the tax, which is what is set up in the A-2 letter, he takes exception to everything in the whole schedule of adjustments which he does not care to accept, and when we want to know what the effect on the taxpayer is, we have to compute it. In other words, we can not go to the records and find a case and pick it out and say, "Here is a case where the tax has been changed so much." In every one of these instances where the Senator has asked us to determine the difference, it has been a matter involving enormous computations.

The CHAIRMAN. That is just what I wanted to get at. That is a matter of computation, then?

Mr. MANSON. Yes.

The CHAIRMAN. Computations on your own part?

Mr. MANSON. Yes.

The CHAIRMAN. And not computations taken from the bureau?

Mr. MANSON. Well, I think we usually have them checked by the bureau auditors. Do we not, Mr. Wright?

Mr. WRIGHT. The computations of the tax are made by the auditor assigned to the case, usually. There are five different men on the five different companies in the Income Tax Unit.

Mr. MANSON. You mean that that computation was made for our benefit?

Mr. WRIGHT. It was made for our benefit, but it was made by the unit men.

Mr. MANSON. Yes; we did make them ourselves.

The CHAIRMAN. As I understand it, you did not take them from the records.

Mr. MANSON. No.

Mr. WRIGHT. No.

Mr. MANSON. But the point is that we did not make the computation.

The CHAIRMAN. I understand.

Mr. MANSON. Yes.

The CHAIRMAN. Is there any disposition on the part of the bureau, so far as you know, Mr. Nash, to reopen these 1917 and 1918 cases where there is shown an estimated loss of some \$50,000,000 in taxes?

Mr. NASH. Mr. Chairman, the order of the commissioner, which was approved by the Secretary, specifically stated that the revaluation was to be made for the years 1919, 1920, or 1919 and subsequent years, or something of that sort.

The CHAIRMAN. I understand that; but I am talking about 1917 and 1918.

Mr. NASH. That order stands to-day, so far as I know.

The CHAIRMAN. Then, I would ask the bureau to consider that and let us know what their viewpoint is with respect to the valuations for 1917 and 1918.

Mr. NASH. I believe the bureau will reply to that query, Mr. Chairman. I am not in a position to state what the position of the bureau will be on the subject of your question.

The CHAIRMAN. I understand that; but what I want to find out is if you will get what the position of the bureau is and let us know?

Mr. NASH. I will be glad to do that.

Mr. MANSON. I would like to make a query at this point in that same connection. While this order provides that the revaluation shall apply to 1919 and subsequent years, I have received some information to the effect that where the 1919 or the 1920 tax has actually been paid by the company before the revaluation was completed the revaluation is not applied, but the old valuation is permitted to stand. I do not want to make that as a statement of fact, but I am merely repeating some information that has come to me. I would like to get the facts about it.

Mr. NASH. Mr. Manson, I do not understand that any exception is contemplated in the commissioner's order. Mr. Grimes is more familiar with the carrying out of that order than I am, and I would like to have him state if any exception has been made in any case.

Mr. GRIMES. That question was taken up with Mr. Bright, through Mr. Greenidge. There are, I think, six or eight copper companies in Michigan which have had their tax returns audited for 1919, together with their 1918 tax returns, before the commissioner's order was issued. While there have been no signed agreements between the commissioner and the taxpayer, we have instructions from Mr. Bright, which had my approval and Mr. Greenidge's approval at the time, that they would not open returns which had been closed.

Now, for 1919 and subsequent years the Government will not lose any money on account of that procedure, because we have an opinion from the solicitor's office, which we are following in the audit in these cases, to the effect that the depletion sustained or allowed for any year prior to the date at which revaluation becomes effective is deducted from the revised valuation, the remainder of the value being divided by the remaining number of units of metal. (That would be a pound of copper in the case of the copper companies.) The Government would lose interest on the additional tax for 1919, which would be small in the case of all of the copper companies. It did not run into excess-profits tax in 1919, and I think none of the Michigan companies will run into excess-profits tax.

So that these 1919 cases which have been closed have been allowed to stay closed, but the Government is fully protected on these cases, because there are waivers on file for 1919. In the case of these companies—that is, the Calumet & Hecla Co. and these companies which were recently consolidated with the Calumet & Hecla Co.—while we only requested waivers for the opening of the returns for 1919, the company voluntarily furnished waivers on the returns which had been closed and audited, so we have waivers for all of these companies.

The CHAIRMAN. I am not quite sure now that I get your viewpoint. As I understand it, you are not going to open those cases for 1919?

Mr. GRIMES. It is not the present plan to do so; no, sir.

The CHAIRMAN. In that connection I understood you to say that the Government would not lose anything by not bringing them up.

Mr. GRIMES. Except the interest on the additional tax from the date that it should have been paid until the date it is actually paid.

The CHAIRMAN. How are you going to collect the additional tax for 1919 on the new valuation from these companies if you do not open them up?

Mr. GRIMES. The old value—the provisional value, we will call it—would be, we will say, \$2,000,000. The new value, we will say, will be \$1,000,000. We will assume that on the basis of the provisional valuation there would have been a \$500,000 depletion sustained for 1913, 1914, and 1915, which was not legally allowable, on account of 5 per cent limitation on depletion—5 per cent of the gross income being allowed by the statute as depletion for those years.

I should correct that and say 5 per cent of the gross value of the ore at the mine.

For 1916, 1917, and 1918 the depletion allowances were made on the basis of the provisional valuations.

Now, we will say that the depletion allowances for those years were also \$500,000. The new valuation would be \$1,000,000. The depletion sustained on the basis of the new valuation would be \$500,000 for 1913, 1914, and 1915 and \$500,000 for 1916, 1917, and 1918, allowed on the basis of the provisional valuation, which would make \$1,000,000 total depletion allowed for those six years on the basis of sustained depletion on the new value, or allowed depletion on the basis of the provisional valuation, whichever was the highest in any year.

That would be a total of a million dollars, which would be deducted from the new valuation, leaving nothing returnable through depletion for future years, although the basis of the new valuations, if they had been applied to sustained depletion from 1913 to 1918, the depletion allowance, we will say, would have been half of the amount of \$500,000 depletion allowed for the same years.

Mr. MANSON. If there is any change of the tax rate, however—

Mr. GRIMES. A change in the tax rate would affect the result.

Mr. MANSON. Yes.

The CHAIRMAN. It seems to me that that is obvious, and therefore the cases should be opened the same as any other case. I would like to have inquiry made and a report made to the committee as to whether they are going to open up those six Michigan Copper Co. cases because of the varying tax rates.

Mr. GRIMES. I might mention that the discrepancies in those cases were not as great as in a majority of the valuations. They were made at a later time and were more nearly correct. They had some errors on the fundamental basis of valuation, in my opinion, but those are errors of judgment. But the fundamental errors of computation which appeared in so many of the first valuations were almost altogether eliminated.

The CHAIRMAN. Were they made by the same gentleman who is now a professor at Harvard University?

Mr. GRIMES. No, sir.

The CHAIRMAN. They were made by another engineer?

Mr. GRIMES. They were made chiefly by engineers now in the employ of the bureau in one capacity or another.

There are some errors in them, but they are not as serious.

These companies also, I might say, paid considerably higher than the average rate of tax for copper companies for the years 1917 and 1918, and the additional tax, on account of the revaluing, would not be so great as in other cases. The invested capital was also determined on a very much more conservative basis than in some of the other valuations.

The CHAIRMAN. That demonstrates very clearly that there has been no equality of treatment among taxpayers.

Mr. GRIMES. No, sir. That is what, in my opinion, was the fundamental reason for bringing up these copper revaluation questions—to get taxes as nearly as possible on an equitable basis between taxpayers in an industry and between different industries.

The CHAIRMAN. Have you anything else on this, Mr. Manson?

Mr. MANSON. I think that is all.

Senator KING. Mr. Grimes, I think I would like to ask whether, in your opinion, taking into account the very large earnings of some of the companies, particularly during the war, when copper was being sold to our Allies at 30 or 40 cents a pound, and considering all the facts upon which a fair and just assessment might be made, a fair tax was paid by these mining companies to the Government?

Mr. GRIMES. I can only give you my opinion on that question, Senator.

My opinion is that in 1917 and 1918 the mining companies did pay a fair rate of tax. The law specified a reasonable allowance for depletion. The commissioner has very considerable discretion in that matter, and there are other ways of figuring the depletion allowance, such as depletion as a percentage of net income, which the American Institute of Mining Engineers, the American Mining Congress, and a great many of the abler engineers of the bureau have thought was the only equitable basis for determining depletion deductions.

On that basis—the percentage basis—the depletion deductions on the new or revaluations of the copper industry would not be materially different from those which were allowed on the basis of the provisional valuations, but the provisional valuations on the unit basis of depletion, now approved, would give such excessive depletion deductions in normal years that the copper companies would be almost entirely relieved of any taxation for future years. If the properties were sold they would be permitted to write off very large

losses, under the 1924 revenue act, which they would not be entitled to, and in many cases the only basis for estimating the value of a share of stock of any one of these companies was to take the March 1, 1913, value and allow for the assets of the company, because the stock was not quoted on any stock exchange. On any sales of stock, or other disposition, under some of the revenue acts, the March 1, 1913, value would govern as a basis for determining profit and loss to successor interests, and it would be very unreasonable, in my opinion, to carry those provisional values forward for future years.

However, my personal opinion is that it was not unreasonable to allow the depletion deductions on the basis of the provisional valuations for 1917 and 1918.

Mr. MANSON. Was there any uniformity as between them, as between one company and another?

Mr. GRIMES. Further, on a provisional basis, there is a certain amount of uniformity.

Mr. MANSON. Using the revised valuations as a standard, is it not true that those provisional valuations varied all the way from 100 per cent up to 1,000 per cent?

Mr. GRIMES. No, sir; none of them were as high as 1,000 per cent.

Mr. MANSON. Up to 600 per cent.

Mr. GRIMES. I think from about, we will say, 25 or 50 per cent as a minimum up to about 300 per cent as a maximum; possibly 400 per cent in one or two cases; but I am certain that there were none of them over 400 per cent, and very few of them over 200 or 250 per cent on the revised valuations.

The CHAIRMAN. Considering your answer to Senator King's question, if you believe that the assessments in 1917 and 1918 were equitable, how do you account for the fact that the computations show that by the use of those two valuations there is some \$50,000,000 due the Government?

Mr. GRIMES. The assessments are not made according to present regulations, which specify depletion on a unit basis—so much depletion per pound of copper. We value the mines on the basis of their expected future earnings, and we assume an average rate of earning in the valuation, which we know was incorrect to start with, because there is no company that makes exactly the same amount of profit every year. We can only estimate the earnings from a mine. In some years the mine will run when it is making no profit in order to keep the organization together. It may even take a loss. We know that in other years they will make two or three times the average rate of profit.

The taxpayer on the unit basis of depletion does not get a return of his entire capital, because in the years in which he is making no profit, or running at a loss, he writes off depletion, which he can never get back as a tax deduction.

The value is based entirely on the income, and in any natural resource industry the normal condition is either a feast or a famine. They are either making a great deal more than the average profit or they are making almost no profit, struggling to keep in the business.

The valuation being based upon the expected profit and the depletion deductions being deductions from income, it would not seem

unreasonable to allow depletion deductions as a percentage of net income, because of the basis upon which you are determining the value. For instance, if you had a \$100,000,000 expected net income and you valued that at \$80,000,000 in getting depletion and depreciation, it would not seem unreasonable to allow 30 per cent of the actual operating profit as a deduction for depletion and depreciation.

There is some question as to the legality of that, and it has not been adopted for that reason. The solicitor's office, under Mr. Wane Johnson, ruled that in the opinion of the solicitor's office it would require legislative action to recognize such a method. There is considerable difference of opinion on that subject. Some of the attorneys in the solicitor's office and a considerable number of the attorneys for the taxpayers hold that there is no legislative action necessary and that the commissioner has discretion in the reasonable allowance for depletion.

In my opinion that is the proper basis for determining depletion and depreciation allowances to natural resources companies, to determine one deduction for both depletion and depreciation as a percentage of net income; and holding that opinion, I might state that I do not think the depletion deductions for 1917 and 1918 are unreasonable.

The CHAIRMAN. When you took this up with the heads of the departments and drew their attention to these errors in the provisional valuations, you did not contemplate at that time, as I understand it, any revision of the 1917 and 1918 taxes.

Mr. GRIMES. I did not make any such recommendation. I asked certain questions through Mr. Hamilton, the chief of the metals section at that time, and through Mr. Fay, who was head of the natural resource division. We asked the commissioner what was the basis. That, I think, will be found incorporated in the memorandum of January 27, 1922, and we also asked the commissioner to give us specific instructions as to what we were to do in the correction of these errors.

The CHAIRMAN. Then, I still understand that you do not think that a reassessment of the 1917 and 1918 taxes is justifiable?

Mr. GRIMES. Mr. Hamilton and I recommend that the returns be opened for all the years, as I recall it, the revaluations to be effective from 1913 to date.

Mr. C. P. Smith, who was then assistant commissioner, as I recall it, held a similar view. The Solicitor of Internal Revenue, Mr. Carl Mapes, the chairman of the Committee on Appeals and Reviews, Mr. Johnson—I think his initials are N. T.—and the deputy commissioner, Mr. Batson, held entirely different views. Mr. Fay was somewhat between the two extremes. Mr. Fay, I believe, thought that the provisional valuation should govern the audit of 1917 and 1918. I think the commissioner and the secretary decided that some neutral ground would be the most defensible basis.

I would like to remark at this time, if I may—it is rather extraneous, but there was some question yesterday as to the delay between the date that the recommendations were made to the commissioner and the date at which his memorandum of December 11, 1922, was issued. That was a little over eleven months.

The matter was taken up through Mr. C. P. Smith, who was assistant commissioner, and he discussed the matter at some length with the commissioner, and the secretary who referred the matter to Mr. Beall, I believe, who was the Assistant Secretary of the Treasury. Mr. Beall was a rather sick man, and hearings were postponed on account of his illness once or twice.

Finally hearings were held before Mr. Smith, and within a couple of months after these hearings, in August, 1922, as I recall it, Mr. Beall died. Mr. Beall had the entire legal matter under consideration, and Mr. Mellon relied upon Mr. Beall to settle that question. Undoubtedly, his sickness and death delayed the commissioner's decision several months longer than it would ordinarily have been delayed.

The CHAIRMAN. The situation was important enough, it seems to me, on account of the statute of limitations running, that the mere fact that a man was sick should not delay the Government's business to such an extent as to jeopardize the interests of the Government.

Mr. GRIMES. He was a very able man.

The CHAIRMAN. I am not questioning that. I am talking about the delay in getting it out, because the matter was important to the Government, in view of the fact that the statute of limitations was running.

Mr. GRIMES. There would be no jeopardy of the Government's interests, because it would be possible, within a few weeks, to assess the tax for 1917 and 1918 on the basis of disallowing all depletion deductions, either getting a waiver from the taxpayer, or making an actual assessment and have him file a claim for abatement.

Senator KING. Was that done?

Mr. GRIMES. It was not necessary, because the order does not cover 1917 and 1918. It covered 1919, which gave plenty of time for the bureau to act in a more deliberate way. But it could have been done for 1917 and 1918.

Senator KING. How do you deal with a case like this: Take some mines that I have in mind in Arizona and other places, where they have operated for many years, especially in lime formations, where the deposits are entirely uncertain, and from day to day you open up, or perhaps from month to month, enormous deposits in little pockets in the ground. How do you determine the depletion allowance there, because the mine may be more valuable to-morrow or the next day than it was 10 years ago, notwithstanding the fact that you have been working it all the time, and taking out ore all the time? It will have a market value, a salable value, which is greater, perhaps, after 10 or 15 years of mining operations, than at any time during that period. How do you figure that?

Mr. GRIMES. Senator, that question is rather a difficult one to answer, because there is no general method.

The method employed would depend to a great extent upon the individual case, and the past record of the property, the continuity of ore deposits, the development of new ore deposits.

In most mining camps that have been in operation for some time, such, for instance, as the Bisbee camp in Arizona, it is a practical certainty, with so much development work you are going to develop so many tons of ore.

The mining company owns a certain acreage of ground in which this formation or ore deposit exists. The entire possibilities of what prospective ore are not considered, but we have found that in the more permanent types of ore deposits, such as the Bisbee district of Arizona, the Coeur d'Alene region of Idaho, and the Butte deposits of Montana, if 25 per cent of the ore included in the valuation is developed for mining, about 75 per cent of the total ore reserve may be partly developed or prospective, and that that much additional ore would be paid for actually in a cash transaction.

That is as close as we have been able to determine that. If the actually developed ore falls below 25 per cent, we use a higher interest rate for discounting to present worth.

If the continuity of the deposit, or the past history of the district would lead one to the conclusion that there would be any great uncertainty as to the development of the future ores, we would also use a higher interest rate in discounting to present worth.

So we take those uncertainties into account in the discount rate, and discount the operating profits to present worth; and if the prospective ores are found to be too great in proportion to the total, as claimed by the taxpayer, we refuse to value a certain portion of the prospective ore, and cut the taxpayer's estimate of the ore reserves.

Senator KING. You allow as for discovery in a property that has been operated for years the opening up of a new pocket of ore?

Mr. GRIMES. We have not up to the present year. We have a new regulation, Regulations 65, which is a much more workable regulation, and I think it is fairer to both the Government and the taxpayer than the prior regulations. In the new regulations a new ore body or ore bodies may be valued as discoveries, but in such cases you deduct the entire estimated cost of the mine workings and the new plant necessary and new smelters and everything else that is necessary to work that property as a separate mine, and that without the depletion allowance to or below the amount which would have been allowed if such ore had been included in the estimate of the ore reserves at March 1, 1913.

Some such action as that was actually necessary, because in the mining business it is impossible to define proven tract or lease. The only definition you can get is the definition of a mine. In the mining business, as you know, there are extralateral rights. A mine property may be divided into several hundred mining claims, and a mining claim will have a maximum area of about 20 acres and a minimum area of a small fraction of an acre.

Senator KING. Depending on when the patent was obtained?

Mr. GRIMES. Yes.

Senator KING. But in those early patents they were all of a 100 or 200 feet claims. Now they are 600.

Mr. GRIMES. There are a great many claims located under all the laws which were not full-sized claims.

Senator KING. Yes.

Mr. GRIMES. Because they were just located to obtain title to a small fraction of the complete ownership of the entire area.

It is impossible, in an ore deposit underground, may be thousands of feet, to tell what claim it is going to outcrop in, particularly as

the ore deposit is likely to be displaced by faults and intersection of other veins.

I might say before this new regulation was adopted we had four cases which would have been absolutely impossible to settle under our old procedure. I believe we can settle the four of them satisfactorily to both the taxpayer and the Government now. Three of them are already settled.

Senator KING. Well, coming back again to my question, you think that, taking those copper properties and others that made such enormous profits during the war, especially before we went into the war, when they were charging our allies very large prices for their products, they paid a reasonable tax to the Government upon their earnings. That is your view, is it?

Mr. GRIMES. Yes; in 1918. I believe in 1917—

Senator KING. Take 1915, 1916, 1917, and 1918.

Mr. GRIMES. The tax from 1913 to 1915 was only 1 per cent, and in 1916 only 2 per cent, and any amount allowed for depletion would be almost negligible as far as the tax was concerned up to 1916.

The CHAIRMAN. Have you anything further, Mr. Manson?

Mr. MANSON. I want to call Mr. Grimes's attention to the fact that Mr. Wright, our engineer, has reported that the revaluation of limestone replacement deposits is 191.87 per cent of the original valuation of those same deposits, while the revaluation of the vein mines, taken as a whole, are 307.39 per cent of the provisional valuations of those same mines, and the revaluation of the porphyry mines is 421.90 per cent of those same mines.

In view of that variation between the revaluations, running from 191 to 397 and then up to 421 per cent, do you believe that any tax based upon those original valuations could be equitable as between the different mines themselves?

Mr. GRIMES. There is an adjusting factor in there which Mr. Wright has not taken into account.

In the case of the porphyry mines, invested capital is much more conservatively determined than in the case of some of the other properties, such as the limestone replacement properties, and the vein mines. The determination of invested capital would unbalance to some extent the apparent discrepancy there on the value for depletion at March 1, 1913, because the lower the invested capital is, the greater the rate at which you are taxed, and the higher the March 1 value, the less the tax.

Senator KING. You say the lower the invested capital in porphyry mines?

Mr. GRIMES. Yes, sir.

Senator KING. How do you make that out?

Mr. GRIMES. The invested capital allowances were quite a bit lower.

Senator KING. Not the actual invested capital. That may or may not be. I know of porphyry mines where the invested capital was a great deal more than in the lead or silver mines in that part of the State, or within a comparatively small area of territory.

Mr. GRIMES. I am discussing just the copper mines alone.

Take the Anaconda Copper Co. They had a reorganization in 1910, when it was a going concern.

The Phelps-Dodge Corporation had a reorganization in 1908 as a going concern.

The porphyry copper mines have had no reorganizations since the original acquisition of their properties, when the valuations of the properties were not so well known as now. If they had revaluations within a short time prior to March 1, 1913, when they were going concerns, the invested capital would have been materially increased; but the invested capital as a whole, in both the porphyry copper mines and the Michigan copper mines, is very low as compared with other producing copper companies, which have had reorganizations, and some of them repeated reorganizations.

Senator KING. Take the Utah Copper Co., in Utah. Their capital investment is very great. They must have some \$15,000,000 or \$20,000,000 in railroads to take their ore out, and they have enormous investments for the purpose of removing the overcapping for steam shovels and for railroad cars, equipment, engines, etc. They also have some great mills, perhaps the largest mills in the world. There are two mills there that handle 45,000 tons a day. The invested capital there is enormous, and I was wondering why you say that the invested capital there is less than in other metalliferous mines, especially vein mines.

Mr. GRIMES. I will cite you some specific instances, Senator.

The Utah Copper Co. had a value of approximately \$13,500,000 allowed as the value of their original property when acquired. On revaluation we cut that to \$10,000,000, as I recall it.

The Phelps-Dodge Co. ---

Senator KING. But that stock sold on the market at one time at \$137 a share.

Mr. GRIMES. The first stock quotation available, when there was only an ore body and \$3,000,000 in the treasury or in plant investments, acquired by a bond issue -- the stock quotations, as I recall them, were somewhere around \$60, which is about six times the value that we have allowed for invested capital.

Senator KING. The first stock quotation, as I remember it, was \$3. That was in its earlier days.

The CHAIRMAN. In one case they are talking about the ore body and in the other case they are talking about the complete corporation, Senator.

Senator KING. Yes.

Mr. GRIMES. The Phelps-Dodge Corporation has a paid-in surplus of \$45,000,000 allowed. As nearly as we could determine it, the invested capital was about \$45,000,000 in 1908 on a valuation checked by stock quotations. There were very few stock transactions as a basis of comparison, but there was an appraisal by Dr. James Douglas, who was president of the company, and some estate-tax litigation in New York, and other evidences of that kind.

The Phelps-Dodge stock is not often quoted on the market, because it is a family corporation. There are half a dozen families which own \$44,000,000 out of \$45,000,000 of the par value of the capital stock. There, in the case of the Phelps-Dodge Corporation, the discrepancy between the provisional and the revised valuations was two to one. In the case of the Utah Copper Co. it was 13½ to 10. In the Anaconda Copper Co., as I recall it, there was no change

in invested capital, except in the case of the Anaconda Copper Co. itself. The Anaconda Copper Co. was a subsidiary of the Amalgamated Copper Co., and in 1910 this subsidiary of the Amalgamated Co. took over the assets of the Amalgamated Co., which comprised holdings in a dozen or more companies in Montana.

The initial invested capital allowed a valuation for invested capital of the Anaconda Co. as a subsidiary company, which amounted to about one-third of the total assets of the reorganization as the holding and operating company, as at 1910.

There are two court decisions on minority interest contestants in some of these companies which were taken over by the Anaconda Co., which decide the cash value of the Anaconda Co.'s stock. We did not think we could get better evidence or break down those court decisions, although, in our opinion, the value allowed by the courts was too high. But we did cut down the invested capital on account of a disallowance of a value for the Anaconda Copper Mining Co., the subsidiary at 1910, and threw the date of that valuation back to 1895, or some such time, when the valuation was materially lower, and depletion was sustained from 1895 to 1910.

Those are just three illustrations of the different classes, to confirm my general statement which is, an opinion statement, on the basis of my knowledge of the whole question.

The CHAIRMAN. Mr. Manson, have you anything further?

Mr. MANSON. That is all.

Mr. NASH. Mr. Chairman, I have been looking over this A-2 letter of the Utah Copper Co., and I find that the 1919 adjustment does include the revised figures on depletion which would be the result of this revaluation.

The CHAIRMAN. Just 1919?

Mr. NASH. Yes, sir. Do you want to put this entire A-2 letter of the Utah Copper Co. in the record, or just that part which has been read?

The CHAIRMAN. I think Mr. Manson read it into the record without the schedule. I do not think the schedule is necessary.

Is that all you have to-day, Mr. Manson?

Mr. MANSON. Yes.

Mr. HARTSON. Mr. Chairman, the bureau desires to make a statement in regard to the copper situation.

Due to the importance of the subject and also the necessity for some of us to become familiar with it, we having had no knowledge of it of a personal nature before, we would like to have Monday to go over it, so that we may be heard on Tuesday, say. If we get someone else to work on it between now and Monday, Mr. Nash and I then could be here on Monday, and could give you the statement on Tuesday, but it does seem essential that we ourselves do some work on it, and to come up here on Monday would interfere with our investigation. We have had a good many conferences on it already, and we are trying to gain a more complete knowledge than we have possessed. I should like to be heard on Tuesday with regard to it.

The CHAIRMAN. I think Mr. Manson wants to catch up on some work and, if agreeable to the committee, we will adjourn the Income Tax Unit feature of this investigation until call, and not take this up on Monday.

If agreeable to the other members of the committee, I would like to take up some prohibition questions on Monday, which we may have ready at that time. I will confer with Mr. Pyle to-day, and see if he will be ready to proceed with the prohibition feature on Monday.

Senator ERNST. I want to be here when the prohibition matters are taken up, but if we go ahead with them on Monday, I can not be here at that time, because the Judiciary Committee meets at 10.30 Monday morning.

Senator KING. I will leave it to the Chairman. I am ready whenever he says.

Senator ERNST. I suggest that it go over until Tuesday.

The CHAIRMAN. We may not be ready to go ahead on Monday, but I will take it up with Mr. Pyle.

Senator ERNST. When the prohibition matter comes up I would like to be here.

The CHAIRMAN. I will let you know. We have a lot to do, and we have to work pretty fast for the length of time that we have. We may not be ready by Monday.

(Whereupon, at 11.45 o'clock a. m., the committee adjourned until Monday, January 27, 1925, at 10.30 o'clock a. m.)

INVESTIGATION OF THE BUREAU OF INTERNAL REVENUE

TUESDAY, JANUARY 27, 1925

UNITED STATES SENATE,
SELECT COMMITTEE TO INVESTIGATE
THE BUREAU OF INTERNAL REVENUE,
Washington, D. C.

The committee met at 11 o'clock a. m., pursuant to call of the chairman.

Present: Senators Couzens (presiding), Watson, Ernst, and King.

Present also: Mr. L. C. Manson, of counsel for the committee, and Mr. Edward T. Wright, investigating engineer for the committee.

Present on behalf of the Bureau of Internal Revenue: Mr. C. R. Nash, assistant to the Commissioner of Internal Revenue; Mr. Nelson T. Hartson, solicitor Bureau of Internal Revenue; Mr. James M. Williamson, attorney, office of solicitor Bureau of Internal Revenue; Mr. S. M. Greenidge, head, engineering division, Bureau of Internal Revenue; and Mr. Emil L. Koenig, appraisal engineer, Bureau of Internal Revenue.

Senator ERNST. What are we going to take up this morning, Mr. Chairman?

The CHAIRMAN. I think Mr. Hartson is going to present something in connection with the copper question. Is that right, Mr. Hartson?

Mr. HARTSON. Mr. Chairman, the request was made by me on Saturday to be given the opportunity of making a statement at the session on Tuesday, and following that request the chairman indicated that we would adjourn subject to call, and that in the interim prohibition matters would be taken up by the committee. Relying on the statement that we would be called, Mr. Nash and I have been working on a report in the copper cases, but the call did not come to us until 10 o'clock this morning, and we are not prepared to discuss copper, although there are some other things that we can take up, that are pending, and with which we could well occupy the time.

Mr. Nash and I discussed, for the major portion of yesterday, with Mr. Graton, whose name was mentioned at the Saturday session of the committee, the original or provisional valuations of the copper properties. Mr. Graton was the engineer in the bureau in 1919 who made those original valuations. He is now, as I told the committee some days ago, on the engineering faculty at Harvard University. He went back last night to get certain data which he himself has in his personal possession, which would throw light on the reasons and the basis for his determinations at that time, as well as the procedure that he followed in making the valuations. It is disclosed that in the early days of determining such things, the individual engineer did the entire work. Mr. Graton, I think almost without assistance of any other engineers, valued the copper properties at that time.

We agreed with Mr. Graton tentatively, and subject, of course, to the approval of the chairman of the committee, to have him come here on Thursday morning and explain to the committee what he did, and to enlighten those who are interested as to just what took place. Mr. Graton, of course, is really not the bureau's witness. The bureau, as you know, changed his valuations in 1922, but left them as final valuations, so far as the tax years of 1917 and 1918 were concerned; so that my only thought in having Mr. Graton here—and I think the chairman would probably want to call him, anyway—is to have him lay before the committee the basis for his valuations, and, in fairness to him, I think he should be given that opportunity, because his valuations have been criticized very severely.

The CHAIRMAN. I am just wondering, Mr. Hartson, whether that is not going backwards and will be a consumption of the time of the committee. I have no particular objection to his coming here, but I do not see, if we are on the fundamentals of the two valuations, just what is to be gained by having him here and tell us how he arrived at those valuations when both the bureau and the committee agree that they were not proper valuations.

Mr. HARTSON. I think, Mr. Chairman, it is material to have Mr. Graton heard on this matter for this reason: Criticism has been made, and no doubt will be made, that the commissioner and the secretary did not go back and change everything that Mr. Graton did. We were asked by the chairman what our policy was to be with regard to a change in the valuations of the copper properties as they affected the tax years 1917 and 1918. Our answer at that time was that decision had been made by the commissioner in 1922 by a memorandum approved by the Secretary, dated December 11 of that year, to revalue the copper properties and make such revaluations effective for 1919 and the subsequent years.

Now, the query immediately arises, why was it not made effective for 1917 and for all the tax years if they were to be made for 1919 and later years?

The CHAIRMAN. Can Graton advise us as to that?

Mr. HARTSON. I think Mr. Graton can give the committee the basis for his valuations, which was one of the reasons for the decision of the commissioner and Secretary to leave 1917 and 1918 as they were.

The CHAIRMAN. I want to say that so far as the committee is concerned, we have no objection to Mr. Graton appearing here, but the solicitor himself has said that he would not be the witness of the bureau. If the bureau wants to put him on, we certainly would have no objection.

Senator ERNST. In view of the statement of Mr. Hartson, I think it would be best to have him.

Mr. MANSON. I think it would be material for the committee to know whether the bureau stands upon the valuations made by Mr. Grimes or the valuations made by Mr. Graton as the proper valuations of the copper properties. We have not criticized, and do not intend to criticize, as far as counsel are concerned, the valuations made by Mr. Grimes.

The CHAIRMAN. Then, with that understanding, Mr. Graton will come on Thursday morning?

Mr. HARTSON. On Thursday morning.

INVESTIGATION OF THE BUREAU OF INTERNAL REVENUE

FRIDAY, JANUARY 30, 1925

UNITED STATES SENATE,
SELECT COMMITTEE TO INVESTIGATE THE
BUREAU OF INTERNAL REVENUE,
Washington, D. C.

The committee met at 10.30 o'clock a. m., pursuant to adjournment of Wednesday, January 28, 1925.

Present: Senators Couzens (presiding), Watson, Jones of New Mexico, and King.

Present also: Mr. L. C. Manson, of counsel for the committee; Mr. L. H. Parker, chief engineer for the committee; and Mr. Edward T. Wright, investigating engineer for the committee.

Present on behalf of the Bureau: Mr. A. W. Gregg, special assistant to the Secretary of the Treasury; Mr. C. R. Nash, assistant to the Commissioner of Internal Revenue; Mr. Nelson T. Hartson, Solicitor Bureau of Internal Revenue; and Mr. S. M. Greenidge, head engineering division, Bureau of Internal Revenue.

The CHAIRMAN. Mr. Hartson, do you desire to put Mr. Graton on the stand the first thing this morning?

Mr. HARTSON. Yes, sir.

TESTIMONY OF MR. L. C. GRATON, MINING GEOLOGIST, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

(The witness was duly sworn by the Chairman.)

The CHAIRMAN. State your name and your occupation, please, for the record.

Mr. GRATON. My name is L. C. Graton. I am a mining geologist.

Mr. HARTSON. Mr. Graton, where did you get your education as a mining geologist?

Mr. GRATON. At Cornell and McGill Universities.

Mr. HARTSON. Will you tell the committee the course of training that you took and the degrees that you received?

Mr. GRATON. I took a four-year program, specializing in chemistry and geology at Cornell, receiving a degree of bachelor of science.

Mr. HARTSON. What experience have you received since you received your degree at Cornell?

Mr. GRATON. After leaving Cornell with the bachelor degree, I went two years to McGill, where I taught chemistry, but studied further mining engineering. Then I returned for a special year

of graduate study at Cornell, and at the end of that year I entered the United States Geological Survey.

Mr. HARTSON. In what capacity?

Mr. GRATON. I started in as field assistant, and wound up as geologist in charge of copper resources.

Mr. HARTSON. What duties did you perform while with the Geological Survey and where did those duties take you?

Mr. GRATON. My duties were of two kinds; first, investigation of the geology of mining districts in the western part of this country, chiefly, and, second, I was given charge of the work in copper resources, under the Division of Mineral Resources in the Geological Survey, which took me to all the producing districts of importance in the United States.

Mr. HARTSON. What was the nature of your duties when assigned to that work for the United States Geological Survey?

Mr. GRATON. Our work consisted of a general inquiry into the status and conditions of the copper producing industry. We were charged with the collection and the compilation of all of the statistics of the industry, an analysis of the conditions that affected production, and examination into matters of the cost of production, persistence of ore with depth, the effects of the grade of ore on the prosperity of the industry, and conditions affecting selling price; in fact, all the fundamental factors that have to do with the copper industry.

Mr. HARTSON. You were with the Geological Survey for how long?

Mr. GRATON. About six years.

Mr. HARTSON. And what did you do when you left the Geological Survey?

Mr. GRATON. I became secretary of the newly organized Copper Producers' Association of New York. The title was secretary, and the duties were those of manager of the organization. Very shortly after that I was appointed on the Harvard Mining School staff to teach mining geology.

Mr. HARTSON. You said, "Very shortly after that." How long a period?

Mr. GRATON. A few months after. I carried on the two connections until the outbreak of the European war, when the Copper Producers' Association was dissolved. In the meantime I had moved to Cambridge and had taken up more and more the work at Harvard.

The CHAIRMAN. What were your activities as secretary of the Copper Producers' Association?

Mr. GRATON. The Copper Producers' Association virtually continued the kind of work that I had been doing in the Geological Survey in a somewhat more intimate and detailed way. They were able to go into details to a greater extent than the Government felt able to do. It was a general information bureau, in which the same fundamental conditions as applied to the Government work obtained, namely, the individual companies reported all of their data, and the data of each were to be assembled into totals, which only were available to the members. The individual statistics and individual facts were never revealed to the committee or to any member.

The CHAIRMAN. Did the statistics that you received relate to the cost of production in the mines?

Mr. GRATON. No, sir; not to cost of production.

The CHAIRMAN. Just tell us what the data were that you accumulated for the producers?

Mr. GRATON. The essential statistics were statistics of production, consumption, export, destinations of the consumption, geographically and by kinds of uses, electrically, for casting purposes, for railroads, and for automobile consumption, etc.

The CHAIRMAN. Then, each of those reports that you received from an individual copper company related to the amount of tonnage they produced, the particular industry it went to, and I assume the price it was sold at.

Mr. GRATON. No.

The CHAIRMAN. Just the two former?

Mr. GRATON. Well, I have tried to tell in general terms what the statistics covered.

The CHAIRMAN. Yes; I understand, but you previously said that this information was only available in the aggregate.

Mr. GRATON. That is right, sir.

The CHAIRMAN. To the individual members of the association?

Mr. GRATON. Yes, sir.

The CHAIRMAN. You yourself had access—

Mr. GRATON. To all of the details: yes, sir.

The CHAIRMAN (continuing). To all of the details?

Mr. GRATON. Yes, sir.

The CHAIRMAN. In other words, that is comparable to a bank examiner employed by a clearing house of a city, who investigates all the loans and all of the financial conditions of the member banks, and is assumed only to pass out that information in the aggregate. But there is a source where that detailed information may be obtained if the employees of the particular agency are disposed to give it out. Is not that correct?

Mr. GRATON. I am not familiar with the banking business, Senator.

The CHAIRMAN. But, as a matter of fact, you did have all of the detailed information, which was highly confidential?

Mr. GRATON. Yes, sir.

Mr. HARTSON. When you went to Harvard to go on the faculty, what were your duties there?

Mr. GRATON. I took over, gradually at first, and within a couple of years entirely, the instruction in mining geology.

Mr. HARTSON. Were you on the faculty at Harvard when the war broke out?

Mr. GRATON. Yes, sir.

Mr. HARTSON. What war service did you render, if any?

Mr. GRATON. The first thing I did was to enter the Reserve Officers' Training Corps, and I was assigned to instruction in military mapping, in consequence of my experience in mapping work in the Geological Survey. While I was engaged in that work the members of the War Industries Board, who had to do with supplying the Government with copper, found that the industry was not sufficiently centralized in its organization to function most efficiently,

and therefore suggested the organization of a committee, to be made up of the important producing units, the important producing companies, which would function with the War Industries Board for the supply of copper. That committee was organized and went into existence; it went to work, and it soon became evident that some one independent of the producing interests would be desirable, both from the point of view of the copper companies and that of the War Industries Board; so both sides came to me and asked me to take over the management of that committee, which I did. I continued with that work until several months after the armistice, when all of the adjustments that were involved in the war contracts were settled up.

Mr. HARTSON. For how long a period of time did you serve in that way?

Mr. GRATON. Just one year.

Mr. HARTSON. Just a year?

Mr. GRATON. Yes, sir.

Mr. HARTSON. That service terminated in May, 1919?

Mr. GRATON. In April, 1919.

The CHAIRMAN. Excuse me, Mr. Hartson, but I am interested in the matter of that producers' association. What percentage of copper production of the country was represented in that producers' association?

Mr. GRATON. Do you refer to the first association that I mentioned, sir?

The CHAIRMAN. I do not recall that you mentioned more than one producers' association.

Mr. GRATON. Well, the War Industries Committee was a producer' committee.

The CHAIRMAN. Yes.

Mr. GRATON. But you refer to the first one?

The CHAIRMAN. Yes, sir.

Mr. GRATON. That was a voluntary association that covered substantially the entire copper-producing industry of the United States.

The CHAIRMAN. Where was it located?

Mr. GRATON. In New York City.

The CHAIRMAN. How long did you say it was in existence before it disbanded?

Mr. GRATON. From the beginning of 1909, or thereabouts—I think it was February 1 that I began work—until the outbreak of the European war. About the 1st of August, 1914, it was voted to suspend all statistics. Business, of course, was demoralized in all the markets of the world about the beginning of 1915, and the association was dissolved.

The CHAIRMAN. All right, Mr. Hartson.

Mr. HARTSON. What did you do then, Mr. Graton, after you left the war industries work in April, 1919?

Mr. GRATON. I returned to Harvard, sir, to take up my work.

Mr. HARTSON. Did you thereafter become associated with the work of the Bureau of Internal Revenue?

Mr. GRATON. Yes, sir.

Mr. HARTSON. Will you tell the committee the circumstances under which you took up your work with the bureau?

Mr. GRATON. Dr. Ralph Arnold, who had long been a friend and colleague of mine, and with whom I had been associated for a number of years in the geological survey, had been, during 1919, and I do not know how much earlier, in charge of the work in the Revenue Bureau relating to mineral resources, his particular specialty being oil. The same week that I returned to Cambridge from the termination of my work in New York for the copper committee I received a telegram from Arnold asking if I would undertake the valuation of the copper mines of the country in the Revenue Bureau for the purpose of determining taxation.

As I remember it, the telegram indicated that Commissioner Roper, with whom Arnold had talked, was anxious that I undertake the work. That is the first I ever heard of Commissioner Roper. I replied that I was not interested in the matter. I had already ended my regular program of work for the war, and I was glad to be home to take up the threads again.

After a number of telegrams, at a rapid-fire rate, within the course of a couple of days, between, first, Mr. Arnold and myself and then Commissioner Roper also, I finally went to Washington, at their urgent request, and with a good deal of reluctance, expecting absolutely to decline or refuse to undertake the work. I went simply because it did not seem courteous to do otherwise.

I was met by Doctor Arnold, who took me to the commissioner, who was very anxious that I undertake the work. From there I went to Mr. Callan; at least, the commissioner sent me to Mr. Callan, who was assistant to the commissioner, and in charge of the revenue work of the Income Tax Unit, who likewise set forth at length the difficulties of the job, and told me what he had learned as to my peculiar fitness to handle it, and impressed upon me my duty to the Government and to the industry demanded that I undertake the work.

Mr. HARTSON. Mr. Graton, if I may interrupt you at that point, during those conferences that you held with Commissioner Roper and Mr. Callan, was it made plain to you the exact nature of the work that you were to engage on if you came into the bureau?

Mr. GRATON. In general terms, yes, sir; in specific term, no.

Mr. HARTSON. What was the general nature of the duties that you were asked to perform in the bureau; what was the task that they put upon you to do?

Mr. GRATON. The task was to value the copper mines. That is, in briefest terms, the job that I was given to do.

Mr. HARTSON. In other words, it was made plain to you, then, that if you came into the bureau it would be for the purpose of valuing the copper properties?

Mr. GRATON. That was it; yes, sir.

The CHAIRMAN. As of any particular date, or was it the value at the moment?

Mr. GRATON. No; at whatever dates would be concerned with the application of the tax laws. The date of most general application was March 1, 1913, but there were valuations required as of earlier

dates in certain instances, and numerous valuations of a later date, but the great number were for 1913.

At the end of that series of conferences here I had weakened to the extent of promising Mr. Roper that I would consider the matter carefully; I would ascertain whether it would be possible, without serious prejudice to my own position and to the welfare of the work with which I was charged at Harvard, to again seek leave for a considerable period, and I would let him know.

I returned to Cambridge, and it was properly seen to by all of them, by the commissioner, his assistant, and by Doctor Arnold, that I was not permitted to forget what they tried to impress upon me as to my duty.

Two or three weeks after that I capitulated further to the extent of coming again to Washington and talking with Mr. Roper, Mr. Callan, and Doctor Arnold again, as well as some others who were then in the bureau, and at that time, which I think was about the beginning of May, I finally consented to undertake the work.

I came down here as soon as I could clean up my own affairs, about the middle of June, 1919.

Mr. HARTSON. What duties did you immediately engage upon when you came into the bureau?

Mr. GRATON. I found, somewhat to my surprise, and a good deal to my disappointment, that there was no method or procedure established by which mines could be valued. A procedure had been established by which oil wells could be valued.

The CHAIRMAN. Is not that fairly well set out in the affidavit that you made in the Chile Copper Co. case; I mean that statement as to the condition of the work in the bureau?

Mr. GRATON. I think it probably is; yes, sir.

The CHAIRMAN. I am referring to the affidavit that you made.

Mr. GRATON. Yes, sir.

The CHAIRMAN. For the Chile Copper Co.

Mr. GRATON. That was made for the Anaconda Co., and made at their request, and then incorporated, I believe, in the brief that they presented after they purchased the Chile Copper Co.

The CHAIRMAN. At whose request was it that you made this affidavit for the Anaconda Co., and afterwards incorporated in the brief in the Chile Copper Co. case?

Mr. GRATON. It was at the request of the Anaconda Co.

The CHAIRMAN. Were you in the employ of the Anaconda Copper Co. at that time?

Mr. GRATON. No, sir.

The CHAIRMAN. Did you receive a fee for your services in that connection?

Mr. GRATON. Yes, sir.

The CHAIRMAN. If not inconsistent, will you tell us what fee you received for making that affidavit?

Mr. GRATON. I received \$100 a day.

The CHAIRMAN. How many days were you engaged in making that affidavit?

Mr. GRATON. I left Colorado and returned to work in Michigan and I charged them for 12 days--\$1,200.

The CHAIRMAN. Then, did the Chile Copper Co. pay anything for reproducing it or did that come in as a part of the assets of the Chile Copper Co. when the Anaconda Copper Co. purchased it?

Mr. GRATON. I told you all the money that I received, sir. I did not know that the affidavit was to be incorporated; I did not know how it was to be used, except that it was to be sent to the Revenue Bureau in connection with the testimony that I gave at a hearing in June, 1922.

Mr. HARTSON. Are you through, Mr. Chairman?

The CHAIRMAN. Yes.

Mr. HARTSON. Do I understand you to say, Mr. Graton, that the fee that you testify you received was for the making of the affidavit, or was it for your expenses that you were put to by reason of the time it took to prepare the affidavit for them?

Mr. GRATON. I was working in Colorado at the time at \$150 a day, on mining work, which had nothing to do with taxation. I had to leave that work, and when Mr. Evans, of the Anaconda Co., asked me about compensation I told him that if they would pay me my extra expenses of travel I would be satisfied, and Mr. Evans said he felt it was entirely unfair to take me away from my earning work; so I charged them a fee of \$100 a day instead of \$150.

Mr. HARTSON. During the period of time that you were engaged?

Mr. GRATON. During the time that I lost from other earnings. In other words, I lost \$600 by coming East.

Mr. HARTSON. This affidavit was made in 1922, was it not? It is dated July 3, 1922.

Mr. GRATON. Yes; that is right.

The CHAIRMAN. That was after you had completed provisional valuation of the copper properties?

Mr. GRATON. Yes, sir.

The CHAIRMAN. And included in that provisional valuation, of course, was the valuation of the Anaconda and Chile Copper Co. properties?

Mr. GRATON. I assisted in the valuation of the Anaconda and was chiefly responsible for the provisional valuation, which I left in the bureau, and I was entirely responsible for the valuation assigned to the Chile Copper Co., as left in the bureau at the time I left the Government service. The interest of the Anaconda Co. in the Chile Co. in 1922, so far as I know, did not exist. Certainly, the purchase of the Chile Co. by the Anaconda Co. was not in my knowledge at the time. My impression is it was made after that.

Senator KING. Prior to your employment in the bureau, had you been in the employ of the Anaconda Co. or the Chile Co. or of any of the persons who were the principal stockholders or directors of either of those companies?

The CHAIRMAN. I might say to the Senator that before he came in the witness testified that he was secretary of the Copper Producers' Association, in which all copper companies were interested, in years previously.

Senator KING. I see.

Mr. GRATON. I had also done a very large amount of geological work for about 20 of the larger companies.

Senator KING. Including the Anaconda Co.?

Mr. GRATON. Including the Anaconda Co.

Senator KING. And the Utah Copper Co.?

Mr. GRATON. In connection with a scientific investigation, which was, as a matter of fact, interrupted by the war, but for which those companies furnished the necessary financial support, on the understanding that I was to receive no compensation. I did receive traveling expenses for all of the field work, and I did later receive \$4,000, which is all that I have ever profited from about six solid years of intensive work.

Mr. MANSON. That is, while you were employed as secretary of the Copper Producers' Association?

Mr. GRATON. That began during that time; yes, sir.

Senator KING. Of course, you received pay as secretary?

Mr. GRATON. Yes, sir. I had \$6,000 a year as secretary.

The CHAIRMAN. Were you under compensation at Harvard during the time that you were secretary of the Copper Producers' Association?

Mr. GRATON. Yes, sir.

The CHAIRMAN. And also while you were in the War Industries Board?

Mr. GRATON. No, sir.

Mr. HARTSON. Mr. Graton, you had gotten to the point of telling the committee about the duties that you were immediately engaged upon when you went into the Bureau of Internal Revenue. I would like to have you continue from that point and give the committee an understanding of what the conditions were with regard to the valuation work that had already been done, if any, and what it became necessary for you to do, and what you actually did do.

Mr. GRATON. Well, as I said, I found that there was no general procedure established for mine valuation. I think a few iron mines and some lead and zinc mines of rather small importance and short life, that came into existence mushroomlike in consequence of high war prices, had been assigned specific valuations by an engineer who had been in the bureau ahead of Doctor Arnold, but those were valuations which I never saw and with which I was never concerned, so far as I could ascertain were taken as they came, one company after another, and settled in what seemed, I suppose, a fair way to deal with each particular company; but, so far as I could gather—and I searched the records for general instruction and guidance pretty carefully—there had been no general policy or no general procedure established.

The valuation of the copper mines, of course, was a very important matter, and I felt that it would be quite unwise to begin upon any without having a very definite basis and standard established by which to value them all.

Furthermore, I realized that there was no one then in the bureau who had any capability whatever to pass upon this question, and I felt that it was absolutely vital, from the standpoint of fairness and finality, and, as a matter of fact, in self-protection, that the commissioner and Mr. Callan should know exactly the basis on which the valuations would be made, and should have opportunity not only to pass their own judgment upon that basis, and, if they deemed wise, subject the proposed basis to any expert and professional counsel or jury that they might want to engage.

So my first effort, really, after an initial survey of the general situation, was to set about the formulation of a general procedure for valuation.

Mr. HARTSON. Had there been any of that work done, Mr. Graton, by anybody in the bureau prior to your coming into the bureau?

Mr. GRATON. There had been no work of that kind, so far as I know, done with respect to copper by anyone who could claim qualification for the work. The revenue agents had, in many instances, made comments on valuations submitted by the taxpayers and in some instances had substituted so-called valuations of their own, which bore all the marks of amateurism, and which showed conclusively that they were made by people who did not understand at all what a copper mine is or how its value is measured. With that exception, sir, there was no procedure established, and nothing had been done.

Mr. HARTSON. What was the status of the tax liabilities of the various copper companies when you came into the bureau with regard to the determination of any additional assessment that might be determined to be due from those copper companies? I am speaking in general terms now.

Mr. GRATON. In general I was not concerned whatever with the tax. It was outside my province to compute tax. I kept away from it for various reasons, partly because it was outside my province, partly because I did not claim any familiarity whatever with the machinery of the specific tax-computation operation, involving more or less complicated schemes of the various brackets of surtaxes, and so forth, and for as weighty a reason as any, because I did not want to have any bias whatever upon my actions. I did not want to feel, after having reached what seemed to me a sound and proper valuation, that if that valuation were to survive the Government would get more taxes or the Government would lose taxes.

Mr. HARTSON. Now, Mr. Graton, I think my question—I know my question did not bring out what I had in mind. Up to the time that you came into the bureau did the taxes of the various copper companies rest solely on the valuations of the copper properties made by the companies themselves?

Senator KING. Would not his answer—if I may be pardoned for interrupting—that he found these amateurish assessments or valuations which had been placed upon some of the properties by agents give a partial answer to that question?

Mr. HARTSON. It is quite possible, Senator, that, although the agents reported their own opinion as to valuations, those opinions never had been carried into the computations of the additional tax which might be due and that therefore no additional tax had been assessed, even though these agents had reported.

Mr. GRATON. I can speak about that only in general terms from a more or less incidental lot of impressions that I got from contact with others in the bureau.

I think your statement is essentially correct, sir, that the companies had paid for prior years—certainly for 1916 and certainly for 1917, and I suppose certainly for 1918—at that time, in June, 1919, had paid tax based on their own computations of value, and I would be of the opinion that, in the main, no further tax had been paid by

them up to the time of my work and that, in the main, no further levies had been made, although I think it is probably true—I think it is true—that in certain instances the revenue agents who had examined the returns had computed a new statement of tax on the basis of the valuations which seemed to them appropriate.

The CHAIRMAN. When you started in to value the Anaconda Copper Co.'s properties, for example, did you have at hand the valuation put on by the company itself?

Mr. GRATON. Oh, yes, sir.

The CHAIRMAN. Is that true of all the companies that you valued?

Mr. GRATON. That is true of substantially all; yes, sir. There were certain instances in which the data furnished by the company up to that time were very incomplete indeed. For the most part those were small companies. In general, the data afforded by the companies was fairly complete.

The CHAIRMAN. I do not want to get ahead of the solicitor, but I was just wondering if you could state generally whether there was much difference between the valuations as claimed by the companies in their tax returns and the valuations that you placed on the properties.

Mr. GRATON. There was a difference; which ranged from slight to considerable.

Senator KING. Higher or lower?

Mr. GRATON. Both ways, sir. On the day that I left the bureau I transmitted a memorandum to Mr. Callan, outlining as fully as seemed appropriate and necessary what I had done, and I have a copy of that, which I will be glad to submit if you think it proper, in which I summarized my findings in very general terms, about, as I recall, to this effect, that the valuations placed by the companies themselves on their properties were in the majority of instances of the same general order of magnitude as the valuations to which my findings led, and that, in general, the companies' own valuations were not very far from the valuations at which I arrived. I pointed out that in a few instances I had raised the valuations and in a majority of instances I had reduced the valuations. I was surprised to find how much I had reduced the valuations in some cases cited as typical by Mr. Grimes.

The CHAIRMAN. At this point I would like to ask who marked these valuations "provisional"?

Mr. GRATON. I did, sir.

The CHAIRMAN. Did you mark all of them "provisional"?

Mr. HARTSON. Senator, if I may interrupt here, if the Senator has no objection, I would like to bring the witness to that point a little later on. It is coming out in an orderly way, and I think we can get the picture before the committee a little better if we go ahead as we are and not get ahead of our story.

The CHAIRMAN. The Chair has no objection.

Mr. HARTSON. Mr. Graton—

Mr. GRATON. If you do not mind, I should like to complete my answer to the other question, which was this—

Mr. HARTSON. Yes.

Mr. GRATON. Mr. Grimes set forth in a memorandum of 1922, which the Revenue Bureau has been kind enough to let me see just

now, a comparative statement relating to four companies that he has selected as typical, and his conclusion is that the tax reported on the original returns by the four companies was \$2,160,000 and the tax with the provisional basis of valuation, which I gather from the preceding tabulations is the tax for those four companies, was computed on the basis of the provisional valuations which I made, \$6,690,000, something over three times as great.

As I say, I was surprised that my valuation resulted in such an increase in tax. As a matter of fact, I never figured through in any instance the tax of any single company. I did not know what its effect would be.

The CHAIRMAN. What are those companies that he is referring to there?

Mr. HARTSON. Those are the Utah Copper Co., the Chino Copper Co., the Nevada Consolidated Copper Co., and the Inspiration Consolidated Co.

Senator KING. That would be the aggregate to be paid under your assessment of those four companies?

Mr. GRAYTON. As I gather here, that is the comparative statement of the total tax of those four companies in 1918, as computed, first, by the companies themselves, and, secondly, on the basis of my valuations. Just what basis Mr. Grimes has for selecting those particular four companies, I do not know; further than that they are fairly typical, I have, at the moment, no way of judging.

Senator KING. Well, if I may be permitted, if Mr. Grimes' statement with respect to these four companies is correct, and those four are typical of the others, then your statement to me a moment ago that the valuations which you placed upon the mines were substantially the valuations placed upon them by the mine owners, would not be reconcilable, because this provisional valuation which you have placed upon these four companies increased the tax from \$2,000,000 plus, to \$6,000,000 plus, so you must have placed the valuation for taxes much different from the valuation of the companies.

Mr. GRAYTON. Lower than theirs; yes, sir. In general, that was the trend, without any doubt. My valuations in general were lower than the companies' valuations. I would like to tell you what changes I made from those which the companies, as a rule, followed, which resulted in my valuations being lower than their own.

Mr. HARTSON. Do you know whether your valuations generally resulted in an additional tax or not?

Mr. GRAYTON. I do not know, sir.

Mr. HARTSON. You did not follow through to find out what the effect of the valuations was?

Mr. GRAYTON. No.

Mr. HARTSON. You have now gotten to the point, Mr. Graton, where you were determining the general plan which would be consistently followed as a method of valuing copper company properties? I would like to have you go on from that point and tell the committee what you did, indicating whether you had any assistance in this work.

Mr. GRAYTON. The thing to which I really gave attention was the completion of a program which Doctor Arnold had set, but which he dropped, namely, the formation of a technical staff in the bureau.

with competent engineers, to take care of the other related products—gold, silver, lead, zinc, coal, etc. With frequent conferences with Mr. Callan, I started to help to do that. In fact, Mr. Callan and I went to New York to consult with Mr. Pope Yeatman, who had been in charge of the nonferrous metals work in the War Industries Board and had made a very great success and had impressed everyone with his ability and his judicial qualities, his lifetime experience with it being well known, of course. We had hopes of persuading Mr. Yeatman to come and take charge of the entire mining-valuation program, and I would presume, with this approval, he would take care of the specific valuation with respect to copper. Two outstanding members of the Geological Survey, specifically familiar with individual specialties—Mr. Siebenthal with lead and zinc, and Mr. Harder with iron—were virtually engaged. The Civil Service Commission had been called upon for their transfer, and all the preliminaries undertaken, when, for some reason which I never understood, that was called off. The consequence was that I was left virtually alone in that work for some time, sticking, as I did, to copper only.

Some time later, J. C. Dick, a mining engineer from Utah, whom I had known for many years previously, learned that men were needed, and came and offered his services to Mr. Callan. He was sent over to me, and I welcomed Dick with a good deal of satisfaction, and we went to work. I suggested that he take over gold and silver, which he did, and in the course of my own work on copper valuation, which eventually became pretty pressing, so that I was working day and night, and hardly keeping even, even then. I suggested that Dick take over some of the important valuations.

The CHAIRMAN. Some of the important copper valuations?

Mr. GRATON. Copper valuations, yes, partly as an independent check, and partly to get the jobs out without my breaking down, as I was really working too hard, and Dick, as a matter of fact, did submit three valuations, which were either his work wholly, or a combination of his work and mine, but they went in over his signature, perhaps with my initials added.

Mr. MANSON. Do you recall what companies those were?

Mr. GRATON. Those were the Utah Copper Co., which is one of those included in the four that I have mentioned, which Mr. Grimes selected—the Phelps-Dodge—I think not all the holdings of the Phelps-Dodge, because I believe I had part in the valuation of one of them, the Copper Queen, and the third company that Dick handled was the Calumet, Arizona, as well as the Bisbee, Arizona.

In the course of time I had formulated what seemed to be a sound and reasonable and applicable method of mine valuation. In the course of that formulation I had been in frequent conference with Mr. Callan, with the commissioner, and with Dr. T. S. Adams, who acted as a sort of technical adviser to the bureau—technical in the sense of his being an expert in taxation but not an expert in engineering. That procedure was put in the shape of an orderly memorandum, which I submitted in writing to Mr. Callan, to the commissioner, to his assistant, to the head of the technical sections, and asked each one of them to criticize it fully and drastically, and to submit it to anyone or any group of persons or engineering or ex-

perts whom they felt qualified to pass upon its validity, and, eventually, if enough of it remained after such treatment, to return it to me with all the changes indicated which they thought necessary. As a matter of fact, it went to each of the men I have specifically mentioned and, so far as I know, they did not think it necessary to submit it to anyone outside the bureau; but whether they did or not I do not know. At any rate, it was returned to me with a few suggested changes, which were mainly or terminology, and which, and which concerned very largely the introductory section, which was a statement of general policy.

In short, the program was returned substantially as I had submitted it, with permission to present that as a formal paper before the annual meeting of the American Institute of Mining Engineers at Chicago in 1919, where I hoped it would have the effect of doing two things: First, show industry in general and the mining industry in particular that the bureau was making an earnest effort to do its heavy job in a businesslike and fair way, because Mr. Roper's attitude was very straightforward indeed; and, second, to secure, so far as possible, an attitude of cooperation on the part of mining companies whose officers and engineers would attend that meeting at the time when the conference regarding the specific settlement of taxes were to be had.

I gave that paper—it aroused a great deal of discussion—and afterwards the commissioner gave me his express approval for its publication in the transactions of the mining institute, which had asked me if they could publish it.

So far as I know the principles involved in that program have not been assailed by anyone competent to be entitled to an opinion upon mine valuation; and, furthermore, those principles are justified by the practice of all reputable mine engineers and mine valuers, and those States which have undertaken to value the mines in a scientific and equitable way have employed engineers to do that valuation who subscribe wholeheartedly to the principles I used and who have, in effect, used those same principles and methods in arriving at the valuations for the States. The same principles, so far as I can gather, are now being used by Mr. Grimes and his associates, and the principles themselves, so far as I can see, are unassailable from any standpoint.

The CHAIRMAN. Does the solicitor mind if I ask a question at this point?

Mr. HARTSON. Not at all, Senator.

The CHAIRMAN. I have heard a great deal about this principle, and I read in your affidavit that:

It was evident that there was only one sound general method of mine valuation applicable, namely, the present value method, which is the one method of mine valuation described in all standard textbooks on mining and followed in professional practice generally.

That is, in substance, saying that water is water; but do not the factors entering into those valuations determine the value of the method or the influence that the method has upon the results?

Mr. GRATON. Yes, sir; very much.

The CHAIRMAN. This statement does not mean anything unless you determine the factors, does it?

Mr. GRATON. It means a good deal, sir, to one who has the background that existed at that particular time, as I did, which was this: This method to which I refer had been used by the great majority of companies in setting up their own value as of 1913. The use of that method had been very severely criticized in the bureau by members of the organization, most of whom had left the organization by the time I entered it. This method, which I insist is the only method of valuing a mine, just as weighing a piece of beef-steak is the only way of finding how much it weighs, was under very great suspicion when I entered the bureau.

The CHAIRMAN. For what reason?

Mr. GRATON. For the reason that it resulted in valuations that looked high to people who did not know anything about what a mine should be worth, and for that reason alone.

Mr. MANSON. In that connection you have used the expression, "What a mine should be worth." Were you trying to arrive at what the mine should be worth or at the market value of the mine?

Mr. GRATON. I do not recognize any distinction, sir.

Mr. MANSON. That is all.

Senator KING. Well, there is, is there not?

Mr. GRATON. I do not recognize any, Senator.

Senator KING. But there is, as a matter of fact?

Mr. GRATON. Perhaps you can show me, but I do not recognize any. I really do not.

Senator KING. Do you say that the market quotations of mining properties are always coincident with what you say is the real value?

Mr. GRATON. No; market quotations of shares of the company, I think, have been shown in so many instances to be unreliable and incomplete indexes of the value of the property which the tax law said must be determined.

Mr. MANSON. Did not the tax law say "market value?"

Mr. GRATON. It said the fair market value of the property; yes. It did not say anything about the shares of the stock of the company.

The CHAIRMAN. Would the fair market value of a piece of property be determined by the fair market value of a piece of property of like nature contiguous to it?

Mr. GRATON. I am afraid I do not quite understand the question.

The CHAIRMAN. Would the sale of a piece of property next to the property which you are valuing, they both being under the same general conditions, be a basis of arriving at the value of the property that you had under consideration?

Mr. GRATON. No, sir. The situation in mining property is very different from that existing in connection with oil wells. Mines are so unlike that you can no more arrive at commensurate values by comparisons than you can say that you will pay \$15 a week to one boy, and therefore you will pay \$15 a week to his brother. Their abilities, their capacities, may be very different, indeed.

The CHAIRMAN. There are no exact conditions existing as between these two mines?

Mr. GRATON. No; I will not say that, but the number of conditions of fundamental importance that vary is so great.

The CHAIRMAN. Then, you evidently did not understand my question. I said two pieces of property identically alike, and next to

each other or contiguous to each other. Would the sale of one be the basis for the value of the other?

Mr. GRAYTON. If they are alike, then, obviously, the sale of one would be, at the appropriate date, and ought to be, and could not help but be, an index of the value of the other. But to take a specific illustration, the Miami Co. and the Inspiration Co. mine adjacent are a part of a single geological ore body. That ore body is as nearly uniform as almost any kind of ore body that one can imagine. The values of those two mines, arrived at by any reliable method and by the use of any reasonable factors in that method, are bound to show a very great difference. For one reason, the portions of the ore bodies which the two mines have are unequal. In the second place, the Miami end of the ore body is of somewhat richer grade than the Inspiration end. The method of mining adopted by one is a different method than that adopted by the other, and, in consequence, different expenditures for capital and different costs for operation result in a difference in the judgment of the management in the first place.

The CHAIRMAN. In connection with your statement, did the method of producing the ore enter into the question of valuation? If a given mine had an improved method, a more up-to-date method than another mine, would you give it a higher or a lower valuation?

Senator KING. Assuming the same richness in the ore bodies?

The CHAIRMAN. No; I do not want to include that assumption. I want that out of the question, because he says there are no two exactly alike. He refers to the method of producing as a factor, and I want to know what that factor did in determining the value of the property.

Mr. GRAYTON. That factor is inevitably of consequence.

The CHAIRMAN. Which way, though—of consequence, which way?

Mr. GRAYTON. In the logical way, namely, better management yields greater value, and the reason that that is true is this, that better management is reflected in a past history of greater profit; lower costs, therefore greater profits.

The CHAIRMAN. That is just what I tried to prove in another hearing, that the more efficient and the more competent the management; the less the tax, although the more able they are to pay; and the less efficient the less competent, the more the tax, because of the lesser value of the property.

Mr. GRAYTON. To some extent I think you are right, but I think there are elements in there in your present statement which you have overlooked, sir.

The CHAIRMAN. Well, speaking generally.

Mr. GRAYTON. You say the more competent the management the less the tax. That certainly is not true in general. The more competent the management the greater the profit, and the greater the income, and therefore the more the tax.

The CHAIRMAN. Maybe I did not state that correctly. I should have said value, perhaps.

Mr. GRAYTON. The more competent the management, other things being equal, the higher the value, not because there is any necessity of applying the human factor of judgment in the management, but

because the better management is reflected in terms of history, in terms of arithmetic, recorded in the reports, the outcome of the company, and submitted in connection with the company's data to the Revenue Bureau.

Mr. MANSON. Following out that, the more efficient the management, the greater would be the deduction for depletion per ton of ore?

Mr. GRATON. Per unit; yes, sir.

Mr. MANSON. The same thing would be true in respect to the adequacy or inadequacy of capital?

Mr. GRATON. That is quite true.

Mr. MANSON. Yes. In other words, the mine that is adequately capitalized and has adequate equipment would receive a greater deduction per unit of ore mined than a mine that was inadequately capitalized?

Mr. GRATON. That certainly is true, and those same factors govern absolutely in the valuation of mining properties for absolute sale, quite independent of taxation purposes.

Senator JONES of New Mexico. How did you fix the value of a mine, then, that is not being operated at all and where you did not know how it is going to be operated, whether efficiently or not, or whether undercapitalized, or what?

Mr. GRATON. I will undertake to answer that question to the best of my ability, if you wish; but I pointed out that in general, that question did not confront us because we were valuing mines that were already operating.

Senator WATSON. Well, this is hypothetical, Professor.

Mr. GRATON. And mines that were making a profit and therefore subject to taxation, you see.

In general, sir, the procedure for such a case involves, instead of the use of records of past operations and findings, the best estimate that can be made as a substitute. Such development as has been done up to that time is appraised as to its probable outcome when further pursued. The costs are estimated on the basis of what substantially similar operations are doing elsewhere, and, to some extent, judgment is endeavored to be reached by careful appraisers as to what the particular management that has been chosen, if the management has already been chosen, would be likely to do on the basis of what that management has done in its previous capacities. If a brand new lot of people are at the helm, the entire enterprise is looked upon as far more questionable as to outcome.

All of those estimates are then discounted for a factor of safety by the use of a very high profit-risk rate of return, in some cases reaching to 50 per cent, and perhaps, under very exceptional cases of risky nature at every angle, even greater than that, which means that you are almost demanding that your money be brought back to you as fast as you let go of it.

Senator JONES of New Mexico. What I am getting at is this: Would a piece of property have a greater market value with respect to one person than it would with respect to another?

Mr. GRATON. If I understand you correctly, this is your question: Would a given property have a greater value to one person—

Senator JONES of New Mexico. No; I mean a greater market value. Market value is what we are talking about.

Senator KING. In the hands of one person than in the hands of another?

Senator JONES of New Mexico. Yes.

Mr. GRATON. I think it probably would. I am sure of this, that for the majority of successful and profit-making mines, those mines are worth more to people who own them and have been making them successful, than they are likely to be to anybody else.

Senator JONES of New Mexico. That was not my question.

Mr. GRATON. Then, I did not understand the question, sir.

Senator JONES of New Mexico. "Market value," legally speaking, is understood to be a fixed thing, and I want to know if, in the application of this term "market value" as used in the statute, you gave it a different meaning, depending upon the person who had control of the property?

Mr. GRATON. No, sir.

Senator JONES of New Mexico. Then, my question is: Has a piece of property a greater market value in the hands of one person than it has in the hands of another?

Mr. GRATON. The market value?

Senator JONES of New Mexico. I am not speaking of values. I am speaking of market value.

Mr. GRATON. Again, I say I do not recognize any distinction between value and market value.

Mr. MANSON. In making these valuations you did not recognize any distinction between the utility value of the property to the owners and the market value of the property as a merchantable thing?

Mr. GRATON. I do not recognize any such distinction. No; I do not believe there is any such distinction. If sirloin steak is worth 30 cents as the market value, then it is worth 30 cents a pound. Its value is worth 30 cents, and you can not reach any other figure than 30 cents for it.

The CHAIRMAN. The purchaser of that steak may be able to get more out of it than some other purchaser might be able to get out of it, because of a greater ability to cook; but I say your own statement indicates that you have given a greater value to properties because of the management, which, in substance, is what Senator Jones includes in his question—because of the individual owning it, than you give to some other property because another individual owned it, and that individual was not so competent to manage it as the other individual was.

Mr. GRATON. I do not want to be thought to say that my conclusions as to value were determined in any respect by the particular importance and character of those who owned the property.

The CHAIRMAN. No; I understand that, and I think the committee understood that.

Mr. GRATON. But only by the results which, under the existing management, the property had been able to reach.

Senator KING. In determining the value, you did not assume continuity of ownership in the respective individuals or corporations, did you?

Mr. GRATON. I was valuing when the ownership was fixed. Now, if they decide to sell it, and some other ownership comes in later,

then a new value might conceivably be established in this other management, this new management, which may exceed or fail to reach the results of the former management.

Senator WATSON. Let me ask you this question. It is hypothetical altogether, and therefore academic. Suppose John D. Rockefeller owns a piece of property in New York City, and suppose Bill Smith owns one just like it, adjacent to it. Does the fact that John D. Rockefeller owns that piece of property enhance its value above the one that Bill Smith owns right by it, and which is just like it?

Mr. GRATON. I would be inclined to say offhand, no.

Senator WATSON. The psychological effect?

Mr. GRATON. No.

Senator WATSON. The fact that Mr. Rockefeller saw fit to invest in it would not give it a value in the estimate of the public over and above what Smith might have paid?

Mr. GRATON. If people in general are willing to say that because Rockefeller owns this property, we are willing to pay him a higher rental for it than we are willing to pay to Mr. Smith, and so long as his ownership continues, we will pay a higher rental than the income par of that property usually is, that is all. I am getting outside of my own field now.

Senator WATSON. I know.

Mr. GRATON. And I do not want to try to answer questions along lines that I do not understand.

Senator WATSON. This is all very interesting as an academic discussion. I do not think it has anything to do with the case particularly, because we are trying to develop your idea as between real value and market value.

Mr. GRATON. Well, I will venture outside of mining to draw an analogy, which, perhaps, may explain what I am trying to say.

Suppose the Pennsylvania Railroad and the Podunk Railroad have the same number of miles of track and reach the same cities; they have a lot of things in common; the Pennsylvania Railroad is managed by the Pennsylvania Railroad, with a fine history of accomplishment, and the Podunk Railroad is continually running into the ground for one reason or another which comes down to management. Now, are you going to value those two railroads on the same basis? Can you imagine for a moment that the market of those two railroads is identical? Can you for one instant omit that effect of management, which is reflected in earning power? It can not be done, and it can not be done for a mine any more than it can be for anything else.

Senator WATSON. I think you are entirely right.

The CHAIRMAN. Take two motor plants of the same size of building and the same equipment and the same original investment. In the one case it is in the hands of Henry Ford and in the other case it is in the hands of Mr. Hartson. Certainly the public would more readily buy the plant that was in the hands of Henry Ford than it would buy the plant that was in the hands of Mr. Hartson, would it not?

Mr. GRATON. I think it would; yes.

The CHAIRMAN. Because of its past earning power.

Mr. GRATON. Yes.

The CHAIRMAN. And the demonstrable ability of its owners to make the plant worth while?

Senator WATSON. Certainly.

Mr. MANSON. Would not that be true only in the case that they were buying an interest which anticipated the continuance of Mr. Ford's management, or were buying an interest which, we will say, anticipated the discontinuance of some other management?

Mr. GRATON. Of course, when we talk about Rockefeller and Ford we are taking outstanding figures.

Senator WATSON. The mere fact that Henry Ford would buy the property would be evidence to a lot of people that it would be a good money-making proposition or else he would not have anything to do with it, and that would have a bearing on the matter of market value.

The CHAIRMAN. There is no question about that.

Mr. GRATON. As a matter of fact, it is not a difficult matter to secure good management of a mining property. It is not a difficult matter.

Senator JONES of New Mexico. Let us take the illustration a little further. We will say that you value the whole of the Ford property at a given sum. I do not know anything about the automobile business. If I were to be the purchaser, would that market value as used in this statute be greater or less?

Mr. GRATON. I will show you exactly what the market value would be, Senator. It would be the price that you could offer Mr. Ford that would induce him to part with that property, and that is the only thing. The definition of "market value," the only one I know of, is the price at which a willing and able seller and a willing and able buyer will agree on, and the property will change hands for that consideration.

Senator JONES of New Mexico. Yes.

Mr. MANSON. If you were valuing the plant alone, disassociated from the selling organization and disassociated from the manufacturing organization, would you pay more for the plant than you could reproduce the plant for?

Mr. GRATON. I guess you are getting out of my field again. I am afraid I can not talk intelligently about the automobile manufacturing business because I do not understand it.

Mr. MANSON. Well, in any business, if the sale contemplated a change of management, would you pay any more for the business than you would be able to reproduce it for?

Mr. GRATON. I think I should answer no to that, but I am not quite sure that I understand your question.

Mr. MANSON. Then, this is true, is it not, that in placing the value upon these mines in accordance with the method that you used, a portion of the value that you place upon them was the value that was inherent in the organization, in the possession of the capital, and in the possession of the plant; in other words, in the going business?

Mr. GRATON. Yes, sir; the mines were valued as a going business. There is no doubt about that, and whatever they possessed in the way of management or capital was reflected in their past record of earning power, and that is the only thing to which we gave consideration.

Mr. MANSON. And that is reflected in those valuations?

Mr. GRATON. Absolutely it is, through earning power; yes, sir.

Mr. HARTSON. Mr. Chairman, I do not want to seem to cut this off, because it is very interesting, and it is a subject about which the committee has had a good deal of concern, and I think it has been very profitable; but if there is no objection on the part of the committee, I would like to have Mr. Graton get back again on his story as to what happened when he was in the bureau and what he did when employed by the bureau.

The CHAIRMAN. You may proceed along those lines.

Mr. GRATON. I fear, perhaps, I talk pretty emphatically sometimes, but I assure you that I am quite willing to—

Senator JONES of New Mexico. Well, that is not offensive to us.

Mr. GRATON. I have no objection whatever; in fact, I should be very glad to have you interrupt me whenever I raise a question which you would like me to illuminate further.

Senator JONES of New Mexico. Some of us talk rather emphatically too, and I hope you will accept that in the same spirit that we accept your emphasis.

Mr. GRATON. Surely. I have told you that I set up the outline of a method, and, as you pointed out, Mr. Chairman, that method did not mean much until the specific taxes to enter into it were determined. It was the settling upon the vital factors which this method demanded in order to reach a result, and the factors that were fair, that were sound, that were determined by and in accordance with the existing practice, and that would inevitably govern if the thing that the Government hypothetically contemplated actually came to pass; namely, if, all of a sudden, the largest number of the profit-making copper companies of the country were obliged to sell their properties, or at least had their properties bid for, because what the law did was virtually this: In the revenue law for 1918, for the first time, the mines, and specifically the copper mines, of the country, were confronted legislatively with this situation, that they were put in the position of considering bids for the sale of their property, and you might say that the Government came to them and said in 1918, "You must imagine that on March 1, 1913"—for most of the companies, because that was the date at which they had to value—"You must imagine that on March 1, 1913, you are confronted with a man who was making bids for your property, and you must decide at what value, or at what size bid would actually and honestly have purchased that property from you."

Now, I was put in the position of referee. I was put in the position of determining whether successive bids, presumably starting low and running up the line, would have been in 1913 sufficient to cause the then owners to sell that property, they knowing what its value was, and they being naturally unwilling to part with it for less than its value.

The CHAIRMAN. Just what influence did the earnings from March 1, 1913, have upon that determination made in 1919?

Mr. GRATON. From 1913 onwards?

The CHAIRMAN. Yes. What I am trying to get at is this: You are imagining back to March 1, 1913?

Mr. GRATON. Yes, sir.

The CHAIRMAN. I was wondering how difficult it is to imagine back to that date.

Mr. GRATON. It is very difficult, indeed, sir.

The CHAIRMAN. Without considering the experience that you have had from that date on until 1919.

Mr. GRATON. It is very difficult, indeed, sir. I do not mean to imply in what I am going to say that I succeeded in erasing from my mind the impressions of six years. I could not do it; but, as a matter of fact, I endeavored as sincerely as I possibly could to take the records which were made year by year and stop with 1913, and, in general, when those records existed, that is where I stopped. Valuation after valuation is made on the basis of cost ending with the year 1913, one after another, by far the great majority.

Mr. MANSON. How about the price?

Mr. GRATON. If you do not mind, I would like to come to prices in a more or less collective way at another time.

The CHAIRMAN. Just proceed in your own way, then.

Mr. GRATON. In securing the criticism of the bureau as to what I was doing in this second step, namely, the establishing of specific factors to fit into the general principles, I pursued a somewhat different method from that which I pursued to secure the criticism and general approval of the method itself, because these factors began to translate themselves, not into general things but into specific tax cases, specific valuations, and therefore I submitted a number of valuations, more at the beginning of my actual valuation work or my treatment of specific companies.

I submitted those definite valuations, with the computations by which they were reached and the reasons for the use of the specific factors, to my superiors in the bureau, pointing out exactly what the significance of that act was, namely, that this was the way of advertising to all concerns the particular way in which I proposed to use the method of particular factors for general range of factor values which seemed to me wise and appropriate and fair to use. Those valuations were returned to me with the specific approval of Mr. Callan.

Now, I presume you would be interested in knowing what those factors were.

The CHAIRMAN. I certainly would; yes.

Mr. GRATON. And the reasons for their selection.

The CHAIRMAN. Yes.

Mr. GRATON. I might preface what I have to say on that by this statement: I went to the Revenue Bureau with a good deal of reluctance, partly because it interfered with my regular work, in which I was greatly absorbed, and partly because it meant a very serious sacrifice of income after a similar sacrifice of income in the war work, but most of all I felt that when I got into that kind of a position, there was no knowing when I would be free from it, and without meaning any offense whatever, I foresee sooner or later just this kind of an inquiry. Therefore, every step I took as if some antagonistic observer were at my elbow all the time. I was on the defensive at every corner.

The CHAIRMAN. The antagonistic observer at that time, I guess, was the silver mines, was it not?

Mr. GRATON. No; not as far as I know.

The CHAIRMAN. I understood that they were the first ones that criticized conclusions reached on these valuations.

Mr. MANSON. Lead,

The CHAIRMAN. Lead, was it?

Mr. GRATON. I do not know, sir.

The CHAIRMAN. You had a considerable imagination when you anticipated five or six years in advance an inquiry into it, had you not?

Mr. GRATON. No, no; I do not believe I did, sir. That is another thing that you can judge from past history pretty well.

I left, as I told you, on the day that I retired from the bureau, a memorandum, of which I kept a carbon copy, and this is the original carbon [exhibiting paper]: That was addressed to Mr. Callan, through Mr. Darnell, who was head of the natural resources subdivision in which I worked, dated January 9, 1920. This is pretty lengthy. I am not going to take time to read it all, by any means. I should be glad to give you a copy of it.

The CHAIRMAN. Are you not getting ahead of your story, or does that deal with the factors which you determined upon at the time?

Mr. GRATON. This comes to the factors; yes, sir.

The CHAIRMAN. But that was written afterwards.

Mr. GRATON. This is a record of what I did. If you wish to go into the specific cases that I presented in 1919—

The CHAIRMAN. No. I understood you were leading up to the fact that you arrived at certain factors and submitted them to your superior officers, and I thought you were going to tell us how you arrived at those factors from what those factors were.

Mr. GRATON. This tells how—

The CHAIRMAN. That is a résumé of all of your work in the bureau, is it?

Mr. GRATON. Yes, sir; but it relates specifically—for instance, after a general statement, it comes to the method which I have outlined, and which I need not repeat. Then we come to tonnage, which is a specific thing; grade and recovery of ore.

The CHAIRMAN. I wonder if you could give us out of that the factors that you used.

Mr. GRATON. These are the factors, sir. That is what I am talking about, selling price, cost of production—

The CHAIRMAN. Are those the only factors?

Mr. GRATON. These are the factors, the tonnage of ore, recovery, grade of ore.

Senator JONES of New Mexico. That is not a very lengthy paper. I think we might well have that in the record.

Mr. GRATON. I intended to submit that in full, but at this time I thought I would not take your time to do more than hit the outstanding headline points.

Mr. HARTSON. Mr. Graton you have said that the memorandum bore date of January 9, 1920.

Mr. GRATON. January 19, 1920?

Mr. HARTSON. Yes; I want to correct that for the record. I think you gave it as January 9.

Mr. GRATON. No; January 19, 1920, is correct.

The CHAIRMAN. That was the time you left the bureau?

Mr. GRATON. Yes, sir.

The CHAIRMAN. Then, you were with the bureau about seven months on this revaluation work?

Mr. GRATON. Yes; from June until January.

The CHAIRMAN. You will leave this statement for the record?

Mr. GRATON. Yes.

The CHAIRMAN. You may proceed with it.

Mr. GRATON. I think this will touch upon a number of questions that have been asked, and which I have implied that I should like to handle more or less collectively.

Mr. MANSON. Mr. Hartson, do you expect to finish with this witness to-day?

Mr. HARTSON. No; I do not. Not the way it is going now, because I think Mr. Graton will want to go into his valuations in some detail, and no doubt questions will arise that will demand his explanation, and time will be consumed. I doubt very much whether we can finish to-day.

Mr. MANSON. The reason I ask that is I was wondering whether I would have an opportunity to examine this document before he leaves the stand; that is all.

Mr. GRATON. I will be glad to leave a complete copy of this. Shall I put this in?

Mr. HARTSON. I should like to offer it in the record now, Mr. Chairman.

The CHAIRMAN. Wait until he gets through with his story, please.

Mr. GRATON. As I say, I shall select from this, as I have already indicated to you, what seem to me to be the essentials.

In bringing to a close to-day my work in connection with the valuation of copper mines, I think it desirable to leave on record in the department the general methods and conceptions by which my figures for values and depletion deductions have been reached. * * *

In each case I have handled I have submitted, and filed with the other papers of the case, a "provisional" recommendation setting forth in general only the briefest statement of fair market value on the required date of valuation and provisional depletion for 1917. I have also filed similarly, under later date, a second provisional memorandum showing in detail how each step has been arrived at, and also embodying any corrections that might have been discovered in the earlier statement.

The reasons why these recommendations have been called "provisional" are set forth below.

And I take up that thing, which may be summarized thus in three headings. The first of these reasons is that the work was done hastily. If you wish me to tell you why, I will go into that.

Mr. MANSON. How long did you spend making the actual valuations of all the copper mines, that is, after you had arrived at your method?

Mr. GRATON. About two months.

Mr. MANSON. How many did you value?

Mr. GRATON. I valued 60 cases.

The CHAIRMAN. How much help did you have in doing that?

Mr. GRATON. The help ranged from practically nothing at the start; gradually—and very soon I persuaded Mr. Dick to help me, and about a week after I began the actual valuations assistance began to be available from the civil-service list; so that for perhaps

three-fourths of the time there was available, I think, four—surely four, possibly more, but I think only four—assistants, Hackett, Cummins, Gaumer, and Donahue.

The CHAIRMAN. Did that include the stenographic and clerical help, too?

Mr. GRATON. No; those were engineers, and they were all real assistants.

Mr. HARTSON. They were working on copper valuations, were they?

Mr. GRATON. Yes; they were working on copper valuations.

Mr. HARTSON. And were immediately under your direction?

Mr. GRATON. Yes.

Mr. HARTSON. They followed the formula which you have identified here?

Mr. GRATON. Yes, sir.

Mr. HARTSON. And they used the factors which you gave them?

Mr. GRATON. Yes, in general. They used their judgment to some extent, and, in general, discussed the situation with me fully before final value or provisional depletion was arrived at.

Mr. HARTSON. One other point, Mr. Graton. At the time that you were working on these valuations in connection with these other engineers that you have mentioned, were you holding conferences with taxpayers, or were you arriving at those valuations with the data which were then in the files and records of the bureau?

Mr. GRATON. In general, conferences were not held. In a few instances specific taxpayers applied for conferences, and either through Mr. Callan or Mr. Darnell they were referred to me and I gained some additional data from them, but, in general, the valuations were made upon the basis of the records then available in the bureau.

The CHAIRMAN. Referring to these taxpayers that you conferred with, did you discuss the matter of factors with them at all?

Mr. GRATON. Yes, sir.

The CHAIRMAN. In other words, the producers helped you to arrive at the factors used, by discussion?

Mr. GRATON. I do not think I should like to say yes to that. No, sir; not at all.

The CHAIRMAN. You think they had no influence in arriving at the factors?

Mr. GRATON. I think they had only this influence, that they made clearer some of the records which they had filed, and which they later made still clearer in formal conferences.

Mr. HARTSON. Conducted by your successors after you left the bureau?

Mr. GRATON. Well, yes; by my successors, and by my superiors chiefly—those who were my superiors were those who later took their places.

Mr. HARTSON. You were proceeding to tell, Mr. Graton the reasons why you marked these valuations "provisional."

Mr. GRATON. Yes; the first one was the limitation of time that was imposed upon my work, and I summarize that by saying:

The requisite initial data and the appropriate procedure however, are contained in the report on each valuation, so that should any errors be found hereafter they may be readily corrected without any uncertainty.

The second thing was that not every step in the selection of factors had been approved at the time the valuations were called for.

The results may, in consequence, be something short of ideal, though I believe no far-reaching errors of principle or method are involved in them, except such as are detailed hereinafter.

I shall take that up in due time :

Furthermore, the data submitted by the mining companies in regard to valuation and depletion ranged from excellent to very bad, but in a large proportion of cases failed to give all the information needed, because either of incompleteness or of lack of clearness or lack of satisfactory evidence or explanation in support of the statements and claims advanced.

As to their failure to give all the information needed, I have indicated the principal reason for that deficiency, which was pretty clear and natural enough, and I summarize that by saying :

Although in the majority of cases the vital information was available more or less directly, most of the valuations would gain in reliability if further information were secured from the taxpayers. Many of the specific gaps that should be filled are indicated in the individual valuation records.

My records were filled with suggestion that "the taxpayer should be asked for this to substantiate thus and so."

In consequence of these three foregoing sets of conditions especially—viz, (a) haste, (b) immature condition and premature application of the bureau's program, and (c) deficiencies in the data furnished by the taxpayers—the valuations and depletion deductions I have set up must be required as subject to revision and have therefore in all instances been designated as provisional. This does not mean that I have any doubt as to the essential soundness of the methods I have pursued, but only that the detailed figures used in the computations may in many instances be capable of improvement. Neither does it mean that most of the results are far from the truth. As explained hereafter, I have endeavored to follow such a policy of conservatism that, should any of my valuations be changed because of the substitution of more reliable data, the changes are likely in nearly every instance to be in favor of the taxpayer. This, of course, only increases the moral obligation on the bureau to secure the true facts and use them.

The CHAIRMAN. I was wondering how you arrived at the conclusion that any revision might be in favor of the taxpayer, when you said that you did not follow the values through to the question of taxes.

Mr. GRATON. It is obvious enough, that a low valuation is against the taxpayer, and a high valuation is in his favor, and I stopped there, sir.

The CHAIRMAN. Proceed.

Mr. GRATON. Now, I am going to say what, perhaps, I ought not to say, and yet I do not feel inclined to do otherwise.

I was greatly impressed during my connection with the work with the fair-mindedness of Mr. Roper. I felt all the time that if Mr. Roper could multiply himself sufficiently to guide each fundamental step that was taken in the Revenue Bureau they would have proceeded in a pretty satisfactory way. He could not do that; he had to depend upon men in his organization, and some of those men, I felt, were concerned chiefly in getting all the tax they could. Therefore I felt pretty definitely between two fires during all of my work. One was the fire that the copper companies would direct upon me in consequence of my valuations, which were lower than theirs, in

general. Mr. Grime's sample, as he puts it, shows that I made such valuations as to indicate more than threefold the tax.

The CHAIRMAN. While you are dealing with that, just what criticism has Mr. Grimes to make of your valuations? I understand he has made a criticism of them.

Mr. GRATON. He has made a criticism. I share your wonder as to why he did it. I can see what his reasons aim at, but I can not, for the life of me, see where he gets any justification for such statements as he makes.

The CHAIRMAN. Apparently, his criticism and statement justify a revaluation.

Mr. GRATON. I am sorry, indeed, that he is not here. Mr. Grimes and I are good friends of long standing. I knew him when he was geologist of the Anaconda Copper Co. I wonder why he is not still.

The CHAIRMAN. I think I can analyze that for you.

Mr. GRATON. I beg your pardon.

The CHAIRMAN. I think perhaps I could answer that if I were on the witness stand.

Mr. GRANTON. Well, I mean to say he is a geologist; he is interested in geology, and they are doing high-grade geological work out there. I suppose he was persuaded to come here in the same fashion as I. I do not know anything about it.

Mr. MANSON. I think Mr. Grimes ought to be here during the testimony of this witness.

The CHAIRMAN. You may proceed.

Mr. GRATON. I was going to say that I knew I would be under fire from the copper companies, and I felt that I was under fire from certain of the officers above me in the bureau, and I tried and did steer a straight course absolutely through the middle of what seemed to me just right. That may explain more of the ways in which I have worded what I then had to say.

Method:

I just wish to say a word about that:

In all instances except where actual sale had been made of the property for cash or its readily determinable equivalent the fair market value of copper mining property at a given date has been determined by means of the so-called present value method.

I have a lot of authorities here of formidable standing in support of that, but, as far as I can gather, that method, in its general conception, is not in question here. It is the method which Mr. Grimes adopts and follows and gives support to in his criticisms on the specific things that I did, and in the proposal to revalue that he has made.

The CHAIRMAN. He only differs with you on the factors?

Mr. GRATON. Yes.

The CHAIRMAN. And not the method.

Mr. GRATON. We now come to tonnage, which is the first of the specific factors to be entered into.

The tonnage figures reported by the taxpayer have in general been used in my computations. I do not mean to imply that I should have accepted any claim, however extravagant, set up by the taxpayer, but rather that my acquaintance with practically all the districts and properties concerned, dating back before income-tax valuations were required, lead me to believe that the tonnages claimed by the taxpayer are not unreasonable. Yet, of course, I can

not pretend to know the exact details of every property valued and it might therefore be assumed that excessive valuations have slipped through. The situation is such, however, as to automatically guard against such a likelihood, for if too large a tonnage is claimed, the life of the mine is correspondingly lessened, and this, resulting in a larger period of compound discount, so reduces the relative present value as to seriously lower the depletion factor.

Then, I give an explanation as to how that would be. For instance, if a taxpayer claimed too much, he, as a matter of fact, would lose at every stage. He would lose in his annual deductions for depletion, and he would lose in failing eventually to get all the depletion he claimed, because his mine would be exhausted before the time would come to use that depletion.

The CHAIRMAN. Might he not speculate, though, on a reduction in the tax, and therefore take immediate advantage of it, and not wait for the ultimate exhaustion of the mine?

Mr. GRATON. No; the reduction in tax would not be to his benefit.

The CHAIRMAN. But the taxes would be less affected by the depletion if the taxes were lower.

Mr. GRATON. I do not see that he could have any advantage in any way.

The CHAIRMAN. Well, if he figures on an excessive tonnage he places an excessive value on it, and you have previously stated that the higher the value, the more benefit to the taxpayer, and the lower the value the less benefit to the taxpayer.

Mr. GRATON. There is one way in which what you say would be true, namely, that an added tonnage might give one an advantage, and that would be when the gross value—I do not mean the gross—the full value is contracted with the annual depletion deduction. When the full value has to be determined for purposes of invested capital, then he would have a direct and immediate advantage if his values were inflated, and wherever the value involved was concerned in the determination of invested capital, I cut deep into tonnages, wherever I did not know that the tonnages were absolutely substantiated and proper. I set that forth here in general.

Senator JONES of New Mexico. During the period with which you were dealing, the inclination of the taxpayer was to inflate tonnage, was it?

Mr. GRATON. No. Everyone of any sense whatever in the mining industry knew exactly what inflation of tonnage would do. It would work against him.

The CHAIRMAN. I can not agree with that at all, because it is human nature to get while the getting is good, and if they could get benefit from high values at the time, they were not going to speculate on the future.

Mr. GRATON. Not at all, sir. They got low values at that time. If they made their tonnage high, they paid a big tax right then, when they knew the tax was high. The only possible benefit they could have would be a highly speculative benefit years hence, and nobody was willing to gamble on a speculative fifty-cent piece ten or twenty years ahead, as against a very genuine five-dollar bill to-day and next year.

Senator JONES of New Mexico. Then, the depletion allowance was of more importance to them than the excess profits tax.

Mr. GRANTON. Well, in general, or in the great majority of cases that I valued, the value of the property was not concerned in the invested capital. The invested capital was reached by bookkeeping methods. It was in the hands of the auditors, and only under certain circumstances was the value of the property, the market value of the property—

Senator JONES of New Mexico. That is perhaps true of the market value.

Mr. GRANTON. Yes. The property value in general was not concerned in invested capital. The invested capital was determined by an accumulation of entries in the books, and, as a matter of fact, the great majority of mining companies, so far as I can gather, paid excess profits tax and war profits tax on the basis of an invested capital that was below the market value of the property.

Senator JONES of New Mexico. If purchased prior to 1913?

Mr. GRANTON. Yes; away below the market value of the property as valued on March 1, 1913.

Senator JONES of New Mexico. Yes.

Mr. GRANTON. That was the only time I had any valuation to make.

Senator JONES of New Mexico. The value as of March, 1913, was to be determined by purchases before that time?

Mr. GRANTON. Only for depletion, not for invested capital.

Senator JONES of New Mexico. Is that true?

Mr. MANSON. That is right. Now, if you cut the tonnage, would not that result in increasing the depletion unit?

Mr. GRANTON. If I cut the tonnage; yes, sir. If I cut the tonnage it would increase the depletion unit, and I only cut the tonnage when I felt sure the tonnage was too high. It is perfectly possible to get me "coming and going," if you wish to, sir. If I say in one case it is too high and I cut it, you can say, "Why did you cut it?" If in another case I said, "It seemed too low and I raised it," you could say, "Why did you raise it?" As a matter of fact, I exercised my best honest judgment in cases where invested capital was concerned, and therefore the total value of the property was specifically at issue, and in connection with the tax I was essentially conservative in the matter of tonnage, and that is all. I can explain it no more fairly or fully than that; I mean in general terms.

So much for tonnage. There is a good deal more here, and there are specific illustrations. I have taken the Chile Exploration Co.—

Senator JONES of New Mexico. That raises, to my mind, a very important question. We take one valuation at a given time for one purpose and a different valuation at the same time for another purpose.

Mr. GRANTON. Yes, sir.

Mr. GREGG. Senator, if I may answer that, of course the values are not at the same time. Where it is necessary to value for invested capital the value is not as of March 1, 1913. Mr. Graton said that in the matter of tonnage the advantage to the taxpayer was different in computing capital from what it was in computing the depletion allowance. The high tonnage might give him a higher original valuation for invested capital as of, say, 1906, the date the property was paid in for stock; so you might, for that purpose, want a high tonnage; but for depletion purposes, if set as the value of March 1, 1913, the more units that you have to spread that valuation over the

less the depletion deduction in any year, beginning in the excess-profits year, and for any year thereafter.

Senator JONES of New Mexico. Yes; I can understand that. Now, for the purpose of ascertaining capital gains we use a different standard if the property was bought prior to March 1, 1913.

The CHAIRMAN. In that case that is where they want the very high valuation.

Senator JONES of New Mexico. Yes; and I am wondering whether we should not arrive at values in a uniform way.

Mr. GRATON. That, of course, is apart from my specific interests.

Senator JONES of New Mexico. Yes; we are considering the whole subject here.

Mr. GRATON. I was doing what the law imposed at the time.

The CHAIRMAN. Proceed, Mr. Graton.

Mr. GRATON. Under "Grade and recovery," those are, perhaps, technical terms. The grade of the ore is the copper content of the ore as it exists.

The CHAIRMAN. Is that a factor in the method?

Mr. GRATON. Yes; a very definite one.

The CHAIRMAN. In the method?

Mr. GRATON. Yes. It can not be avoided, by any means?

The CHAIRMAN. I had an impression that the factors might be general, and not so specific as the grades.

Mr. GRATON. Well, they have to be very specific indeed, just as a grade of wheat, or a grade of anything else, affects the—

The CHAIRMAN. Yes; but how did you arrive at those factors before you started your investigation, because you could not tell the grades that were going to come out of your mine at the time that you arrived at your factors?

Mr. GRATON. Perhaps I have not made it clear that the factors to be used in this method had to be taken from two sources. One source had to arise in the property being valued. That showed the grade, the recovery, and the life, also.

Another lot of factors, of which the chief were the discount rates and the selling price, did not arise from the individual property, but were general factors to be determined by the best judgments and the best indications that could be deduced.

The CHAIRMAN. You are not getting at the point that I have been trying to get through my head all morning, as to how you arrived at the factors for general application, and not have in mind the factors that dealt with the individual property. That is what I wanted to bring out before. Then, there are factors which might be used without ever investigating the property or considering the individual property, are there?

Mr. GRATON. Selling price; yes, sir. Selling price is absolutely independent of the property.

The CHAIRMAN. The discount factor, also?

Mr. GRATON. No, sir; the discount factor is to some extent determined by the property.

The CHAIRMAN. Would not the discount factor have some connection with the industry as a whole?

Mr. GRATON. Yes; very much.

The CHAIRMAN. Then it would not have to deal with the specific property?

Mr. GRATON. You can not generally apply a discount factor to a given property without knowing the details of that property.

The CHAIRMAN. Yes; but you can also take—

Mr. GRATON. But you can assign to that individual property a discount factor that you have concluded fairly applies to a given group or a given subdivision of the total industry into the unit that this property indicated it to belong in.

The CHAIRMAN. Just how did you arrive at your discount factor and your price factor before you started your investigation?

Mr. GRATON. Do you want me to skip these other things, grade, life, and cost of production?

Mr. HARTSON. Do those factors that you speak of have to do with Mr. Grimes' criticism?

Mr. GRATON. Yes.

The CHAIRMAN. We will wait, then.

Mr. GRATON. "In the case of all the principal companies, the grade of ores which they have been mining is a matter of common knowledge, and in the case of many has long been reflected in their annual reports."

I am very glad, indeed, that I have put in that reference to annual reports in 1919, because Mr. Grimes, for some reason or other, says that I never saw the annual reports of these companies in many cases. I do not know how he found that out, but I was intimately familiar with the annual reports of these companies long before I came to Washington for this purpose.

Mr. MANSON. Did you assume that the grade of ore was going to continue to be what the indications showed the ore then being mined was?

Mr. GRATON. This will tell that, and perhaps this will be a little more specific and a more readable answer:

As a rule the grade of ore given by the companies in their depletion questionnaires has been accepted after having been found to harmonize with existing records, proper account having been taken of the normal tendency toward decline in richness.

In the paper that I have mentioned, I have set forth at length the general tendency of a decline in grade with depth and with increased scale of operations, citing specific instances, and showing what effect that has upon the value of the property.

Mr. MANSON. That is a factor necessary to be considered, is it?

Mr. GRATON. Absolutely; yes, sir.

Mr. HARTSON. The paper that you refer to is the one that you received Commissioner Roper's approval of before reading it at the meeting of the Mining Institute in Chicago?

Mr. GRATON. That is right.

Mr. MANSON. If, in any particular instances, it has since been found that that factor has not been considered, you would not consider those valuations as sound, would you?

Mr. GRATON. If that had not been considered, and its inclusion would affect the results, I think then I would say that those results were inaccurate; yes, sir.

Mr. MANSON. What I mean to imply by my question is this: if you assume a given grade of ore and have not taken the general tendency of the ore to reduce in grade as mining operations continue,

you would have ignored one of the essential factors necessary to be considered?

Mr. GRATON. Yes, sir.

Mr. MANSON. In order to arrive at a proper valuation?

Mr. GRATON. Yes, sir; I would. But I did not ignore any so essential a factor, I can assure you, any more than I would ignore the fact, if they were going to sell their copper, that it would cost something to sell it; and in each case when I pass judgment on the grade of ore, the inevitable question was considered. I say "inevitable." It is inevitable in the average case. There are numerous properties in which history shows that it does not apply yet.

Here I specifically take up a case which shows a falling off from 2 per cent to 1 per cent, and I show what the effect of that change in grade may be upon the value and the effects were taken into account and reflected in the valuations that I made.

Senator JONES of New Mexico. Do I understand that it is a general assumption that the further you go into a mine the less valuable the ore is?

Mr. GRATON. There are two factors, sir. One is this, that in copper mines in particular, perhaps more than in the mines of any other metals, there is a tendency toward an accumulation of richer ore reasonably near the surface, through what we call the enrichment of the geological process, which has really added to the copper which was already there in the primary deposit some more copper derived from the part of the deposit which was above the surface. Some properties are valuable only in that enriched portion. The part below it has not been enriched, and is of too low a grade to be treated under any present or immediately entertainable conditions of production cost and selling price.

Senator JONES of New Mexico. Is that true of lode mines?

Mr. GRATON. That is true of many lode mines, yes, sir; but not so generally true as it is of the lower grade, large scale, so-called disseminated or porphyry mines, like the Utah, Nevada, China, Inspiration, and so on.

Senator JONES of New Mexico. Then would you assume, with these mines having been worked for many years, they had probably taken off the rich ore?

Mr. GRATON. Many of them have taken off the rich ore. Many of them have taken off that zone of enrichment many years ago, and have since been working in the underlying primary ore, which decreases in grade, if at all, very much more slowly.

Senator JONES of New Mexico. Then the records of profits in the past may not be an indication of a given value?

Mr. GRATON. That is quite right. Then the records of profits in the past, when that past extended sufficiently far back to point out a different condition of operation, either are excluded or are adjusted to the costs per ton divided by the then existing grade of ore, instead of by the richer grade of ore that had been mined in those back years when the actual costs were achieved.

Mr. MANSON. And the cost, of course, would necessarily increase with the decrease in the quality of the ore?

Mr. GRATON. The cost per pound; yes, sir.

Mr. MANSON. Yes.

Mr. GRATON. For instance, I was reading yesterday in the report of the Geological Survey, written many years ago, when dealing with the State of Montana, that the Anaconda and St. Lawrence mines, which are now parts of the Anaconda Co., were then sending to the smelter 24 per cent copper ore, something that is now almost unheard of, in richness, and were sending to the concentrating mills, if you please, 300 tons of ore a day, running ten per cent copper. Even that, by present standards, is bonanza ore at the present time. All of that was gone and done for many years ago.

The CHAIRMAN. What is the percentage they now usually get into the concentrating plants?

Mr. GRATON. Two, two and a half, and some three per cent ore. The grade of ore in Butte, as I remember it, averages somewhere in the neighborhood of three and a quarter per cent. That is the average grade. There may be a lot of lower grade, and some higher grade.

Senator JONES of New Mexico. How long are we going to continue to-day? It is nearly 1 o'clock.

The CHAIRMAN. We will stop at once, if you desire.

Senator JONES of New Mexico. That being the case, I think I would like to stop now.

The CHAIRMAN. All right.

Mr. MANSON. I would suggest that Mr. Grimes be present to-morrow.

Mr. GRATON. I should like to have Mr. Grimes present.

The CHAIRMAN. Then we will adjourn here until to-morrow morning at 10.30 o'clock, at which time we will resume the hearings in this room.

(Whereupon, at 12.50 o'clock p. m., the committee adjourned until to-morrow, Saturday, January 31, 1925, at 10.30 o'clock a. m.)

INVESTIGATION OF THE BUREAU OF INTERNAL REVENUE

SATURDAY, JANUARY 31, 1925

UNITED STATES SENATE,
SELECT COMMITTEE TO INVESTIGATE
THE BUREAU OF INTERNAL REVENUE,
Washington, D. C.

The committee met at 10.30 o'clock a. m., pursuant to adjournment of yesterday.

Present: Senators Couzens (presiding) and Watson.

Present also: Mr. L. C. Manson, of counsel for the committee; Mr. L. H. Parker, chief engineer for the committee; and Mr. Edward T. Wright, investigating engineer for the committee.

Present on behalf of the Bureau of Internal Revenue: Mr. A. W. Gregg, special assistant to the Secretary of the Treasury; Mr. C. R. Nash, assistant to the Commissioner of Internal Revenue; Mr. Nelson T. Hartson, Solicitor Bureau of Internal Revenue; Mr. S. M. Greenidge, head engineering division, Bureau of Internal Revenue; and Mr. J. E. Grimes, chief of the metals valuation section, Bureau of Internal Revenue.

The CHAIRMAN. Senator King's absence to-day is due to the fact that he is sick. Are you ready to proceed, Mr. Graton?

Mr. GRATON. Yes, Senator.

TESTIMONY OF MR. L. C. GRATON, MINING GEOLOGIST, HARVARD UNIVERSITY, CAMBRIDGE, MASS.—Resumed

Mr. GRATON. At the end of the session on yesterday I was answering a question of Senator Jones as to the tendency toward decline in richness of ores with the lapse of years as time goes on. I had said that proper account had been taken of the normal tendency toward decline in richness in my memorandum, which I left at the time of leaving the bureau, and I should like to read very briefly from this paper to which I have referred, which was prepared earlier in my stay in the bureau on that subject.

I set forth an example in which the grade of ore, in the course of time, changes from 2 per cent to 1 per cent, with an average of 1.33 for the entire tonnage.

The CHAIRMAN. Of a particular mine or of all mines?

Mr. GRATON. This is a hypothetical mine, but it is based, in large measure, on a given example, a specific example.

If we assume that the richer ore is mined first and the lowest grade of ore mined last, which is ordinarily what happens, the indicated present value changes from 15.84, based on the average of 1.33 per cent, to 19.77, an increase in value of 25 per cent, approximately.

Those are merely arbitrary units to measure this change in grade.

Mr. MANSON. At this point, let me ask you, Mr. Graton: If it has developed, in any of these appraisals made by you of mines, in which the quality of the ore was decreasing, you did not consider decrease in value of ore, that, of course, would result in a serious error in your results, would it not?

The CHAIRMAN. If I remember correctly, the witness answered that yesterday, that it would, and he had taken into account in all of these mines a reduction in ore values as time went on.

Mr. GRATON. I am not sure that I answered to that effect about that question. Another question that Mr. Manson asked I did answer in that respect.

I think, sir, if I understand your question correctly, I would answer yes to that, that if I failed to take into account a decline in richness, I would have made an error.

I have set forth here at length, and I will not take the time to read even an outline of it, the factors or the costs, several in number, which operate to give that general tendency, namely that:

A great deposit, such as those which most of the profit-making mines are working does decrease in grade as years go on. As a rule, the valuations have been made on the average grade, where the development is complete, and where the development is not complete the estimates as to future developments have been weighted in order to accord with the historical setting of past years as to decline in grade or change in grade in that particular property.

I want to emphasize again, though, where, as in the majority of instances, I think, the average rate for the life has been used, the use of the average lowers the actual present value, from what it should ideally be. In the case that I have indicated, a rather fair sample, it seems to me, it lowers it by as much as 25 per cent. So there is that factor of safety that applies to the valuations that have been made on the basis of average grade of ore.

Mr. MANSON. Do you mean where you base a valuation on the average grade of ore, as shown by the history of the mine—

Mr. GRATON. No; as shown by the development of resources.

Mr. MANSON. Oh!

Mr. GRATON (reading):

A similar state of affairs applies with respect to recovery or the efficiency of the metallurgical operations to which the ore is subjected.

That, perhaps, is a little out of its setting after what I have just read. It continued, in good sense, I believe, with the portion that is quoted.

We now come to life:

The life of a property, being determined by the total tonnage present and the rate of extraction, can be computed directly when these two factors are known. But since the almost invariable history of successful copper mines is that their rate of output steadily increases, the true life will be shorter than that indicated by the rate of production which obtained in, say, 1913. As a rule, the life computed by the companies has been found reasonable and has been accepted; but in a few instances, where the 1913 rate of production was assumed by the company to govern thereafter, though subsequent events have shown that the output has actually increased (as could have been predicted), I have shortened the life to accord with the evident truth. In all cases where I have shortened the life, additional deduction from the indicated value of the property has been made to cover the increased plant required for the greater output capacity. Without doubt, many, probably most of the estimates

of life which have been used in my valuations are longer than the actual lives will prove to be, and in numerous instances in which I have made no change, the life should probably be shortened now, and a higher valuation and depletion deduction arrived at. In the case of companies that have developed tremendous reserves of ore, which, even at an assumed increasing rate of exhaustion, will last for many years, I have followed the customary practice of regarding as unavailable such ore as will not have been mined in a period of life that will afford, when reduced to present value, about 85 per cent of what the value would be if the life of the mine were perpetual. Specifically, in the case of discounting on a 7 per cent and 4 per cent basis (which would apply to a very long-life mine of this kind), the available life would in this way be about 37 years, and all ore that would remain unmined at the end of that period is regarded as nonexistent and is assigned no value. This seems proper, for no one can safely predict so far ahead what the demand, the cost of production, or the selling price for copper will be, and it is therefore impossible to assign a trustworthy value to ore available at so remote a time.

Cost of production: This item, so essential in arriving at mine values, has given more trouble than probably any other. The reason is that many companies have set up, in their own valuation computations, production costs which I have been unable to confirm by their records of past performances, and the basis for which they have not sufficiently explained. Judged by the general reliability of the other data the companies have used, their figures of costs are probably accurate.

I should like to modify that statement by saying that their figures of cost are probably correct, in general. I have no doubt that some of the figures are incorrect, though I do not know, at this moment, at any rate, what particular ones.

In fact, I have no doubt that their costs are better justified than the higher costs which, in many instances, I have used. In a considerable number of cases, I can see and understand the manner in which the companies' cost figures were probably reached. But in all cases of doubt I have resorted to the following uniform procedure to arrive at a figure to be used for cost of production: The average of yearly costs for the five-year pre-war period, 1909-1913, inclusive, or for such part of that period as production was going on, is used for the foundation; wholly exceptional conditions, which could not fairly be regarded as representative of the normal ups and downs of a typical five-year period of operation have been modified or excluded. These costs, computed per pound of copper produced, represent the entire production expense; that are therefore reduced by the value of the gold and silver produced along with the copper. To the net cost per pound thus obtained, an arbitrary addition of 1.15 cents has been made, as explained under selling price, to cover the expected average increased cost of production for the period subsequent to 1913.

This final result, i. e. pre-war cost plus 1.15 cents, has been used as the cost of production in the majority of my valuation computations. Such cost figures are likely to be unfair to the companies for several reasons: (a) Due to lack of time, I reached an average cost by taking the arithmetical average of yearly cost figures instead of a weighted average obtained by multiplying yearly cost by yearly production—

I will omit how I got the weighted average. That is obvious enough:

Since costs are generally high in years of low production, and vice versa, the arithmetical average I used is likely to be higher than the weighted average, which is the true average cost; (b) no adequate recognition is given in the method followed, of the fact that many of the younger properties had by no means settled down to their normal stride at the beginning of the period used in computing their average costs, nor of the increase in efficiency and consequent tendency toward lowered costs exhibited by many of the older companies; (c) the method makes little allowance for the reduction in costs, already clearly estimable, by 1913 by the improved metallurgical methods, such as the almost revolutionary process of flotation, just then coming into general use and whose economies have been felt, if at all, in the years 1909-1913, for which the average costs were computed.

These three that I have mentioned were not taken account of in my costs.

In short, I believe that many of the costs I have used are too high. I have used them only because it seemed desirable, in making these provisional valuations, to err, if at all, on the side of conservatism. In every case where I have raised the cost set up by the company in its valuation, the company should be afforded opportunity to explain the cost it has used, and if the explanation is sufficient and satisfactory, that cost should be used in the bureau's valuation.

The CHAIRMAN. Let me ask you at this point what would be your recommendation where you overestimated the value of the property?

Mr. GRATON. I have covered just now where I overestimated it. You mean where I underestimated it?

The CHAIRMAN. Yes; I should have said where you underestimated it.

Mr. GRATON. I feel very clearly that the same statement should apply, that if I have underestimated it, the company should be afforded an opportunity to explain what the situation is, and the costs should be corrected by the bureau.

The CHAIRMAN. Yesterday you laid emphasis on the four companies whose valuations you had raised, and you read from the memorandum that Mr. Grimes addressed to the bureau in January, 1922, and I want to now read into the record a memorandum that is the result of an explanation which was made last year of these copper companies. It says:

Referring to testimony given by Mr. Graton yesterday, in which he referred to comparisons of tax liability in 1918, with the four companies cited by Mr. Grimes in his memorandum of January 7, 1922, page 10, I have obtained from the metals valuation section, a check-up of the valuations claimed by the taxpayers in 49 of the 71 copper companies, which had provisional valuations for depletion computed. These figures represent substantially all the companies whose values for depletion have been revised.

The values, claimed by the taxpayer, for depletion have been taken from sworn statements on Form AMMS and amount to \$1,515,813,848 for the 49 companies considered. The values for the same companies as established by Mr. Graton amount to \$1,461,087,200. This would indicate that the "provisional" values were reduced \$53,844,648 below those claimed by the taxpayer.

Senator ERNST. By whom is that signed?

The CHAIRMAN. This is signed by Edward T. Wright, investigating engineer for the committee.

You may proceed with your statement, Mr. Graton, unless you want to comment on that memorandum.

Mr. GRATON. I should like to make one comment.

The CHAIRMAN. Very well.

Mr. GRATON. That is, that you will recall that I said, in referring to the four companies which Mr. Grimes had selected as typical, that I was surprised to find so great a disparity between the companies' valuations and mine. I have indicated here at the upper end of this memorandum, written at the time, when matters were fresh in my mind, a statement to the effect that I had never made such totals at all, but my general impression was that my valuations were not very far away from those which the copper companies had made.

The CHAIRMAN. If it is more convenient, we will wait until you reach that point in your statement.

Mr. GRATON. All right. We now come to selling price:

This being a subject to which I have been giving much attention and study during the last 14 years, I believe my estimate of the future selling price of

copper results from a wider range of inquiry and rests on a greater number of influencing factors than any other prediction of the sort I have seen. The ultimate data involved in my conclusion are shown in the diagram attached hereto.

The estimated selling price used by most of the companies is 16.67 plus cents—

Roughly, 16 $\frac{2}{3}$ cents.

This is the average receipt for the 10-year period 1907-1916, inclusive, by what was the largest American selling agency, and it is the figure at which many companies sold a large quantity of copper to the Government just prior to our entry into the war, when the prevailing market price was about 30 cents. But this arbitrary figure seems to me as having little necessary relation to the price of copper for the period from 1913 onward.

I might say at this point that I felt that there was one of the few places where the copper companies, perhaps, endeavored to take advantage of the situation. They had very generously, and, in my opinion, with a very fine display of spirit, which, as a matter of fact, served as an index to eventual mobilized industry behind the Government before we declared war, offered to sell a lot of copper which the Secretary of War and the Secretary of the Navy wanted to the Government, at some 13 cents under the price that was then prevailing, with a very strong market, so that they could have obtained that price without any difficulty.

In settling on a price at which to sell that copper to the Government, they arrived, more or less arbitrarily, at this particular figure. They took the average 10-year period of receipts for the United Metals Selling Co. up to that time. Finding it away below the then existing market, they said, "We will sell the copper to you at that figure."

The CHAIRMAN. What was the United Metals Selling Co.?

Mr. GRATON. That was at that time the largest selling organization, or at least it had been during that 10-year period, and it was later affiliated with the Anaconda Co. I do not mean later; it was already by that time affiliated with the Anaconda, but it had been independent and then it became affiliated.

The CHAIRMAN. Do you know who organized that selling company?

Mr. GRATON. I think Rockefeller and interests behind the American Brass. I do not happen to recall at the moment the principal. Perhaps it was Coe. I do not recall what became of the American Brass Co. By "Rockefeller," I mean William Rockefeller, not John D. Rockefeller. Then there was another big interest, whose name has escaped me for the moment also.

Mr. GRIMES, who was the president of the Osceola and the Tamarack, and all of those when they had the big suit with the Calumet & Hecla?

Mr. GRIMES. I do not recall.

Mr. GRATON. It was a diverse group of copper producing and consuming interests that organized the company in the first place.

The CHAIRMAN. In other words, it was producers creating a market for their production, largely?

Mr. GRATON. Well, it was a necessary machine to handle the very simple process of copper selling. The process of copper selling is so simple, as compared to the selling of merchandise like shoes or

automobiles, or anything like that, that the entire commission is ordinarily 1 per cent; the entire gross cost for selling is 1 per cent.

The CHAIRMAN. You may proceed with your statement.

Mr. GRATON. I do not see, as a matter of fact, how the copper companies could justify, in reality, the use of that particular peg figure as the price of copper from 1913 on. I do not see that it has any relation to the situation. The fact that it approximates fairly closely the price which I reached after very careful study, extending over a very long period, long before this matter was on the books or the statutes at all—the fact that their price of 16 $\frac{2}{3}$ cents closely approximates mine may serve as some justification for their use of it.

The CHAIRMAN. In other words, it was that particular price that the zinc industry complained of, the fixing of that 16 $\frac{2}{3}$ cents for copper?

Mr. GRATON. I do not know of that. I never heard of that.

Mr. MANSON. What was the price you used?

Mr. GRATON. The price I used was 17.4 cents, subject to the equivalent of a reduction of 1.15 cents.

Mr. MANSON. Is that the same 1.15 cents that you used as a factor of safety?

Mr. GRATON. Absolutely.

Mr. MANSON. In increasing the cost?

Mr. GRATON. Yes, sir; it is the same thing. You can call it 16 $\frac{1}{4}$ at pre-war cost, or 17.4 at increased cost.

Mr. MANSON. Then, you raised the cost of production 1.15 cents as a factor of safety and then added it to the expected selling price?

Mr. GRATON. No, sir; I did not do that. I will tell you how I came to that in a moment.

The CHAIRMAN. What was the price fixed during the revaluation? What was the selling price fixed, if you recall?

Mr. GRATON. What revaluation do you mean, sir?

Mr. GRIMES. 14.92 cents, Senator. That is the 10-year average selling price for 120 months prior to March 1, 1913—10 years.

The CHAIRMAN. All right, Mr. Graton. You may go ahead.

Mr. GRATON. My feeling was, and still is, that the copper companies, perhaps unconsciously, perhaps deliberately—I do not know—did seek to take some advantage of the fact that they had done a very handsome thing by the Government in time of war, and I presume some of them used that figure. I am speaking altogether from offhand expressions. I have never discussed the thing with a soul, but I presume, as a matter of fact, that some of them thought the "Government won't have the face to charge us for a lower price, or use a lower price, when we sold them so much copper at a figure of 13 cents under the then existing market."

As I say, I disregarded that price entirely and, as I think you will see, I used a price that was, in equivalent, lower.

My own prediction for the price of copper for the 20-year period subsequent to 1913 is 17.4 cents per pound. This represents the price for electrolytic copper at New York, to which point the costs of production cover. Though my figure is higher than the 16.67 used by so many of the companies, it is, in net effect, lower, for I virtually subtract from it 1.15 cents estimated increase in production costs, so that as compared with the pre-war costs my price amounts to the equivalent of 16.25 cents.

Mr. MANSON. If you take the position that that price amounts to 16 $\frac{1}{4}$ cents, then you assume there will be no increase in the cost of production?

Mr. GRATON. Yes; that is right.

Mr. MANSON. Yes.

Mr. GRATON. That is right. That is, there will be no increase in the cost of production over that of the 5-year pre-war period which I used in general as the standard. That is quite right.

The average of yearly copper prices for the 15-year period ending with 1913 was 15.13 cents. Examination of the cost figures of representative companies to determine how costs rise with rising selling price has led me to the conclusion that to gain the 2.27 cents from the 15.13 cents average to the 17.4 cents level, the costs will increase 1.15 cents, leaving 1.12 cents for increased profit.

In other words, I assume that from the 15-year average prior to 1913, which was a little over 15 cents, the average of 21 $\frac{1}{4}$ cents to the 17.4 figure that I used would be split a little more than half to increase the cost a little less than half the profits, and shortly I shall endeavor to substantiate that very, very thoroughly; indeed, by figures showing what actually happened over as wide a range of years as anything approaching reliable figures are available.

All my estimates of price are made on the basis of knowledge and indications existing as of 1913, and they are not influenced at all by the fact that the war brought abnormally high prices, nor by the high costs that are likely to prevail for a long time as a consequence of the war.

Now, I would like that to be emphasized very clearly, that not a single figure was taken into account by me in arriving at this price of 17.4 cents which was influenced by war conditions.

Mr. MANSON. Do you consider the year 1916 as being a war year?

Mr. GRATON. Very much, sir. I consider the year 1914 as being a war year, absolutely. I stopped smack with 1913.

Mr. MANSON. Assuming that you did not consider war conditions, the result you arrived at is a greater price than the average in the year 1916, used by the companies? I believe you just stated the companies, in arriving at 16 $\frac{2}{3}$ cents, or 16.67 cents, used a five-year average ending with the year 1916?

Mr. GRATON. No; they used a 10-year average.

Mr. MANSON. Yes; they used the 10-year average ending with the year 1916.

Mr. GRATON. I think that is right; yes, sir.

Mr. MANSON. And you finally arrived at 17.4 cents, which is higher than the 16.67 cents, of course.

Mr. GRATON. I am insisting simply that I did not take into account the war conditions. Now, what did happen after that is of no concern to me whatever in this connection. I am insisting that it is of no concern. I am trying to emphasize very clearly to you that I did not give any concern to it, and that is all I am seeking to do at this moment.

Mr. MANSON. But your result is higher than it would have been if you had taken the war conditions into consideration?

Mr. GRATON. Not at all, sir; because, if I had taken the war conditions into consideration, why on earth should I stop at 1916? Why

did I not go through with 1918, and see where your pretty figures come out?

As against 17.4 cents for electrolytic copper, I assume 17.6 cents for prime Lake copper, which for years has commanded a premium over electrolytic—

Mr. Grimes has said that premium is from two-tenths of a cent to three-tenths of a cent, and in his chart he uses twenty-eight one hundredths of a cent, which is somewhat larger than the two-tenths of a cent that I have used. I used 17.15 cents, a reduction of a quarter of a cent from the electrolytic price "for arsenical brands of Lake copper and for casting copper. All these figures I believe to be conservative, as well as the 65 cents per ounce adopted by Mr. Dick as the price for silver subsequent to 1913, and used in all my computations in which silver is involved."

I have here a lengthy dissertation on deductions for plant. I think, Mr. Chairman, that that is subordinate to some other questions. My procedure has been attacked and I should like to defend and justify it, but it is the desire of all of us, I assume, to get through with this as soon as possible, and if you are willing I shall omit any reference to that here and it will be contained in the memorandum which I should like to put in.

Mr. MANSON. There is one question I should like to ask you about that.

Mr. GRATON. Yes.

Mr. MANSON. In case the life of the mine is assumed to be greater than the life of the plant, it would be necessary to make provision for more than one plant, would it not?

Mr. GRATON. Yes, sir.

Mr. MANSON. That is all.

Mr. GRATON (reading). Interest rates:

Three types of interest are involved in the value computations: (1) The "profit-risk" rate or demanded earning on the enterprise, (2) the "security" rate that may be expected on the safe investment of the allotments set aside or supposed to be set aside for the amortization of the funds put into the enterprise, and (3) the "discount" rate to be used in finding the present worth of future necessary outlays.

For the profit-risk rate the majority of companies have used 6 per cent, though some have used higher rates, up to 10 per cent. I am unable to agree to the contentions advanced in favor of the 6 per cent rate, and have used higher rates except in one special instance, which appears to be exempt from all these forms of risk which attach particularly to mining.

That particular exception, I might say, are the sands, the body of old mill tailings or sands worked by the Calumet & Hecla Co., whose quantity and content had been measured when they were put there, and then very carefully rechecked again by most systematic sampling, so that the quantity of copper available in those sands and recoverable from them was practically as evident as—well, I was going to say, as the money in the bank vault, but that is a little extreme, I realize. However, there is no inherent risk in that enterprise, such as attaches to the average mining case, and, for that single instance, I used the 6 per cent rate.

Mr. MANSON. Would there not be risk of a reduction in the price of copper below the assumed price before the copper was recovered out of those sands?

Mr. GRATON. Of course, there is a risk in any enterprise. There is a risk in a mortgage at 6 per cent. The place may be burned

down, and in the meantime the insurance companies may become defunct. That is one of the reasons why interest rates are what they are.

MR. MANSON. You remarked that there was no risk.

MR. GRATON. I said none of the risks which cause the rates for mining to be increased above those for standard things, like mortgages, for instance. If you want an investment that is as devoid of risk as you can probably get, you go to Government bonds, at 3 or 4 per cent, and in times of great stress for money $4\frac{3}{4}$ or 5 per cent.

MR. MANSON. Would there not be—

MR. GRATON. There is a risk always involved in a 6 per cent return.

MR. MANSON. Would there not be another risk, for instance, the risk of an increase in wages?

MR. GRATON. Yes; so there is. There is risk in all sorts of enterprise, and 6 per cent is considered a fair return and is a going rate. Of course, there is a risk.

MR. MANSON. Do you believe the risk in a business, which involves the risk of an increase in cost of operation, as well as a risk of decrease in the price of the product, is no greater than the risk involved in a first-class mortgage?

MR. GRATON. I am inclined to think that the risk is greater, yes, in the mining enterprise, and many first-class mortgages are to be had at 5 per cent.

Let me say right here that I have no pride of position whatever. I arrived at a 6 per cent rate for the sands of the Calumet & Hecla Co. after a very careful consideration and to the best of my ability. Perhaps I may be in error. If I made an error that is important at all, I expected and believed and hoped that my successors in the bureau—I do not mean successors, but those in the bureau who were later to finally handle and fix and determine these cases—would make such revisions and all corrections necessary, and that applies not only to this particular case, but to every one. That is one of the reasons that I labeled these cases "provisional," in order that the hands of the taxpayer and the hands of the Government, neither one would be tied by what I had done, which I did to the best of my ability and with the exercise of my best judgment.

In the case of ore bodies essentially completely developed, like the porphyry, copper deposits and a few others, and in which the methods of extraction and treatment are on an assured and successful basis, I have used 7 per cent as the profit-risk rate. For properties whose ore supply, though assured well ahead, is nevertheless proved less completely than in the preceding case, but the geological indications ahead and the past history are favorable, I have used 8 per cent; with increasing uncertainty of ore supply or increasing risk from any cause, the profit-risk rate is raised. The highest I have used for any going, profit-making copper mine is 10 per cent.

I would like that to be remembered, that this is for a going, profit-making copper mine, not for rank prospects.

The rates I have used are likely to be criticised more or less severely by the companies, but I feel they can be successfully defended as not too high. On the other hand, my rates may be regarded by some as too low; but as I and others before me have pointed out, all profit-risk rates higher than 6 per cent (assuming that an ordinary good, safe investment should pay 6 per cent) yield actually a higher rate of interest on the money in the mining risk than is implied in the named rate of 7, 8, 9, or 10 per cent. For example, a 10 per cent rate on a 10-year life yields actually 13.25 per cent on the average amount invested in the mining risk.

In other words, if you assume that your money ought to be worth in, let us say a safe investment, exempt from that type of risk inherent in the mining business, your money ought to be worth 6 per cent, and if you invest a certain amount of money in a mining enterprise valued on such a basis as to yield 10 per cent by the formulas which we use, you will actually receive 13.25 per cent on that part of your money that remains in the mining risk. In other words, your protection, which you have said should be 4 per cent above the 6 per cent normal rate, is actually $7\frac{1}{4}$ per cent, or pretty nearly double.

That arises from the manner in which these amortization tables used by Hoskold and Inwood—I mean compiled by them and used by all of us, the manner in which they are constructed is a consequence of certain mathematical relationships, and this fact was already in print. I discovered it, as I supposed, independently, or rather Doctor Hance, in the Revenue Bureau, with me at the same time, and I worked upon it. I think he is really entitled to the discovery, which later proved not to be a discovery. We found afterwards that other engineers had already put this thing on record. That, as I say, makes any rate about 7 per cent really greater than is sound, and the protection involved, the factor of safety involved, is magnified a good deal. If you use a 12 per cent rate instead of a 10 per cent rate on a 10-year life, your increase above the 12 per cent is 40 per cent.

Mr. MANSON. You mean 40 per cent of the 12 per cent?

Mr. GRATON. Forty per cent; yes. It is over 16 per cent—16.7 per cent, or something like that. I have it here, but I will not bother to look it up now.

The CHAIRMAN. If the life of the mine was longer than 10 years, what effect would it have; say 20 years, for example?

Mr. GRATON. I can not say offhand. I do not dare to answer that exactly. I computed the thing for 8 per cent, 10 per cent, and 12 per cent on a 10-year life, and I did not take the trouble to take longer and shorter lives. I could not tell you offhand which would change that figure, whether a shorter life or a longer life, but undoubtedly there would be some change. A longer life would either decrease this extra protection, or it would increase it.

Do you know, Mr. Grimes, which way that would work?

Mr. GRIMES. The same interest rate represents a greater discount for hazard, the longer the life of the mine. That statement holds true with any valuation formula used.

Mr. GRATON. But is that true in this particular sense, that my 13.25 per cent on the 10-year life would become something larger than 13.25 per cent, say, on a 20-year life?

Mr. GRIMES. I think there is an error in Mr. Graton's statement on the 13.25 per cent. I fell into the same error at the start, but since that time we have done a great deal of research into formulæ for valuations, the valuation methods and the results of these different methods, and the application of the different formulæ. The depletion allowed for mining companies, or to any natural resource industry, is not allowed exactly upon the basis of the computation of value. The regulations prescribe a different method, which

is to divide the total value by the total number of units, and determine a certain rate of depletion per unit of production.

The sinking fund valuation formulæ provides that a certain amount shall be placed in a sinking fund each year, which amount increases at a 4 per cent interest rate compounded annually. The depletion allowance is a greater amount than the amount which would have to be placed in the sinking fund. It differs by the difference which the sinking fund would earn during the life of the mine when it is increasing at 4 per cent interest. That works in just the opposite direction to Mr. Graton's statement. Instead of increasing the risk, the method of allowing depletion prescribed by the regulations decreases the interest rate. Instead of being a 13 and a fraction per cent interest rate actually used in reducing to present worth, the 10 per cent interest rate in the computations would mean a somewhat lower rate of interest actually used as a basis for allowing depletion deductions on the unit basis prescribed in the regulations.

The CHAIRMAN. That is very involved.

Mr. GRATON. That is too involved for me, sir.

Mr. GRIMES. That statement is subject to mathematical proof, or it can be proved by arithmetical illustrations. I have arithmetical illustrations and charts of all the possible methods of valuation by different valuation formulæ. Those have been prepared for prospective litigation.

We have a suit, which was set for trial last June, in Chicago, by the fee-owner lessor of an iron mine, which is based entirely upon the reasonableness of the methods used by the commissioner in determining depletion deductions. It became necessary to prepare exhibits of this nature, which could be understood by anyone in order to present the position of the Bureau of Internal Revenue properly to the court. These exhibits were prepared upon the basis of a 6 per cent interest rate on the value of a mine, and a 4 per cent sinking fund rate where the sinking fund formula was used, and for a period of 10 years time. It is a purely hypothetical illustration of the application of the different valuation methods to the same problem of valuation.

I should be glad to submit copies of those charts and tables on the 6 per cent basis, or prepare others upon the 10 per cent basis, if the committee so desires it.

The CHAIRMAN. Well, we will take that up later, and we will now let Mr. Graton proceed with his statement.

Mr. GRATON. If you will permit one moment's digression, I should like to ask Mr. Grimes one or two questions about this, since this, I trust, will be my last offense in appearing before you, and I do not want to leave things hanging, if I can help it.

I gather from what you have just said, especially in the first part of it, which I confess I did not fully grasp as you spoke it, you are contrasting the difference between the theoretical depletion which the valuation allows or provides for on the one hand, and the actual means of computing the real depletion which the taxpayer is allowed to deduct specifically in a given year. Is that right?

Mr. GRIMES. I was referring to the interest rate which the taxpayer would obtain upon an investment in a mine at the value com-

puted, we will say, at March 1, 1913, and the actual interest rate which he would receive by the methods in use in allowing depletion, and in returning that value by the Income Tax Unit.

Mr. GRATON. Those are two different things, of course. At present, I am talking about the method of arriving at a valuation, but I am not talking at all about the particular way in which depletion is going to be given. I do not care whether the Revenue Bureau gives depletion or not. This is the way to value a mine.

Mr. MANSON. Yes; but your statement that the net return to the taxpayer will actually be in excess of the assumed rate is predicated entirely upon the fact that each year the taxpayer will get back a portion of the investment which you finally arrived at.

Mr. GRATON. Now let we tell you about that thing.

Mr. MANSON. And that the interest rate which you have set up here as being in excess of the assumed interest rate would necessarily depend upon the rate at which the taxpayer is assumed to get this back, and that is fixed by the regulations and the method.

Mr. GRATON. No; not at all.

Mr. MANSON. Of allowing depletion.

Mr. GRATON. Not at all, sir. Not at all. The method of valuing a mine was fixed and determined long before Congress knew anything about depletions.

Mr. MANSON. I understand, but the method of returning investments back to the taxpayer?

Mr. GRATON. It has nothing to do with the case whatever. It is what the mine returns to the taxpayer. It is not what somebody in the Revenue Bureau returns to him.

The CHAIRMAN. I think the witness is right in that connection. That is something that can be—

Senator ERNST. I should like to have him define his explanation of it.

Mr. GRATON. Now, to go back to the 13¼ cents just for a moment, is it true, Mr. Grimes, that the method of valuation which Hoskold and Hoover and Finlay and you and I repeatedly use, assumes that a man who pays a million dollars for a property, gets 10 per cent on that property per year; is it true that the method assumes, therefore, that he gets back his profit, and 10 per cent, or \$100,000 a year during the life of that mine?

Mr. GRIMES. Yes.

Mr. GRATON. That is true. He gets back, then, theoretically, if his valuation is sound, \$100,000 per year, and he also gets back theoretically each year a part of that \$1,000,000 that he put in. If it has a 10 year life, he gets \$100,000 back; so that in the second year his risk in the enterprise is only \$900,000, and yet he gets back \$100,000, which is approximately 11 per cent, not 10 per cent; and if, in the second year, he gets \$100,000 on only \$800,000 of risk, and finally, in the last year, if his valuation was sound, with only \$100,000 invested in the risky enterprise, and with the other \$900,000 safely in the bank drawing 4 per cent interest, or somewhere else where it is safe, he gets back \$100,000 of interest, of 100 per cent on the part that is left in there. If that is correct, then I am wrong.

The CHAIRMAN. I think that is plain enough. I think the committee understands that. The witness is not dealing now with the

question of the regulations of the bureau, but rather the question of arriving at valuation.

Mr. GRATON. I am sorry that I get worked up about these things, but I am under tension.

Senator ERNSR. I do not see how you can help it.

Mr. GRATON (reading). After much study, I am convinced that the range of interest rates I have adopted is sound and fair for the purpose of arriving at mine valuation and depletion and that in general these rates have been properly applied, though in some few instances I may have erred in judgment and used a rate not truly suited to the case. Any such error will be revealed during conference with the taxpayer concerned, and should be corrected when revealed.

In common with most companies, and in conformity with most valuations made in recent years, I have used 4 per cent as the security rate, though Finlay, in his work of valuing the mines for the State of Michigan in 1911 used 5 per cent. Probably $4\frac{1}{2}$ per cent could have been secured with perfect safety by any company in 1913, by investing in the type of gilt edge securities selected by life insurance companies. But I have held to 4 per cent partly because no tables at $4\frac{1}{2}$ per cent were to be found and time was not available to make them. Since the lower the security rate used, the lower the valuation, having in this respect the opposite effect of the profit-risk rate, the use of a low security rate like 4 per cent operates in the direction of conservatism and affords one more argument against any contention that the profit-risk rates I have used are too low.

Then I speak about methods used for deferred production, and so forth, which are more or less subordinate.

Then I speak about depletion which, again, with your permission, I will leave merely for the record itself to explain, and not take up the time to read any of it, except this one statement:

It may be unnecessary to point out that the depletion rate per pound for different companies varies between rather wide limits. Indeed, no approach toward uniformity can be expected. Short life, low operating costs, rich ore or noteworthy values in precious metals will raise the depletion rates per pound of copper, whereas the opposite conditions will tend to lower the rate.

There is one other thing that I would like to emphasize here, because I have touched on it very briefly in this memorandum, and that is my conviction, which I understand is shared, I believe sincerely by Mr. Grimes, and, so far as I know, by all who have been confronted with this problem, that the fairest way, the simplest way, the most direct and least expensive way of arriving at depletion is not on the unit basis per pound of metal, but on the basis of percentage of operating income, and if that method, which I proposed and earnestly urged while I was in the bureau, before the valuations were made, could have been adopted, the collection of the tax, I believe, would have been very much simpler. Would it not, Mr. Grimes?

Mr. GRIMES. Yes, sir.

Mr. GRATON. I believe that everybody who has approached that matter in a fair and understanding frame of mind is convinced of the simplicity and directness of that method.

The CHAIRMAN. Just why was it not adopted, then?

Mr. GRATON. It was not adopted, as I understand it, only because the solicitor felt that it was an innovation and so great a departure from what had been in mind that it would be far safer to have it based on new legislation than to attempt to use it under the law as it stood, although the law gave the commissioner entire discretion as to the method by which he should determine value and depletion.

The CHAIRMAN. What you did, then, was to use the pound basis instead of the percentage basis?

Mr. GRATON. I used the pound basis, but because of my very great conviction that the percentage basis was sound and proper, I figured out the percentage applicable to each company, as well as the unit figure, and in certain instances, merely to show how the thing would work, I computed what the total for the year 1917 would be by the two methods.

Now, as a matter of fact——

The CHAIRMAN. How did that come out?

Mr. GRATON. I am answering that now.

There may have been another reason why the solicitor was reluctant to approve that, which was this: The taxes that were chiefly in question in my time were the taxes for 1917 and 1918, when the rate of taxation was greatest, when the profits of the companies were highest, and when the need for money was extreme. If the percentage method had been applied at the outset of its use to those two years, the deductions for depletion would have been very much greater than on the average. For the copper industry as a whole it would have been—I can not say how much, but it would have been substantially, and probably greatly, in excess of the depletion computed on any basis, by the unit basis; I mean on any of the bases that we used. If you put my valuations at one extreme and the lowest that the Revenue Bureau computed on any basis at the other extreme, the per cent of depletion would have been higher still, and my recommendation, transmitted to the solicitor at the time, in connection with the question of the percentage depletion, proposed, as I remember it, that the percentage depletion be used as the method, but that 25 per cent, as I recall it, of the depletion so computed for 1917 and 1918 should be used, that it should be cut in quarters, because it was big at the start. In other words, you had not given a fair sweep of years to equalize this great hump, because you started with a great hump of high profits, and it did not seem fair to give the companies the advantage of that. To have used one-quarter of that it would have brought the figures, probably, below the average unit depletion figures that I used. Yes, they certainly would have been well below them. Then, for the succeeding period of years, when the price presumably was going down from the war peak, we use 50 per cent of the percentage depletion, and eventually, after you got on to what seemed to be a fairly normal running period, use the full thing.

I realized that it was an inappropriate and inopportune time, in a way, to propose such a thing, but I should like to emphasize the value and essential soundness of the method, and to point this out also.

Mr. Grimes, in a memorandum, contends that the depletions that I recommend should be used; that the unit depletion should be used in times of normal profit, when the copper companies would pay little or not tax.

I disagree with him in conclusion. I am, of course, at a disadvantage in not having before me the data, as he has, in completeness, but using such average figures as are available, it looks to me very clearly that the copper industry, in times of normal operation, on

his own basis of what is normal, will pay a tax on a taxable income of something over \$40,000,000 a year, and if the tax rate total amounts to 10 per cent, then you will get \$4,000,000 plus per year.

The CHAIRMAN. There is one thing that I have not clearly in my mind, and that is this: You asked Mr. Grimes about the relative methods of computing depletion, and he answered yes; that the percentage basis was preferable to the per-pound basis. Is not that correct?

Mr. GRIMES. We call that the unit basis, Senator.

The CHAIRMAN. Yes; the unit basis. What I would like to know is this: If, in the beginning, you arrive at the actual amount of copper in the mine, why is not the depletion arrived at by the actual production or removals from the mines instead of using either one of the theories that you have advanced, based on money values? In other words, if you arrive at the conclusion that there are 10,000,000 pounds of copper in the mine at the beginning and 1,000,000 pounds is actually removed, is not that the surest way of determining the depletion?

Mr. GRAFTON. That is the unit method, sir, in reality; but you can not make a deduction from a tax computation in terms of pounds of copper. You have to reduce your value and then take the value of what that million pounds was.

The CHAIRMAN. I understand that, but I do not see why the percentage basis is used. A percentage of what?

Mr. GRATON. A percentage of the operating profit for the year.

The CHAIRMAN. I still do not see what profit has to do with the actual removal of the copper from the mine.

Mr. GRATON. The profit is the thing that makes the mine valuable.

The CHAIRMAN. I understand that.

Mr. GRATON. If you take out of the mine something that is not valuable, you have not damaged the value of that mine. Depletion is a compensation to the owner for a sale of a part of his valuable property, which is the return for the cost of raw material.

The CHAIRMAN. That is true.

Mr. GRATON. And the only measure of that is value.

The CHAIRMAN. I understand.

Mr. GRATON. The only measure of that is value, absolutely. Now, if he takes out copper in a year of high price, a ten per cent profit, he has damaged his mine to the tune of valuable ore, and if in another year in a time of low price, he takes out ore that yields him only one per cent profit, he has damaged his mine less, because the valuation assumes that in taking an average price, that price would be made up of high points and low points.

The CHAIRMAN. Let me state my question again. Assuming that there are 10,000,000 pounds of copper in a mine, and that, in arriving at the valuation you computed it at ten cents a pound, then you remove a million pounds in some one year, why should not the depletion be based on ten cents, the same as you valued it in the first instance?

Mr. GRATON. That is what the unit depletion does, of course.

The CHAIRMAN. Then, what relation has the profit to that particular procedure?

Mr. GRATON. It is a pretty complicated procedure. It is not at all abstruse; it simply has many factors in it. I have written several memoranda on this thing, which I will be glad to submit.

The CHAIRMAN. I know that engineers can write a lot of things we laymen do not understand, but it seems to me that that is a simple question, as to why you should not use the same costs per pound in the depletion that you use in the valuation.

Mr. GRIMES. May I answer that question, Senator?

The CHAIRMAN. Yes; if you can answer it briefly. I do not want a long engineering answer to it.

Mr. GRIMES. The unit depletion basis assumes that each pound of copper in the mine, or each unit of metal in the mine, has the same value. That is an absolutely erroneous assumption to start with. Each unit of metal in the mine has a different value from each other unit in the mine. The percentage depletion method recognizes that difference in the value of each unit in the mine.

Mr. GRATON. That is right.

Mr. GRIMES. The unit depletion method allows an average of the value of all of the units in the mine for depletion.

The CHAIRMAN. Now, I have got it.

Mr. GRATON. Yes; that is fine.

Perhaps, from the standpoint of your consideration and your inquiry, one of the main justifications for the use of the percentage method is that I believe all concerned agree that it will very greatly reduce the costs of tax collection as concerns the metal mines; but that is really apart. I have taken the liberty of injecting that. That is not under criticism or really under inquiry, but I simply took this opportunity to impress my feeling of its importance before this committee.

The CHAIRMAN. Let me ask you this question: What would the practice of the bureau be in a case like this: Assume, for instance, you were valuing an anthracite coal mine, in which the whole mine was made up of coal of equal value—and that is not an impossible assumption—and you value it in the mine at \$5 a ton, and then assume that 10,000 tons were taken out. Would you credit them with a depletion of \$50,000?

Mr. GRIMES. On a percentage basis?

The CHAIRMAN. On any basis. What is the practice of the bureau in a case of that kind?

Mr. GREGG. Under the present practice it would be; yes.

The CHAIRMAN. That is just what I want to get. We do not need to go into any length discussion, if that is the correct assumption. That is all I want to know.

Have you completed your statement, Mr. Graton?

Senator ERNST. Is that according to your idea of what ought to be done?

The CHAIRMAN. Substantially in accord with my ideas.

Mr. MANSON. Mr. Graton, had you ever had any experience in doing appraisal work before you made these appraisals for the bureau?

Mr. GRATON. Not specifically; no, sir.

Mr. MANSON. Had you had any experience in the actual operation of copper mines?

Mr. GRATON. No, sir.

Mr. MANSON. That is all.

The CHAIRMAN. Have you completed your statement, Mr. Graton, that you wanted to make?

Mr. GRATON. Do you mean my entire statement?

The CHAIRMAN. Yes.

Mr. GRATON. No; I am sorry to say.

The CHAIRMAN. Well, you had better proceed, because our time is getting short, and we want to finish it.

Mr. MANSON. I thought he was through.

Mr. GRATON. I have no doubt that I should make a very bad mine manager, Mr. Manson.

Now, I have endeavored to tell you what I did and why I did it, and in so doing I have more or less sought to defend what I did and why I did it against the criticisms that have been directed toward what I did. I should like, if you are willing, to take up in detail certain of those criticism, because, after all, those go to the heart of the thing. Those are the real things. If I have made mistakes, if the bureau has failed to collect taxes, then these two memoranda of Mr. Grimes are the basis of which to decide that.

The CHAIRMAN. I do not want to shorten any statement that you want to make at all, but in the light of new developments, in the light of statements made by Mr. Grimes, you still stand on your provisional valuations, do you?

Mr. GRATON. What new developments, sir?

The CHAIRMAN. Developments such as Mr. Grimes has made in his several statements.

Mr. GRATON. These?

The CHAIRMAN. Well, if those are the ones. You know what we are talking about. You referred to Mr. Grimes's criticism.

Mr. GRATON. I thought you meant that comparative statement of valuations that you read this morning?

The CHAIRMAN. No; you just stated that your valuations have been criticized and you wanted to tell us how you arrived at them.

Mr. GRATON. Yes, sir; and you would like my conclusion in advance. Is that it?

The CHAIRMAN. No; I just want to know—

Mr. GRATON. I do not mean to be impolite at all, Senator.

The CHAIRMAN. If, after reading the criticisms, which you evidently have, because those are what you are replying to—

Mr. GRATON. Yes.

The CHAIRMAN. Do you still stand pat on your provisional valuations?

Mr. GRATON. I would, absolutely, with this modification always, and this modification existed while I made the valuations. It is reflected repeatedly in this memorandum from which I have quoted extracts, and which still holds good.

So far as I knew, when I left the bureau and when I made the valuations those valuations were sound, and so far as I know, except in instances where specific corrections have been indicated, they are still sound, and, in general, I feel just as confident of their soundness, except in one or two particulars, which I shall freely indicate to you, as I did then, absolutely.

The CHAIRMAN. If you believe that, then why not confine your statement to those several factors?

Senator ERNST. I would like to have you take a case like that and make it clear.

Mr. GRATON. A specific case?

Senator ERNST. Yes; I thought you had one before you.

Mr. GRATON. I can not take any specific case, because I have not the data here.

The CHAIRMAN. The witness wants to talk in general about the factors used, and he may proceed along those lines. I do not want to restrict you at all.

Mr. GRATON. I do not know, as a matter of fact, whether I have any business to take the time of this committee to defend the valuations that I made. Those valuations were made, and they were labeled and explained as "provisional" because I expected that others in the bureau would revise them, would review them thoroughly, before or during the conferences with the taxpayers, which everybody knew were to be held before settlements were made. In the great majority of those cases, those reviews were made, and therefore, in considerable measure, my provisional valuations vanished from the picture. For my provisional valuations there were substituted either confirmations of those, or brand new valuations, which, in either case, had the effect of being new valuations, so far as I was concerned. Those valuations were made in considerable number, as I am told, and in one or two instances know, by Mr. Grimes and by the men immediately associated with him. They were, I presume, in large number, if not altogether, approved by Mr. Hamilton, who was chief of the metals valuation section at that time, and approved by Mr. Dick and by Mr. Darnell, who were the heads of the entire mineral resources section at that time.

Mr. Grimes, it goes without saying, is a zealous guardian of the Government's interests. Mr. Hamilton certainly was a most careful man to see that the mining companies did not get away with anything.

It seems to me that the position Mr. Grimes has taken, something like two years later, and from then on until now, four or five years later, is inconsistent. I do not see how he can reconcile what he did in 1920 with what he complains about now. It seems to me his course indicates that when he made those last valuations in 1920, on the basis of which the tax liability was fixed and determined, and payments were made—either further taxes paid in or refunds actually paid back to the taxpayers—at that time he was either incompetent to reach the conclusions which he now reaches, which are so very different from those involved in the valuations he made, or else at that time, if he knew exactly what he was doing, he now says that he gave to the taxpayers a lot that they should not have received.

Now, I am sorry to say such things about a man with whom I have been friends for a long time, with whom I fully expect and hope to remain friends. I am very glad that I do not have to say them when he is not here.

The CHAIRMAN. You asked for Mr. Grimes to appear here to-day. I think you were anxious that he be here, and it would seem to me to be appropriate that Mr. Grimes reply to that statement at this point, if he so desires.

Mr. GRIMES. I should like to, very much, Mr. Chairman. I have always had the very highest regard for Mr. Graton's ability and integrity. I think that his suggestion of the percentage depletion is far and away the most constructive suggestion that has been made to the Bureau of Internal Revenue in connection with depletion.

I am free to admit that I was incompetent to make valuations when I came into the bureau. I do not think there is any man that entered the employ of the Bureau of Internal Revenue as a valuation engineer that was competent to make valuations. I think I can state that without exception.

The CHAIRMAN. Do you mean by that that the valuations that you approved in 1920 were in error because of your lack of experience? Is that correct?

Mr. GRIMES. Yes, sir. I have found out that we made a number of errors at that time. I think we are still making some errors which should be corrected.

Mr. Graton's valuations were made—I believe you read the statements that I made in connection with your valuations, Mr. Graton?

Mr. GRATON. These; yes.

Mr. GRIMES. Those are the only ones that I have made.

I have been accused of criticizing Mr. Graton and his work on this copper revaluation. I wish at this time to state that I think Mr. Graton did excellent work in the limited time which he had available. Mr. Graton had about six months' time. He was working practically singlehanded, and he made tremendous strides toward developing methods which should be applied uniformly to the valuation of all types of mines.

Since that time we have had an average of 10 or 12 engineers in the metals valuation section, and there were a number of exceptionally able men among those engineers. We have had 5 years to study the question, which is about 50 years' accumulated experience of one engineer. That is about a hundred times the time that Mr. Graton had to devote to the subject, and I think that with a hundred times the time we have probably developed some improvements in methods, which I am recommending for revaluation, a large number of them recommended in 1922. I think Mr. Graton would agree that that was entirely possible, to develop improvements of method as we gather more information and a better basis of checking the methods in use.

As to the general principles developed by Mr. Graton, I can take no exception. I think they were excellent. The detail of the method of valuation, however, I think, is open to considerable criticism. The valuations by Mr. Graton, I think, recognize that that was possible. He marked them all "provisional."

When Mr. Graton left the department, Mr. Dick—

Senator ERNST. Pardon me, just a minute. What year did you leave the bureau?

Mr. GRATON. Early in 1920—January, 1920.

Mr. GRIMES. Mr. Dick, who was chief of the metals valuation section at that time, and within a couple of weeks became head of the natural resources subdivision, issued instructions that these valuations were not to be marked "provisional" any longer, that we would not do that, that it would not be the policy of the office.

We still followed the provisional methods as developed by Mr. Graton, and we found, in our opinion, that a number of improvements were possible in those methods as we made computations of values.

As to the review of Mr. Graton's valuations, I want to state that, with two or three exceptions, they were not reviewed by engineers in the metals valuation section subsequent to his resignation from the section. These valuations were used as a basis of audit in almost every case, unless the taxpayer objected to the valuation.

Mr. Dick knew very much more about the mining industry and about valuation methods than the other engineers in the metals valuation section, with the possible exception of Mr. Hamilton, who had had experience in valuation work for the State of Michigan for a number of years prior to his entry into the Bureau of Internal Revenue.

Most of the conferences with respect to these valuations were held after Mr. Dick became head of the natural resources subdivision. They were not held by the metals valuation section.

Other valuation questions came up in connection with these conferences, principally the necessity of determining values for invested capital. Most of the large mining companies acquired properties for stock, and it became necessary, on that account, to determine values for invested capital.

As an illustration of the very limited time which was allowed for very important computations, I should like to mention the case of the Chino Copper Co.

I was given a 160-page printed engineer's report as at the date of the acquisition of that property by the Chino Copper Co. I was told to read that report and the taxpayer's computation of value based upon that report, and determine whether or not it should be accepted by the bureau.

Mr. HARTSON. When was that, Mr. Grimes?

Mr. GRIMES. Early in 1920.

I will not recite the figures, but the value allowed was about two and a half times the par value for the stock for invested capital. That was the only information that was placed before me for consideration—just the engineer's report.

It has been determined in revaluation that large blocks of this stock were sold at par at the date of acquisition of the property by the company. The valuation was in excess of two and a half times the par value.

Now, I made an error there, but I made that error because I only had a part of the record before me when I made the valuation.

There are a number of similar errors, a large number.

We were working under very great pressure at that time. Mr. Graton worked nights and Sundays, and we came back and worked nights and Sundays after Mr. Graton left. Under those conditions errors were bound to occur, and I can state frankly that, with the possible exception of Mr. Hamilton, there was no man in the metals valuation section, or in any other sections of the Natural Resources Subdivision, who was entirely competent to determine values by appraisal methods early in 1920.

The CHAIRMAN. Where is Mr. Hamilton now?

Mr. GRIMES. He is running a silver mine in Mexico.

The CHAIRMAN. Did he approve of these valuations fixed by Mr. Graton, at the time?

Mr. GRIMES. No, sir; he had nothing to do with them at all.

The CHAIRMAN. He was not in that section at that time?

Mr. GRIMES. When Mr. Dick became head of the natural resources subdivision, Mr. Hamilton became chief of the metals valuation section. Mr. Hamilton was the first engineer appointed in the metals valuation section, with the exception of Mr. Dick and Mr. Graton. I was the next engineer appointed after Mr. Hamilton.

The CHAIRMAN. Just what did Mr. Hamilton do after he came in? Did he have anything to do with these copper valuations?

Mr. GRIMES. Mr. Hamilton was chief of the section, and I was assistant chief of the section when the matter was taken up. The provisional valuations were used as a basis for the audit of the 1917 returns. We had nothing to do with making or approving the provisional valuations with two or three exceptions. When the 1918 returns came into the metals valuation section to have depletion allowances determined for 1918, to be used in the audit of the returns for 1918. I checked over—

Mr. HARTSON. Mr. Chairman, may I interrupt Mr. Grimes just a moment, please? I think we can hear Mr. Grimes at almost any time, but it is difficult to obtain the presence of Mr. Graton. I think if Mr. Graton has anything further to say we ought to hear him, and then call Mr. Grimes at some later time.

Mr. GRIMES. May I just finish this sentence?

Mr. HARTSON. Yes; I have no objection to it.

Mr. GRIMES. I checked over the valuations as they came in, and I found that I could not agree with those valuations. The returns were placed in our file, and recommendations prepared to the Commissioner of Internal Revenue, which were embodied in a memorandum of January 7, 1922, and no returns were sent to audit on the basis of the provisional valuations for 1918 until after we had received the commissioner's reply to the memorandum of January 7, 1922.

I thank you.

The CHAIRMAN. You may proceed now, Mr. Graton.

Mr. GRATON. Mr. Chairman. I am naturally anxious to get home, but I certainly was interested in what Mr. Grimes had to say, and I want to express my appreciation for his very fair and generous reference to me and my work.

This might very easily degenerate into a kind of a scrapping match between Mr. Grimes and myself, in what I hope will be a friendly way. I mean that we would swap these things across the table.

I wonder how specific Mr. Grimes would care to be about the number of cases in which valuations were reviewed or new valuations reached early in 1920, or within the year 1920, let us say, when a number of taxpayers apparently supposed that they had fixed their tax for 1917 and 1918?

Mr. MANSON. Let me say at this point that there are a lot of appeals pending on these provisional valuations, on the very point that this witness is bringing up, and this witness has furnished evidence for one of these taxpayers, and I do not know how many

more. I do not know as Mr. Grimes ought to be required to supply information which may be useful to the taxpayers in prosecuting appeals.

Mr. GREGG. Mr. Chairman, may I say a word on that?

In explaining the bureau's actions with reference to the copper companies, the matter of the finality of the settlement of these cases is a very important item, and I think we should be allowed to bring it out very clearly from both Mr. Graton and Mr. Grimes as to how final the settlement was. We also have some other evidence on the matter that we want to put in.

The CHAIRMAN. There is certainly no objection to that.

Senator ERNST. Yes; we want to hear it all.

The CHAIRMAN. But I was acting on the suggestion of Mr. Hartson, that if Mr. Graton has not finished, and if he wants to do so, we should let him finish, but he can not do that if he is going to indulge in any cross-examination of Mr. Grimes.

Mr. GRATON. That is right. May I say to that, Mr. Manson, that I shall be stopped if any time I ask questions that you think I have no right to ask.

Mr. MANSON. That is up to the committee.

Mr. GRATON. All right. I am trying to get at the truth. I am not trying to work up a case for anybody.

These numerous affidavits which we have here were put in in the middle of 1922, when this revaluation business came to public notice. This one happens to relate to a group of Michigan companies, 11 companies in number, beginning with the Calumet & Hecla.

The CHAIRMAN. What is the date of that?

Mr. GRATON. The date of this is July 7, 1922.

The CHAIRMAN. Was that the first time that these valuations came to public attention?

Mr. GRATON. It was announced some time in June, I think, to the taxpayers that a revaluation was contemplated, and they were notified that they would be given a hearing upon two or three questions—the price of copper, the interest rate, and something else, which I have forgotten, and on June 30, I think, a hearing was held in the Treasury Department, and supporting affidavits were put in shortly after. This is one of such affidavits. This one is addressed to the Commissioner of Internal Revenue and the particular statement that I referred to is as follows:

Your attention is invited to the following list of facts:

1. The valuation for each company in this group was made by Messrs. O. R. Hamilton and S. P. Hatchet, both of whom are still in the valuation section.

Then there is a list of the companies given, including the Calumet & Hecla, the Ahmeek Co., the Alouez Mining Co., the Centennial Copper Mining Co., and so on.

The CHAIRMAN. Do they mean that those valuations were made for the Government or for the taxpayer?

Mr. GRATON. For the Government. The valuations that were settled upon and which the company finally paid taxes upon were valuations which were made or approved, according to this report, by these gentlemen.

The CHAIRMAN. I understood that those men were not in the bureau at that time.

Mr. GRATON. Of course they were in the bureau. Hatchett had helped me, and Hamilton came in shortly before I left.

The CHAIRMAN. Did he assist in making your valuations?

Mr. GRATON. No; Hamilton did not. Hatchett did.

The CHAIRMAN. How did he come to make his valuations, then?

Mr. GRATON. Because, shortly after I left, he became chief of the metals valuation section.

The CHAIRMAN. He went ahead and made new valuations, did he?

Mr. GRATON. I do not know what he did, except, so far as the taxpayer was concerned, he was the man who represented the Government and he said, "This value was too high" and "This value was too low." Dick was concerned also, and Grimes was concerned. It would lead to no useful purpose at all, and I do not know how many such instances there were. Mr. Grimes said a very few. Here are 11. I am wondering whether he valued the Chile Copper Co., whether he valued the Anaconda Copper Co., or whether he valued the Phelps-Dodge, the Kennecott, the Utah, the Ray, the Chino, and the Nevada Consolidated—he or some of his associates. My impression is that some responsible man in the bureau passed upon those questions as intelligently as he could, and with, I have no reason to think, other than utter good faith, and the taxes were determined. If my valuations were adopted, that meant that they were constructive, and if they were changed, that meant that something better had been substituted, something that the bureau, in the final exercise of its judgment, considered better.

The CHAIRMAN. I understood you to make the statement a moment ago, in the paper that you read, that Mr. Hamilton and the other gentlemen that you referred to made the valuations and adopted the valuations on the basis of your valuations.

Mr. GRATON. No.

The CHAIRMAN. Or what are termed your valuations.

Mr. GRATON. No. I do not know what basis they reached. I have never known, except in one or two instances, what valuations were finally used, or how they were reached in determining the taxes that were finally settled on in 1920.

The CHAIRMAN. I think we had better proceed and not raise questions that Mr. Grimes raised, but just tell your own story.

Mr. GRATON. The record is in here, whatever it is, apparently. I assume that it is in here [indicating file].

As to the necessity of correcting errors, there can not be two opinions. If obvious outside errors were made, they ought to be corrected, but if, in the course of the years of time, viewpoints change, new ideas come to mind, through what Mr. Grimes says is 100 years of a man's experience, or 5 years of a group, will not new ideas come to mind after 10 years, and will not new ideas come to mind after 20 years, and will the Revenue Bureau and the valuation section endeavor to go back and revise valuations every time a substantial new group of ideas come to mind? Is that reasonable? Is it contemplated in any scheme of procedure? I can not believe that it is. In the first place, the time will soon come when all that sort of monkey business will cost more than it is worth, and I really believe the Government would have gotten more money if it had been snappy about that determination and got the money long ago, and had interest on it, than to have so many of

these things dragging along and dragging along, both sides using up money.

Mr. HARTSON. Mr. Graton, on that point, if I understand you correctly, the Government did, soon after you left the bureau, conduct hearings in these several copper company cases, and assess any additional taxes that might be determined after those conferences to be due, and then collected the money, and it is the position now, of all of these copper people, that, after such procedure, their cases for those years were closed.

Mr. GRATON. Yes; that is right.

Mr. HARTSON. So that—

Mr. GRATON. The bureau has in many ways done what I have just suggested.

Mr. HARTSON. Yes; that is what I am trying to get at.

The CHAIRMAN. They also made revised estimates on the same theory that they made reassessments.

Mr. HARTSON. That may be true, Mr. Chairman. I think the testimony brought out, though, that in general Mr. Graton's valuations, after he left the bureau, were approved by the officials in the bureau, and they resulted in an additional tax on the copper companies.

The CHAIRMAN. That is not in accordance with the records that we have developed, or that we seem to have developed, and the bureau will have a chance to take that up later, that there were lower valuations than the taxpayers themselves claimed.

Mr. HARTSON. I think in a few instances higher values were allowed than claimed.

Mr. GRATON. Lower values, yes, sir; that is right.

The CHAIRMAN. But that has nothing to do with Mr. Graton's statement; so let him finish his statement.

Mr. GRATON. But it is true that my valuations, according to this memorandum you have read, which is the first comparative basis that I have ever seen or heard about, were lower than the taxpayers claimed.

The CHAIRMAN. Which would mean a refund to the taxpayer.

Mr. GRATON. No; it would mean more taxes. Furthermore, there were various other means by which more taxes were to be assessed, which were quite independent of valuation, or touched it only incidentally, and did not concern my work at all. Undoubtedly the companies as a whole, in the aggregate, averaged a lot more taxes on the basis of the settlements made in 1920 than they had paid initially on their own computations.

The CHAIRMAN. Well, proceed with your statement.

Mr. GRATON. Now, I am going to ask, if you are willing, in view of the stand that Mr. Grimes has taken, which is, as you see, diametrically opposed to mine, to take up the criticisms that he has recorded here, because I believe I can show that most of those are unfounded. I believe that I can show that the price that I used is a good price. I believe I can show that the interest rates I used are good interest rates. I believe I can show that these statements of his, which, as I understand it, were approved by Mr. Hamilton before they were transmitted formally to the superior officers in the Bureau of Internal Revenue, and which, as I understand it, consti-

tute the only basis for the contention that revaluation is necessary, are full of error, that they exaggerate, that they are, in effect, to those who read them, misleading, and that they, as a matter of fact, are not nearly so impressive when examined in the light of an understanding of the facts, as they seem to be when read casually by people like, let us say, the Commissioner of Internal Revenue or the Secretary of the Treasury, or their immediate associates, who naturally can not be familiar with the details, which are set forth here in generalized statements.

The CHAIRMAN. I would like to ask Mr. Hartson at this time whether, in view of the fact that the arguments prepared and presented by Mr. Grimes to the Commissioner of Internal Revenue, and I suppose to the Secretary of the Treasury, because he approved the order, having been accepted and adopted by the bureau, it is any part of the work of this committee to determine the argument between Mr. Grimes and Mr. Graton on this matter?

Mr. HARTSON. Mr. Chairman, the committee, of course, must be its own judge as to what it desires to inquire into.

My own idea is this: The committee has raised the criticism that copper valuations made by the Bureau of Internal Revenue were erroneous and ought to be changed. A memorandum was read into the record, signed by the commissioner, and approved by the Secretary of the Treasury, which directed that those valuations which had originally been determined be changed, effective, however, for the year 1919 and subsequent years, and that the old valuations should be permitted to remain for 1917 and 1918. The counsel for the committee suggested that we should go back and change for all years, if we determined that those valuations were wrong.

The purpose of asking Mr. Graton to come here was to inform the committee as to the basis which was used by the officials of the bureau in determining the original valuations, which the Secretary of the Treasury and the commissioner have said should remain as they are for 1917 and 1918.

The CHAIRMAN. But the bureau itself has adopted the methods proposed by Mr. Grimes, and with that our counsel agrees. There is no argument between this committee or its counsel, and the bureau, as I understand it, on the methods adopted in the revolution scheme. Now we are all agreed on that, but there still remains an argument between Mr. Graton and Mr. Grimes, which does not concern the committee, as I see it, because we are all agreed that Mr. Grimes did use, as I understand it—

Senator ERNST. No—

The CHAIRMAN. Just a minute, please, Senator. The only difference of opinion that there seems to be between the committee's counsel and you is on the question of whether these should be applied for 1917 and 1918, and I can not, for the life of me, see how all of this discussion between Mr. Grimes and Mr. Graton affects the years 1917 and 1918, when you have agreed that it did apply to 1919 and 1920, and subsequent years.

Mr. HARTSON. Mr. Chairman, I think it is material for this reason, that when the matter was decided in 1922, that the taxes of the copper companies for the years 1917 and 1918 should remain closed on the basis that had previously been determined, it was nec-

essary to satisfy the then officials of the bureau that the previous valuations had been determined by competent people, in good faith, having all the facts before them that could be supplied at that time, and in developing those facts and satisfying themselves that such was the case, that those valuations had been determined on proper lines; that, feeling that the officials before them were thoroughly competent and expert in their line to determine those questions, that they would not then make a retroactive order for the purpose of reopening cases which at that time had been closed.

That is the purpose of having Mr. Graton here to-day, to show that, when these actions were taken and when these valuations were originally determined and had been decided upon, it was in the exercise of good faith by competent people, fully qualified to pass on the matter, and that the taxpayers had had their cases closed, and therefore they would not go back and change. But it was agreed that those valuations, so arrived at by the people that I have referred to as being thoroughly competent, in the light of additional facts which time developed, in the light of additional experience which had been gained, were unsatisfactory for determining the taxes for these companies for all years, and therefore, starting with 1919, the new valuations should be made effective as of that date and for subsequent years.

It has been conceded such a position may be charged with being an inconsistent one, but the point that we had in mind in asking Mr. Graton to come down here was to show the committee that those valuations which he made, or which were made on the basis of his recommendations, were valuations that many honest people, many qualified people, many experts, whose judgment is entitled to the greatest weight, believe should remain in effect for all years, and should never be changed for any year, and that the commissioner and the secretary have gone a long way in attempting to safeguard the public interest, and not to permit the copper industry or the copper people or any class of taxpayers to be too favorably treated, in changing those valuations at all.

That is a rather rough statement of what our position is. I think it has been shown here to the committee that the work in those times—

The CHAIRMAN. But this seems to be a general controversy between Mr. Grimes and Mr. Graton.

Mr. HARTSON. Personally, I would like to discontinue any argument between Mr. Grimes and Mr. Graton. Each, in good faith, has a different view of the situation.

The CHAIRMAN. What I am trying to do is to have Mr. Graton go ahead and finish his statement, but we get into this controversy, and we do not want to get into it. I am willing to sit here until Mr. Graton does finish his statement; so you may proceed with your statement, Mr. Graton, and get through with it as speedily as possible, please.

Mr. GRATON. All right; I will do my best.

The first recommendation that I should like to consider is that of January 7, 1922. It sets forth, in general terms, the essential principles that should guide a sound valuation. With so much of that I agree, and those factors with which I do not agree are set forth in greater detail in the succeeding memorandum of July 25, 1922.

Mr. MANSON. Just to keep the record straight, permit me to say that the first memorandum referred to by the witness is Exhibit D and the second one is Exhibit E.

Mr. GRATON. I am inclined to pass over this first one, in large measure. I should, however, like to set forth this, which is point 3 of the general summary:

That the basis of all valuations, except short-life discoveries in war times, be the expected profit as determined by pre-war costs, and metal prices, rather than the expected profits as determined by the costs attained and expected future prices as influenced by war conditions.

Now, I agree with that, in substance. I certainly agree with the principle which I assume this enunciates or repeats, that value made as of 1918 must take into account the factors then known, and can not take into account factors which will come to life; that being modified only, if at all, because of the peculiar fact that the necessity for valuation in 1913, as I have already indicated, was not made evident to anybody, by law, until 1918, and some things were so fixed in men's minds that they could not possibly be eliminated; but the cost of production and the estimate of future selling price were made, as nearly as human judgment could make them, I believe, on the basis of what was known in 1913, and not on the basis of war conditions.

Then, in point 4, it says:

That all valuations by analytic appraisal methods, based upon estimates of any factors such as operating costs, grade of ore, quantity of ore, or increased rates of production, be provisional—

This is Mr. Grimes' recommendation, that all such valuations be provisional until actual operations by the taxpayer have demonstrated the essential accuracy of his estimates: In other words, that information derived from operations subsequent to the required basic date will be the test of the accuracy of analytic valuations which must be based upon estimates.

Now, it seems to me that what I have just said and what I now read are quite inconsistent. The first one says valuations must not take into account subsequent disclosures, while in the next paragraph it says that valuations then made shall be provisional until such disclosures test their accuracy.

If we are to accept this second suggestion, then we will test, up to this time, the accuracy of valuations made as of 1913, by what has happened in the period from 1914 to 1924, inclusive, and I wonder if Mr. Grimes would care to revalue the copper companies in the light of what has happened in this period. It is not as extravagant as it sounds, because the extreme prosperity occasioned by the war was followed by an extreme depression in the copper industry, such as was never faced before by that industry.

I think it is an entirely improper warping of the conception of what market value in 1913 is. It practically says that if a man buys a mine in 1913, and it proves to be better than what both the buyer and the seller assumed it was worth, the new buyer afterwards has to refund to the old owner the increase in value that the mine has shown; and, on the other hand, it presumes that if the mine turns out to be not as good as they both thought it was when they freely came to a bargain, the new owner can claim restitution.

Furthermore, how long a period are you going to take in which to check these valuations? Most of these mines are things that run into years, and into tens of years. Are you going to be continually

passing judgment as to whether those valuations are sound, and continually revising those things, or are you going to know whether the valuation was sound by the way in which the mine has lived out its life? If you should determine that the mine did not do as good as the valuation implied, are you going to try to get the money out of the taxpayer after his assets have been dissipated, or, on the other hand, having found that the mine did better, are you going to be prepared, at the end of a long life, to make a refund? That would come to an absurdity.

The CHAIRMAN. Of course it would, and the committee has intelligence enough to understand that. Mr. Grimes never intended to imply that.

Mr. GRATON. I am sorry, sir. I am taking these things as they appear to me. If all of these things are subject to discount, it is equally unnecessary for me to go on, but if there is anything in here that can be taken at par, then I would like to go ahead with it.

Senator ERNST. Let the witness proceed.

Mr. GRATON. I am going to run over this very hurriedly. Then there comes an extended discussion of the conclusions reached from the analysis of comparative methods as to those four companies which we discussed yesterday, the Utah Copper Co., the Nevada Consolidated, the Chino, and the Inspiration, and he says in connection with that analysis—

Mr. MANSON. What page are you reading from?

Mr. GRATON. Pardon me. Page 4 of this copy. Item No. 4 (reading):

None of the four taxpayers for whom summaries appear in this memorandum report any excess profits or war profits tax in 1918, and in the case of one of the taxpayers the use of the provisional basis of valuation would result in no assessment of war profits or excess profits tax. These taxpayers are among those to whom war prices of copper were most beneficial.

In the first place, this take note of the fact that the valuations that were used, rest, let us grant, on the valuations that I made. I take chiefly the responsibility for the Utah Copper valuation. Then it takes account of the fact or implies that in the case of three of those companies the provisional valuations that were made had the effect of bringing about excess profit taxes, which the taxpayers themselves had not computed, but it says that it omits one company.

Now, is any such clumsy and unreliable and inequitable method of distributing the tax burden, as everybody realized was included in the war profits and excess profits tax law, to be taken as the measure of the value of a mine? The excess profits tax depended on so many factors of chance—chances of date, chances of all sorts of things—that it can not be used as the measure of anything, except the measure of the tax which Congress specifically is to determine. So I think that is without any force whatever as a measure of whether those valuations were proper or not.

There are numerous questions that arise in connection with these specific tables, but I shall pass them over. I should like to refer to a statement on the final page of that:

• If these recommendations for revisions of valuation are approved for all years from March 1, 1913, to date, the additional tax indicated from the copper mining industry alone, is in excess of \$60,000,000, and if approved for 1918 and subsequent years only, an additional tax of in excess of \$20,000,000 is indicated.

I think the committee has probably been misled in some respects about the quantity of tax which would probably arise if revaluations were extended to 1917 and 1918. Mr. Grimes indicates that from March 1, 1913, to the beginning of January, 1922, the total tax on the most extreme basis of computation, would be \$60,000,000.

The CHAIRMAN. If this committee has been misled, with its limited knowledge and ability to deal with these matters, it certainly has placed the Secretary of the Treasury and the Commissioner of Internal Revenue in a very absurd and ridiculous position, because they have accepted Mr. Grimes's recommendations in ordering the revaluation. Certainly, the intelligence of the Secretary of the Treasury and the Commissioner of Internal Revenue is at issue, if all of the absurdities are contained in Mr. Grimes's statement that you would make it appear.

Mr. GRATON. I do not mean to imply, Mr. Chairman, that this statement is misleading. I do not know. I take it for granted that Mr. Grimes' computations indicating \$60,000,000 are high, on the basis which he uses. What I meant was this: As I understand it, a few days ago the committee was advised that about \$50,000,000 available would be collectible as additional taxes from the copper companies if 1917 and 1918 taxes were revised. As far as I know, that specific question was never considered by the Commissioner of Internal Revenue or the Secretary of the Treasury. I do not mean to say that this would mislead them, but that other testimony given or other data submitted showed first \$60,000,000 and then I believe it was reduced to \$50,000,000 for 1917 and 1918.

Mr. MANSON. The \$60,000,000 has reference to the entire period, and the \$50,000,000 refers to the years 1917 and 1918.

Mr. WRIGHT. And it also includes silver?

Mr. MANSON. Yes.

Mr. GRATON. Then, if Mr. Grimes says that 1918 and subsequent years would yield \$20,000,000, that would mean that 1917 alone would be expected to yield something over \$30,000,000 or \$40,000,000. Is that right?

Mr. MANSON. I have no division of it.

Mr. GRATON. What I mean to imply is that I think some one got mixed up in trying to draw conclusions from these figures, and that the consequence of his mistake was to magnify the apparent amount to be collected. However, that is aside from the point. I am glad to say that, in doing what I did in the bureau, the consequences with respect to how much money it would bring in were aside from my consideration, and I feel that an engineer who was asked to pass upon questions of fact and judgment about a mining property certainly should not be influenced in his conclusions as to values by whether they will bring in tax or not. That should be the concern of the legislature, I suppose.

As I say, I am glad that my own valuations were not warped by any consideration of how much more tax or how much less tax my figures would result in.

Mr. MANSON. Just a minute there. You would not expect the commissioner, nor the Secretary, to authorize the expenses incident to a revaluation, without having some idea of whether the amount involved was a substantial one or not, would you?

Mr. GRATON. No; I think not, in general.

Mr. MANSON. No.

Mr. GRATON. I think not.

Mr. MANSON. And there is nothing in this memorandum which indicates that Mr. Grimes' valuations were in any way influenced by what he expected the tax to be, is there?

Mr. GRATON. I do not. I leave that for anybody to judge. I do not know.

The CHAIRMAN. Well, that is not relevant, anyway.

Mr. GRATON. Now, Mr. Chairman, my understanding in coming here, in which I may have been in error, was this, that on about the 24th of January the committee asked the Revenue Bureau if it would tell the committee whether it would extend the revaluations proposed from 1919 onward back to 1917 and 1918, and it was in order that an appropriate answer to that question might be given that the bureau asked me to appear.

The CHAIRMAN. Are you speaking for the bureau in that connection?

Mr. GRATON. No; I am explaining my reasons for being here, and the understanding on which I thought it was desirable to come, and on which I thought it was proper to come, and I am simply asking for this reason: If the committee is not interested in what happened in 1917 and 1918, and if the committee and the Revenue Bureau take the point of view that the decision to revalue from 1919 onward are matters of its own concern, and the decision already reached is irrevocable, then, I think, I would be wasting the time of the committee in going forward. But if the committee is interested to know whether a substantial amount of money is due the Government for 1917 and 1918, provided the valuations already made for those years are wrong, then what I have to say, it seems to me, is relevant.

I am asking that question simply because I do not want to use up the time of the committee at all.

Senator ERNST. Mr. Hartson, what is your own desire about that?

Mr. HARTSON. My own desire, Mr. Chairman, is to ask of this witness the basis used by him in determining the provisional valuations which he arrived at, which later became translated into final adjustments with the taxpayers; at least final so far as the payment of the tax based upon those provisional valuations was concerned.

The CHAIRMAN. Has he not already put that in?

Mr. HARTSON. I think he has.

The CHAIRMAN. That has already been given.

Mr. HARTSON. Any disagreement between Mr. Grimes and Mr. Graton, I think, is beside the point. I think we have shown the committee a picture of conditions in 1920, what was done, and the reason why it was done.

Now, it is going to be incumbent on the bureau to answer the question that the chairman asked us two or three days ago: Are we going back and reverse our decision in 1922, in which we made new valuations effective for 1919 and subsequent years, but declined to go back and make them effective for 1917 and 1918? I think that is a matter for the bureau to answer, and we will be prepared to do so.

The CHAIRMAN. I think that is a very correct statement of the situation, and I think Mr. Graton has covered the ground so that the committee understands how you arrived at those conclusions.

Mr. GRATON. Mr. Chairman, may I say simply this one thing? I would very much prefer not to have any scrap back and forth with Mr. Grimes. I have no desire to do that. We have understood for a long time that we were more or less apart and we have accepted that fact. As a matter of fact, I have stated what I have recited thus far with the expectation that I was supported by many things.

The CHAIRMAN. That is again going back to the controversy between you and Mr. Grimes.

Mr. GRATON. All right, sir.

The CHAIRMAN. If Mr. Hartson does not think that that is important, I believe it would only be bringing before this committee the controversy between you and Mr. Grimes. If the bureau is satisfied, the committee is satisfied to let it drop. If the bureau wants anything more the bureau is at liberty to put anything they want into the record.

Mr. GRATON. All right.

Mr. GREGG. There is just one question I would like to ask, Mr. Chairman, and it has a very important bearing on the whole question.

What was your understanding at the time you made these valuations as to their finality, and why were they marked "provisional"? Would you mind restating that more or less in detail, Mr. Graton?

Mr. GRATON. The fundamental, the compelling reason why they were marked "provisional" was that it was understood and expected that the taxpayer would be given an opportunity to submit any additional information necessary, that the valuation engineers of the Revenue Bureau would have an opportunity to examine that with more leisure than was available to me in examining the data which I had used in arriving at the conclusions which I had provisionally reached, and those things were marked "provisional" simply in order, in view of that pending final settlement, nobody could say that a final settlement had already been reached.

Mr. GREGG. When was it contemplated that these matters would be adjusted?

Mr. GRATON. At the earliest possible moment, sir.

Mr. GREGG. And in what manner—by oral hearings?

Mr. GRATON. Yes, sir; by hearings.

Mr. GREGG. Was it contemplated that any of the material factors in your formula would be changed, or was it contemplated that additional information, filling out the gaps from the information that you had available, would be submitted?

Mr. GRATON. I think the whole thing was wide open, sir. That was my understanding. It was my understanding that it was not infallible, but it was my understanding that shortly the bureau would have to adopt an attitude which was regarded as final and infallible, and would have to stand on that, and bring the taxpayer to it.

Now, I should simply like to say this, and then I will not impose upon you any further.

The CHAIRMAN. Are you through, Mr. Gregg?

Mr. GREGG. Yes, sir.

Mr. GRATON. That I have brought here a lot of data which supports what I did. All I have said up to date is what I did, and, in general, why I did it, but there is no end of things which are specific. There are suggestions, there are charts, there are ratios, there are summaries of past history, and so forth, that, in my opinion, substantiate, one after another, repeatedly, the things I did, and which show the inaccuracy, the extravagant claims, the unreliability and misleading character of these two memoranda upon which the bureau's position appears to be based.

The CHAIRMAN. Where did you get this from?

Mr. GRATON. These [indicating papers]?

The CHAIRMAN. These memoranda that you now have in your hand?

Mr. HARTSON. We furnished them to him, Mr. Chairman.

The CHAIRMAN. Where did you get them from?

Mr. HARTSON. These memoranda?

The CHAIRMAN. No; the memoranda he had in his hand just now?

Mr. HARTSON. Where did he get them from, or where did I get them from?

The CHAIRMAN. Where did he get them from?

Mr. HARTSON. I furnished them to him.

The CHAIRMAN. No; he said he brought them here.

Mr. HARTSON. He was down here, if the chairman will remember, I think, three days ago I stated at the time that he had been here, but had to go back to Cambridge for some additional data. When he was down here the first time he was given copies of Mr. Grimes's memoranda.

Mr. Reporter, will you go back and read Mr. Graton's statement? (The reporter read as follows:)

Mr. GRATON. That I have brought here a lot of data which supports what I did. All I have said up to date is what I did, and, in general, why I did it, but there is no end of things which are specific. There are suggestions, there are charts, there are ratios, there are summaries of past history, etc., that, in my opinion, substantiate, one after another—

The CHAIRMAN. That is enough. Where did you get them from?

Mr. GRATON. I got them from all sorts of sources in the last two or three days. I work fast.

The CHAIRMAN. You have accumulated them since this inquiry began?

Mr. GRATON. Oh, surely. I had never seen these things until Monday of this week, sir. I had never seen them at all. I never know at all any of the reasons that are explained here, or what the attitude was. I simply knew that a 15-cent price for copper, and a somewhat lower price for silver—I have forgotten it for the moment—was recommended, and that the interest rates were reasonable.

The CHAIRMAN. I do not think that is an answer to the committee.

Mr. HARTSON. You did not get any of this data from the bureau, did you?

Mr. GRATON. What is that?

Mr. HARTSON. The data and records that you have referred to as having been accumulated since this matter first came up.

Mr. GRATON. Oh, no.

The CHAIRMAN. That is what I was going to say, Mr. Solicitor, that inasmuch as the bureau and the committee and its counsel are in agreement on this revaluation, there is no controversy between us, and if there is any controversy at all, it is a controversy between these engineers. We are not interested in the engineer's viewpoint. What we are interested in knowing is whether you are going ahead with 1917 and 1918, and if Mr. Graton can help you to decide that, that is a matter between you two, and not a controversy between the engineers.

Mr. GREGG. Mr. Chairman, just to repeat for a minute what Mr. Hartson said, I do not want to encourage a continuation of the discussion, but I think this is very true: Our action in reference to 1917 and 1918 depends to a very large degree on the basis of Mr. Graton's valuations, the original valuations. If Mr. Graton had made obvious errors in his original valuations, of course there would be no justification for a failure to revise them; but if they were made on a sound basis, and the difference is a difference of judgment, that is entirely a different matter, and that is why we are putting in Mr. Graton's evidence.

The CHAIRMAN. Oh, but you disregarded his valuations and disagreed with them in 1919, and now we are asking why you do not disagree with the same valuations for 1917 and 1918?

Mr. GREGG. Yes; but I think that is an entirely different matter. We may disagree with Mr. Graton on matters of judgment, which would not warrant a retroactive change of his action in closed cases, if it is a difference in judgment; but if he has made gross errors of fact, it would be an entirely different matter. That is why we wanted to bring out that Mr. Graton's valuations were made by a competent man, an expert in that line, and he certainly has advanced arguments that none of us laymen can answer in support of his position. We want to bring out that fact.

Mr. MANSON. I would like to be heard at this point.

It appears that the position—I may be mistaken about this, and if I am I want to be corrected—it appears that the position of the bureau is that because the original valuations were made by an expert, that therefore they should stand for the years 1917 and 1918, but that they rejected those valuations for 1919 and subsequent years.

The CHAIRMAN. Oh yes, we understand that, Mr. Manson.

Mr. MANSON. I am just stating that in order that I may recapitulate what I infer to be the position of the bureau.

The CHAIRMAN. Well, let us not have any inference. Let the bureau state its own position, and I am willing to give the bureau time to answer the question as to whether or not they are going to use the new valuations for 1917 and 1918, or whether they are going to confine them to 1919 and subsequent years. I think that is the point at issue, and I am not pushing the bureau to answer that question. The bureau might take a reasonable time to answer it, but we would like to know.

Mr. HARTSON. We shall have an answer very soon, Mr. Chairman.

The CHAIRMAN. All right.

Mr. GRATON. Mr. Chairman, I simply wish to say this, that I shall be delighted to take the train home to-night, and I shall be glad if

I do not have to show further dissent from my friend Mr. Grimes. I assure you that I never should have come before you merely to vindicate my personal actions for personal reasons, or to engage in a personal squabble with anybody. I felt it was my duty as a former servant of the Government to come under conditions that were questioned and tell fairly what I did.

Now, this is what I want to say, that the gentlemen here of the Revenue Bureau, and, as far as I know, everybody in the Revenue Bureau, have no specific knowledge of what I still have to present.

The CHAIRMAN. Well, as I said before, there is no objection to your submitting that to the bureau. I do not care where the bureau goes to get its information of data to support its position. That is not my business.

Mr. GRATON. I am simply, perhaps unduly but properly, making it evident that if they are interested in finding out what I have, it is possible that they would then be interested in bringing it before the committee. I do not know. It is nothing to me. It has not been anything to me personally from the beginning.

Mr. HARTSON. Mr. Chairman, I think the suggestion of Mr. Graton is a very good one. We will have an opportunity to talk with him after luncheon to-day, and if his evidence is of controlling force, it should be of controlling force to the bureau rather than to the committee. I will be very glad to discuss it with him, and then, if on Monday it does seem necessary to call the committee's attention to some of it, we can do that. I think the points that he makes in support of his valuations as opposed to the valuations which Mr. Grimes might arrive at are points which should be considered by the Bureau of Internal Revenue in determining what action it should take rather than being particularly interesting to the inquiry of this committee.

The CHAIRMAN. Then if those views satisfied the bureau as to 1917 and 1918, I suppose they would, of course, satisfy the bureau that they were wrong as to 1919 and subsequent years?

Mr. HARTSON. Well, I am not prepared to answer that in the affirmative, Mr. Chairman, because the question of reopening and disturbing old cases, the question of making a retroactive ruling, in changing a decision which largely involved the exercise of good judgment by competent people, made in good faith, is one of policy, and whether, merely because the commissioner determined that Mr. Grimes's valuations are more nearly accurate than Mr. Graton's, if he so determines, that determination should be made for all years, just in the interest of consistency, and that that should be controlling and guide his actions, is a thing that I am not prepared to say is necessarily the proper result to reach.

The CHAIRMAN. Perhaps you are correct in that, but it is evident that up to date the commissioner has accepted Mr. Grimes's valuations or methods and factors of valuation in lieu of Mr. Graton's. Is not that correct?

Mr. HARTSON. He certainly has, so far as 1919 and subsequent years are concerned.

The CHAIRMAN. If there is nothing more, we will adjourn until Monday at 10.30 o'clock a. m.

Mr. GRATON. Mr. Chairman, was it intended that this memorandum from which I have quoted so fully be submitted?

Mr. HARTSON. I should like to have that go into the record.

The CHAIRMAN. It may be attached to the record, but not be copied into it. It will become an exhibit.

(The statement submitted by Mr. Graton was received in evidence and is attached hereto.)

The CHAIRMAN. Have you anything further, Mr. Manson?

Mr. MANSON. That is all.

(Whereupon, at 1 o'clock p. m., the committee adjourned until Monday, February 2, 1925, at 10.30 o'clock a. m.)

MEMORANDUM FROM L. C. GRATON, VALUATION ENGINEER, REVENUE BUREAU,
TO J. H. CALLAN, DEPUTY COMMISSIONER

JANUARY 10, 1920.

Memorandum for Mr. Callan
(Through Mr. Darnell).

In bringing to a close to-day my work in connection with the valuation of copper mines, I think it desirable to leave on record in the department the general methods and conceptions by which my figures for values and depletion deductions have been reached. Had I remained in the Revenue Bureau, as originally intended, until the copper cases for 1917 and 1918 should have been settled and put out of the way, such a record might have been less essential. But in view of my departure, leaving the final settlements with the taxpayers to be reached by a member of the bureau who did not make the valuations, an outline of the procedure I have followed seems desirable from the standpoint of all concerned.

PROVISIONAL RECOMMENDATIONS

The copper cases were very hastily separated into two groups: (a) those in which depletion and valuation appeared plainly to be of importance (b) all others. Attention has been given only to group (a), though I feel sure that there are many cases in group (b) that will require the establishment of values and depletion deductions which were overlooked in the extremely superficial inspection on which the grouping was based. All further reference in these pages relates only to group (a).

In each case I have handled, I have submitted and filed with the other papers of the case, a "provisional" recommendation setting forth in general only the briefest statement of fair market value on the required date of valuation and provisional depletion for 1917. I have also filed similarly, under later date, a second provisional memorandum showing in detail how each step has been arrived at, and also embodying any corrections that might have been discovered in the earlier statement.

The reasons why these recommendations have been called "provisional" are set forth below:

As you are aware, the orders given with respect to assessment of additional taxes against the copper companies permitted exceedingly little time for the handling of so large a number of cases of such great importance. If any check was to be made on the valuations set up by the companies, other than the entirely incorrect and inconsistent recommendations of the revenue agents, it was plainly necessary to rush the cases through at topmost speed in the hope of arriving at what would at least approximate reasonable and proper valuations and depletion deductions. This was especially true at first, when no help was available. Because of this necessary task, it is not possible to guarantee that arithmetical and other errors have not crept into the computations; a number of errors, indeed, have been found and corrected, but others may have escaped detection. The requisite initial data and the appropriate procedure, however, are contained in the report on each valuation, so that should any errors be found hereafter, they may be readily corrected without any uncertainty.

Not only was the work necessarily done hastily, but as you know, it was imposed at a time when some of the methods of procedure in the metals valuation section were (as they are yet) still unsettled officially, and when a number of collateral plans and investigations, whose results it had been intended should be incorporated into the valuation procedure were in various stages of incompleteness. The results may, in consequence, be something short of ideal, though I believe no far-reaching errors of principle or method are involved in them except such as are detailed hereinafter.

Furthermore, the data submitted by the mining companies in regard to valuation and depletion ranged from excellent to very bad, but in a large proportion of cases failed to give all the information needed, because either of incompleteness or of lack of clearness or of lack of satisfactory evidence or explanation in support of the statements and claims advanced. This deficiency in the data arose probably from three causes. (1) The depletion questionnaire proved in actual practice to be rather poorly adapted to the case, partly because too diffuse and consequently not sufficiently detailed, searching and explicit in those particular respects which are most vital. (It was evidently a mistake to try to make a single questionnaire cover all mining and quarrying operations.) (2) The regulations 33, revised, afforded inadequate guidance and assistance to the taxpayer and in certain respects were worse than confusing. This situation was not entirely relieved by the appearance of regulation 45, notwithstanding their material improvement over regulations 33, revised. (3) There was evident a lack of clear understanding on the part of the companies as to just what was wanted. This arose in part from their unfamiliarity with this type of inquiry and in part from the apparent assumption that brief, categorical answers would suffice, since to judge by the indications afforded by the bureau forms and literature then before them there would be no one in the bureau who would fully appreciate and understand in a professional way explanations that might otherwise have been given. Some of these deficiencies in the taxpayer's data had already been recognized before the actual work of valuation began. But inasmuch as up to that time all attention in the section had been concentrated upon perfecting of principles and methods rather than upon individual cases, not all the shortcomings had been encountered until the individual cases were taken up for valuation, and there was then no time available for securing better or missing data by correspondence with the company as had been intended should be done. In consequence, the best had to be made of what, in some instances, was a pretty inadequate and unsatisfactory lot of data. Although in the majority of cases, the vital information was available more or less directly, most of the valuations would gain in reliability if further information were secured from the taxpayers. Many of the specific gaps that should be filled are indicated in the individual valuation records.

In consequence of these three foregoing sets of conditions especially—viz., (a) haste, (b) immature condition and premature application of the bureau's program, and (c) deficiencies in the data furnished by the taxpayers—the valuations and depletion deductions I have set up must be regarded as subject to revision and have therefore in all instances been designated as provisional. This does not mean that I have any doubt as to the essential soundness of the methods I have pursued, but only that the detailed figures used in the computations may in many instances be capable of improvement. Neither does it mean that most of the results are far from the truth. As explained hereafter, I have endeavored to follow such a policy of conservatism that, should any of my valuations be changed because of the substitution of more reliable data, the changes are likely in nearly every instance to be in favor of the taxpayer. This, of course, only increases the moral obligation on the bureau to secure the true facts and use them.

The various specific features affecting valuation may now be considered in detail.

METHOD

In all instances except where actual sale had been made of the property for cash or its readily determinable equivalent, the fair market value of copper mining property at a given date (commonly March 1, 1913,) has been determined by means of the so-called present-value method, otherwise known as the Hoover or the Finlay method. This method has been used because I know of no other way of arriving at fair market value in the absence of an actual sale of the property itself reasonably near in time to the required date of

valuation. And inasmuch as this method has for years been the one by which the buying and selling price of copper properties has been reached, the trading price in cases of actual transfer between a willing and able buyer and a willing and able seller is likely to coincide very closely with the valuation arrived at by the present-value method. Further justification of the present-value method and a test of its soundness are contained in another memorandum of this date attached hereto.

Stock market quotations have in no case been used in arriving at values (except in one instance where the value of shares had been the subject of special inquiry and determination by the United States courts), since by every test of logic the daily market quotations fail to bear any necessary relation to the true value of the property. The hypothetical figure indicated by stock quotations is often far below and in numerous other instances far above the true value; since, therefore, it can not be used consistently, it is only safe and fair to disregard it entirely, as I have done, except to use it, at times, as a rough check on the present-value results.

TONNAGE

The tonnage figures reported by the taxpayer have in general been used in my computations. I do not mean to imply that I should have accepted any claim, however extravagant, set up by the taxpayer, but rather that my acquaintance with practically all the districts and properties concerned, dating back before income tax valuations were required, leads me to believe that the tonnages claimed by the taxpayer are not unreasonable. Yet, of course, I can not pretend to know the exact details of every property valued and it might therefore be assumed that excessive valuations have slipped through. The situation is such, however, as to automatically guard against such a likelihood. For if too large a tonnage is claimed, the life of the mine is correspondingly lengthened, and this, resulting in a larger period of compound discount, so reduces the relative present value as to seriously lower the depletion factor. In the case of a property which really contains a ten-year supply of ore, the annual depletion factor of about 6 would be reduced to about 4.2 if it were claimed that there is sufficient ore to last 20 years (this on a 7 per cent and 4 per cent basis); and although the claim of 20-year life would result in a greater value or capital sum returnable through depletion, this would result in no benefit to the taxpayer, but rather quite the contrary. In the foregoing illustration, for example, if the life is really 10 years, the valuation would figure out to be 60 units, and in the 10 years the taxpayer would eventually receive the entire 60 as depletion; but if he had claimed a life of 20 years when it really should have been only 10 years, the valuation would be increased to 84 units, but by the time the mine was exhausted (in 10 years) he would have received as depletion a total of only 42, the remaining half of the inflated capital sum of being of no benefit to him and leaving him 18 units worse off than if he had used the true 10-year life. Since the mining companies fully understand this situation, there is every reason to believe they would not deliberately lower their depletion deductions at the present time of high taxes by claiming a tonnage greater than the truth. In cases where fair market value has been required as a measure of paid-in surplus at time of acquisition, I have tried to be especially careful to adopt conservative figures of tonnage.

In the main, if there has been any incentive to the companies to distort their tonnage figures, it has been to reduce the true figures, thus shorten the life and give higher depletion, for the present years; but the danger that the mine will outlive the lowered capital sum, leaving no depletion for years when taxes may still be high, serves as a deterrent in this direction. As a matter of fact I believe little distortion, either as padding or cutting of tonnage figures, has been attempted by the companies, if for no other reason than that essential diversion in either direction from the truth would be to their disadvantage.

No reduction has been made of tonnage figures in those numerous instances in which companies have presented tonnage estimates of late 1916 or early 1917 as the figures to be used in arriving at March 1, 1913, value. One reason for accepting such tonnage figures is the argument above that increased tonnage reduces the depletion factor, so there is no danger of injury to the Government's interests in such acceptance. A stronger reason is this: That a value of mining property as of March 1, 1913, would be required was first

intimated in the act of September 8, 1916, i. e., more than 3½ years thereafter. Even this intimation was indirect and not of apparent immediate concern to the great majority of mining companies, since the law related only to the time when the accumulation of annual depletion deductions should have equaled the fair market value on March 1, 1913. To demand now that the company shall value its mine on the amount of ore actually disclosed on March 1, 1913, is to inject into the situation an element of coercion which would vitiate the only fair and effective definition of fair market value, namely, the price at which a willing and able seller and a willing and able buyer will trade. For tonnages on record on or about March 1, 1913, in engineer's estimates or in companies' annual reports, were in nearly all instances mere progress reports of development, made for purposes of insuring continuous and efficient operation and without attempt or intention to fathom the full and true value of the property for purposes of sale. It is certain that the great majority of companies would not have been willing to sell their properties on the basis of the ore so developed for operations purposes on March 1, 1913, but before being willing to sell would have insisted on opportunity to pursue such further development as would reasonably reveal the content and therefore the true value of their property.

Under the circumstances, I am convinced that the Government can not justly force companies to use tonnages actually known on or about March 1, 1913, instead of those known in 1916, or early 1917; also, if such should be required the result would be to materially increase in many instances the depletion deductions for 1917 and at least several years thereafter, and probably in no case to reduce the depletion deductions. I am also convinced that those companies who presented tonnage figures of an essentially later date than March 1, 1913, did so either through necessity, because they did not possess 1913 tonnage figures, or through an honest effort to comply with the intent of the law by reflecting the true value of their property.

The following example will make the case clear: This example, the Chile Exploration Co., is used simply because it is the only case encountered in which a reasonably full report exists close to the March, 1913, date as well as at a later date. The valuation submitted by this company in its depletion questionnaire rests on a computation dated March 26, 1917, which is based on tonnages developed on December 31, 1916. It happens that on April 15, 1913, only 45 days after the valuation date later prescribed by law, the company's engineers submitted a report to the officers; this was a report only for the guidance of operating plans and policies and contains within itself ample and clear evidence that the report measured only a part of the value of the property, since the value of the property was not a matter of concern or inquiry at that time and since development of the property was then in progress. The 1913 report, however, contains all the essential data for arriving at a valuation even though this be but a partial one. Although the valuation I have recommended as the basis for depletion is the one based on the report of March 26, 1917, I have carried through a valuation based on the April 15, 1913, report, and summarize below the comparative results.

	Report of Apr. 15, 1913	Report of Mar. 26, 1917
Pounds copper recoverable.....	6,682,409.574	26,236,328.199
Pounds recoverable and available.....	6,682,409.574	20,066,815.692
Fair market value as of Mar. 1, 1913.....	\$272,334,531.21	\$404,434,531.21
Depletion factor per pound.....cents..	3.431	2.015
Depletion by unit method, for 1917.....	\$3,031,081.15	\$1,780,659.29

Although the total value afforded by the earlier report is materially lower than that by the later report, it far more than sustains the company's contention of paid-in surplus of about \$90,000,000, and it would suffice to yield all depletion of 21 years after 1913 or for 17 years after 1917; i. e., until 1934. It is therefore inconceivable in view of the likelihood of change in the basis of taxation before that distant date shall have arrived, that any present management would endeavor to protect its depletion standing subsequent to 1934 at the expense of losing some \$1,250,000 of depletion each year in the meantime. The only conclusion I can deduce is that the company honestly sought to arrive at a true value of its property, even though by so

doing it deliberately cuts its depletion for many years far below what it might properly have claimed on the basis of the earlier report.

To sum up the tonnage situation: Since false claims of tonnage would react to the disadvantage of any company, it may be safely assumed in the great majority of instances that the tonnages presented by the companies are reasonably correct and they may be used without possible detriment to the interests of the Government.

GRADE AND RECOVERY

In the case of all the principal companies the grade of ores which they have been mining is a matter of common knowledge, and in the case of many has long been reflected in their annual reports. As a rule the grade of ore given by the companies in their depletion questionnaire has been accepted after having been found to harmonize with existing records, proper account having been taken of the normal tendency toward decline in richness.

A similar state of affairs applies with respect to recovery or the efficiency of the metallurgical operations to which the ore is subjected; but in this case there is the added fact that by 1913 the processes of flotation and of leaching as applied to copper ores were sufficiently advanced to guarantee the increased savings that have since been actually realized by these processes. Reasonable estimates of recovery involving the use of these processes have therefore been accepted.

LIFE

The life of a property, being determined by the total tonnage present and the rate of extraction, can be computed directly when these two factors are known. But since the almost invariable history of successful copper mines is that their rate of output steadily increases, the true life will be shorter than that indicated by the rate of production which obtained in, say, 1913. As a rule, the life computed by the companies has been found reasonable and has been accepted; but in a few instances where the 1913 rate of production was assumed by the company to govern thereafter, though subsequent events have shown that the output has actually increased (as could have been predicted) I have shortened the life to accord with the evident truth. In all cases where I have shortened the life, additional deduction from the indicated value of the property has been made to cover the increased plant required for the greater output capacity. Without doubt many, probably most, of the estimates of life which have been used in my valuations are longer than the actual lives will prove to be, and in numerous instances in which I have made no change the life should probably be shortened now and a higher valuation and depletion deduction arrived at. In the case of companies that have developed tremendous reserves of ore, which, even at an assumed increasing rate of exhaustion, will last for many years, I have followed the customary practice of regarding as unavailable such ore as will not have been mined in a period of life that will afford, when reduced to present value, about 85 per cent of what the value would be if the life of the mine were perpetual. Specifically in the case of discounting on a 7 per cent and 4 per cent basis (which would apply to a very long-life mine of this kind) the available life would in this way be about 37 years, and all ore that would remain unmined at the end of that period is regarded as nonexistent and is assigned no value. This seems proper, for no one can safely predict so far ahead what the demand, the cost of production or the selling price for copper will be and it is therefore impossible to assign a trustworthy value to ore available at so remote a time.

COST OF PRODUCTION

This item, so essential in arriving at mine values, has given more trouble than probably any other. The reason is that many companies have set up, in their own valuation computations, production costs which I have been unable to confirm by their records of past performance, and the basis for which they have not sufficiently explained. Judged by the general reliability of the other data the companies have used, their figures of costs are probably correct. In fact, I have no doubt that their costs are better justified than the higher costs which, in many instances, I have used. In a considerable number of cases, I can see and understand the manner in which the companies' cost figures were

probably reached. But in all cases of doubt I have resorted to the following uniform procedure to arrive at a figure to be used for cost of production: The average of yearly costs for the five-year pre-war period, 1909-1913, inclusive, or for such part of that period as production was going on, is used as the foundation; wholly exceptional conditions, which could not fairly be regarded as representative of the normal ups and downs of a typical five-year period of operation have been modified or excluded. These costs, computed per pound of copper produced, represent the entire production expense; they are therefore reduced by the value of the gold and silver produced along with the copper. To the net cost per pound thus obtained, an arbitrary addition of 1.15 cents has been made, as explained under selling price, to cover the expected average increased cost of production for the period subsequent to 1913.

This final result, i. e. pre-war cost plus 1.15 cents, has been used as the cost of production in the majority of my valuation computations. Such cost figures are likely to be unfair to the companies for several reasons: (a) due to lack of time, I reached an average cost by taking the arithmetical average of yearly cost figures instead of a weighted average obtained by multiplying yearly cost by yearly production, adding these products for the several years and then dividing by the total pounds produced. Since costs are generally high in years of low production, and vice versa, the arithmetical average I used is likely to be higher than the weighted average, which is the true average cost; (b) no adequate recognition is given, in the method followed, of the fact that many of the younger properties had by no means settled down to their normal stride at the beginning of the period used in computing their average costs, nor of the increase in efficiency and consequent tendency toward lowered costs exhibited by many of the older companies; (c) the method makes little allowance for the reduction in costs, already clearly estimable, by 1913 by the improved metallurgical methods, such as the almost revolutionary process of flotation, just then coming into general use and whose economies had been felt little if at all in the years 1909-1913, for which the average costs were computed.

In short, I believe that many of the costs I have used are too high. I have used them only because it seemed desirable, in making these provisional valuations, to err, if at all, on the side of conservatism. In every case where I have raised the cost set up by the company in its valuation, the company should be afforded opportunity to explain the cost it has used, and if the explanation is sufficient and satisfactory, that cost should be used in the bureau's valuation. As matters now stand, I have no doubt that injustice has been worked toward numerous companies.

SELLING PRICE

This being a subject to which I have been giving much attention and study during the last 14 years, I believe my estimate of the future selling price of copper results from a wider range of inquiry and rests on a greater number of influencing factors than any other prediction of the sort I have seen. The ultimate data involved in my conclusion are shown in the diagram attached hereto.

The estimated selling price used by most of the companies is 16.67 plus cents. This is the average receipt for the 10-year period 1907-1916, inclusive, by what was the largest American selling agency, and it is the figure at which many companies sold a large quantity of copper to the Government just prior to our entry into the war, when the prevailing market price was about 30 cents. But this arbitrary figure seems to me as having little necessary relation to the price of copper for the period from 1913 onward.

My own prediction for the price of copper for the 20-year period subsequent to 1913 is 17.4 cents per pound. This represents the price for electrolytic copper at New York, to which point the costs of production cover. Though my figure is higher than the 16.67 used by so many of the companies, it is, in net effect lower, for I virtually subtract from it 1.15 cents estimated increase in production costs, so that as compared with the pre-war costs, my price amounts to the equivalent of 16.25 cents.

The average of yearly copper prices for the 15-year period ending with 1913 was 15.13 cents. Examination of the cost figures of representative companies to determine how costs rise with rising selling price has led me to the conclusion that to gain the 2.27 cents from the 15.13 cents average to the 17.4 cents level, the costs will increase 1.15 cents, leaving 1.12 cents for increased profit.

All my estimates of price are made on the basis of knowledge and indications existing as of 1913, and they are not influenced at all by the fact that the war brought abnormally high prices, nor by the high costs that are likely to prevail for a long time as a consequence of the war.

As against 17.4 cents for electrolytic copper, I assume 17.6 cents for prime Lake copper, which for years has commanded a premium over electrolytic, and 17.15 cents for arsenical brands of Lake copper and for casting copper. All these figures I believe to be conservative as well as the 65 cents per ounce adopted by Mr. Dick as the price for silver subsequent to 1913, and used in all my computations in which silver is involved.

DEDUCTION FOR PLANT

From the fair market value of the property at time of valuation, as indicated by the present value method, must be deducted the value at that date of the equipment which will be returned through depreciation, in order to arrive at the value of the ores alone, which constitutes the capital sum returnable through depletion. In general, it has been assumed that the fair market value of plant is its book value at or about the date in question. But the questionnaire has not brought out clearly the desired data on this point, and in many instances estimates have been made. In cases also where the estimated rate of future production is greater than the 1913 rate, I have added to plant an amount estimated to meet the increased production requirements, even though in some of these cases, such inclusion for future additional plant requirements may have been made by the company, but not recognized by me because not clearly indicated or explained. Furthermore I suspect that in several instances, the costs of production used in the computation of value have actually included an adequate allowance for depreciation, though assumed not to do so; in such instances, there has been, in effect a double deduction for plant, which of course is incorrect. Finally, in a few cases, the company has included the value of underground openings in the sum on which he has claimed depreciation. Inasmuch as the value of underground openings has been included in the equipment total, without being shown separately, I have been obliged to deduct the entire amount. In consequence, the item will be included neither under plant nor under mine, and will therefore bear neither depreciation nor depletion. The proper remedy of course, is to deduct value of underground openings from the equipment account before subtracting this from the value of property to obtain value of ores alone. The auditors, however, in arriving at the capital sum returnable through depreciation, will doubtless exclude the item for underground openings, and properly so, since the underground openings are rather a part of the mine than of the plant.

The upshot is that, in my effort toward conservatism, I have probably in numerous instances deducted too large an amount for plant and thus brought the depletion to too low a figure. This would ordinarily result in no serious inequity, provided my figures for plant value were to be used as a basis for depreciation. But because of the unfortunate decision to take the matter of depreciation out of the hands of the engineers and give it to the auditors, injustice is likely to be worked, and it will generally be to the disadvantage of the taxpayer.

In all instances, therefore, in which my figures or the auditor's figures for value of plant exceed those used by the company, the company should be given opportunity to justify if possible the figures it has used, and, in all cases where the auditors use as a basis for depreciation a lower value than I have used for plant existing at date of valuation, the capital sum returnable through depletion should be increased by the difference between their figures and mine, and the unit depletion factor and the depletion percentage should be proportionately increased.

In the case of properties not equipped at date of valuation or for which further outlays for plant will eventually be required, the date and amount of expenditure has been estimated and then reduced by straight compound discount to present worth at date of valuation before being deducted from value of property to give value of ores only.

INTEREST RATE

Three types of interest are involved in the value computations: (1) the "profit risk" rate or demanded earning on the enterprise, (2) the "security" rate that may be expected on the safe investment of the allotments set aside

or supposed to be set aside for the amortization of the funds put into the enterprise, and (3) the "discount" rate to be used in finding the present worth of future necessary outlays.

For the profit-risk rate, the majority of companies have used 6 per cent, though some have used higher rates, up to 10 per cent. I am unable to agree to the contentions advanced in favor of the 6 per cent rate, and have used higher rates except in one special instance which appears to be exempt from all those forms of risk which attach peculiarly to mining.

In the case of ore bodies essentially completely developed, like the porphyry copper deposits and a few others, and in which the methods of extraction and treatment are on an assured and successful basis, I have used 7 per cent as the profit-risk rate. For properties whose ore supply, though assured well ahead, is nevertheless proved less completely than in the preceding case, but the geological indications ahead and the past history are favorable, I have used 8 per cent; with increasing uncertainty of ore supply or increasing risk from any case, the profit-risk rate is raised. The highest I have used for any going, profit-making copper mine is 10 per cent.

The rates I have used are likely to be criticized more or less severely by the companies, but I feel they can be successfully defended as not too high. On the other hand, my rates may be regarded by some as too low; but as I and others before me have pointed out, all profit-risk rates higher than 6 per cent (assuming that an ordinary good, safe investment should pay 6 per cent) yield actually a higher rate of interest on the money in the mining risk than is implied in the named rate of 7, 8, 9, or 10 per cent. For example, a 10 per cent rate on a 10-year life yields actually 13.25 per cent on the average amount invested in the mining risk. Moreover, there is merit in the contention that because a given mining investment is regarded as especially risky, its financial burdens should not on that account be increased, thus making a successful outcome still more uncertain by the imposition of a correspondingly heavy tax; yet this is just what happens if, because of the risk a high rate of profit is used, giving relatively low valuation, low depletion deduction and consequently high tax.

After much study I am convinced that the range of interest rates I have adopted is sound and fair for the purposes of arriving at mine valuation and depletion, and that in general these rates have been properly applied, though in some few instances I may have erred in judgment and used a rate not truly suited to the case. Any such error will be revealed during conference with the taxpayer concerned and should be corrected when revealed.

In common with most companies and in conformity with most valuations made in recent years, I have used 4 per cent as the security rate, though Finlay, in his work of valuing the mines for the State of Michigan in 1911, used 5 per cent. Probably $4\frac{1}{2}$ per cent could have been secured with perfect safety by any company in 1913 by investing in the type of gilt-edge securities selected by life insurance companies. But I have held to 4 per cent, partly because no tables at $4\frac{1}{2}$ per cent were to be found and time was not available to make them. Since the lower the security rate used the lower the valuation, having in this respect the opposite effect of the profit-risk rate, the use of a low security rate like 4 per cent operates in the direction of conservatism and affords one more argument against any connection that the profit-risk rates I have used are too low.

In any case of deferred production of part or all of an enterprise the fair market value of the ores has been computed as of the estimated time of beginning production by using, say, in the case of a porphyry deposit, 7 per cent and 4 per cent; then the sum so obtained has been reduced to present worth at the date of valuation by discounting for the period of deferment, i. e., from the date of valuation to the date of beginning production at straight compound interest at the same risk rate, in this case 7 per cent—since the same degree of risk attaches to the money invested in the enterprise before as after production has begun.

Outlays for plant subsequent to date of valuation have been reduced to present worth by discounting in all cases at 3 per cent, which is regarded as the standard rental for money.

DEPLETION

In my opinion, the true measure of depletion for any year is the reduction in value of the mine caused by the operations for the year; this is a matter not of tons of ore or pounds of metal, but of dollars. A mine has value only

because of profit evident in it; that value is decreased in proportion as the profit is removed through operation. But since the method of computing depletion as a given percentage of the year's profits has not yet been adopted by the bureau and the so-called unit method for computing depletion must be adhered to, it is more logical and fairer to compute depletion per pound of copper than per ton of ore. In general, I have followed this preferred manner of computation. But in some cases of complex ores—for instance, those containing essential values in, say, lead and silver in addition to copper—it has not in all cases been feasible to use the pound-of-copper basis and the ton-of-ore basis has been used instead. Also, in some instances, although the pound basis should be used, it has been necessary to use the ton basis tentatively because sufficient data had not been afforded by the companies. In such instances the missing data should preferably be secured and used in recomputing the depletion.

The regulations prescribe that the value of each unit in the ground shall be ascertained as the depletion rate. This would mean that on the pound-of-copper basis the depletion would be computed on the gross copper content of the ore. A number of companies have computed their depletion in this way, evidently following the regulations strictly. But I have in all possible instances computed depletion per net pound of copper recovered, not only because the copper actually recovered is the only copper that has value, whereas the part of the gross content of the ore that is lost has no value, but also because abuses could easily creep in that would be disadvantageous to the Government's interests if the depletion were computed on the gross content of the ore. For instance a company might claim an expected recovery of 80 per cent in setting up its valuation, yet in actual practice never attain a better average than 70 per cent. By the gross content method, the company would experience no penalty for failing to live up to the claim it had made, but by the net recovery method, any excessive claim as to recovery is automatically rectified in the annual depletion if the claimed recovery is not actually attained.

However, for the years 1917 and 1918 when the copper companies were responding to the urgent appeals of the Government for highest possible production and were, in consequence overloading their plants, deliberately sacrificing efficiency of recovery for the sake of maximum output, very large quantities in the aggregate of copper were lost. This loss in recovery under these particular circumstances, as compared with the normal recovery the company had previously been making, is an actual loss, which the company ought to be entitled to deduct before arriving at taxable net income. I have taken no account of this loss in computing depletion, but it can not fairly or honestly be ignored and the bureau should find a way of taking care of it before determining the taxes against the companies so affected.

It may be unnecessary to point out that the depletion rate per pound for different companies varies between rather wide limits. Indeed, no approach toward uniformity can be expected. Short life, low operating costs, rich ore, or noteworthy values in precious metals will raise the depletion rate per pound of copper, whereas the opposite conditions will tend to lower the rate.

ATTITUDE OF THE COMPANIES

The opinion has been frequently expressed in the bureau that the copper companies have made claims as to value and depletion that are extravagant, exorbitant, and without foundation, even though that opinion has emanated from individuals who evidently were unacquainted with mines, mine values, and mine valuation methods, and therefore quite unqualified to pass judgment. Competent investigation of the facts shows that the claims of the copper companies with respect to mine values and depletion are not such as to justify the implications mentioned above. Under the circumstances, I deem it proper to assert emphatically, and in my capacity as the expert of the bureau on this subject, that as a whole the copper companies have taken a fair attitude toward their tax obligations and do not deserve the suspicion with which they are regarded by some. I believe the companies, in general, have taken all the benefits to which they have felt justly entitled, though I know of instances in which deliberately less than this has been claimed. On the other hand, I believe that the companies, in general, have not claimed benefits to which they have not felt justly entitled, though in some cases their claims, in my judgment, have been somewhat too high, yet never of a different order of magnitude or very far away from what is right and just. The one respect in which there

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has been essential deviation on the part of the companies from what I regard as a sound basis of valuation is in the matter of profit-risk rate; and the adoption by most of them of a low rate results, I believe, not from a desire to "put something over," but from a conviction (which I do not fully share though regarding it is sincere) that for purposes of taxation, somewhat as in appropriation by eminent domain, the Government should adopt valuations that touch rather on the liberal than on the stingy side of fairness. My own feeling is that the valuations should aim to strike squarely in the middle of fairness.

It is for the primary purpose of recording clearly and in detail the basis for my judgment of the copper companies expressed above that this lengthy memorandum is written.

L. O. GRATON, *Valuation Engineer.*

INVESTIGATION OF THE BUREAU OF INTERNAL REVENUE

THURSDAY, FEBRUARY 5, 1925

UNITED STATES SENATE,
SELECT COMMITTEE TO INVESTIGATE
THE BUREAU OF INTERNAL REVENUE,
Washington, D. C.

The committee met at 10.30 o'clock a. m., pursuant to adjournment of yesterday.

Present: Senators Couzens (presiding), Watson, Jones of New Mexico, and King.

Present also: Mr. L. C. Manson, of counsel for the committee; Mr. L. H. Parker, chief engineer for the committee; and Mr. Raleigh C. Thomas, investigating engineer for the committee.

Present on behalf of the bureau: Mr. C. R. Nash, assistant to the Commissioner of Internal Revenue; Mr. Nelson T. Hartson, Solicitor Bureau of Internal Revenue; Mr. James M. Williamson, attorney, solicitor's office; Mr. S. M. Greenidge, head, engineering division, Bureau of Internal Revenue; and Mr. W. S. Tandrow, appraisal engineer.

The CHAIRMAN. You may proceed, Mr. Manson, when you are ready, or do you wish to put in something first, Mr. Hartson?

Mr. HARTSON. Mr. Chairman, I think it might be a good plan to continue with the presentation of the copper matter. However, am not prepared this morning, although I will be in a day or so, to answer the Senator's question as to what the bureau is going to do in regard to reopening 1917 and 1918 on the new valuations, and it may be that the additional data that I desire to offer for the record should be postponed until that statement is ready, and then we can do it all at once.

The CHAIRMAN. I think that is satisfactory. Is it not, Mr. Manson?

Mr. MANSON. Yes.

Mr. HARTSON. If the Senator would prefer to have me go ahead, I have two affidavits here which I desire to read into the record. Neither one is very long, and, if you would prefer, I could read these in now, or I could wait until we close the thing up entirely. Whatever meets with the Senator's wishes will be done.

Mr. MANSON. In the interest of the continuity of the record, inasmuch as copper was the thing that we were considering at our last session covering tax matters, it would be better, I think, if we would do that now.

The CHAIRMAN. How long would it take to do that, Mr. Hartson?

Mr. HARTSON. It ought not to take more than 30 minutes to complete it, Mr. Chairman.

The CHAIRMAN. Then, you may proceed.

Mr. HARTSON. Except for the final statement which I have indicated.

The CHAIRMAN. Yes. However, as I understand it, Mr. Manson, you are putting all of these subjects in continuity when you come to print the record.

Mr. MANSON. Oh, yes; but that requires a great deal less trouble if the record is continuous.

Mr. HARTSON. Mr. Chairman, the first affidavit that I desire to read is that of James C. Dick, submitted to the bureau in connection with the hearings which were held sometime in July, as I remember it, of 1922. Those hearings were conducted for the purpose of advising the commissioner as to what action he should take. It was an opportunity offered the copper people to come in and protest, they being notified that the commissioner was considering reopening the tax years 1917, 1918 and 1919 and all subsequent years, and revaluing their properties.

AFFIDAVIT OF JAMES C. DICK

STATE OF NEW YORK.

County of New York, ss:

My name is James C. Dick; I reside at Salt Lake City, Utah; I am a mining engineer by profession; I graduated from the Lehigh University in 1895 with degree of civil engineer; in 1899 I went to Salt Lake City, Utah, and practiced general mining engineering; since that time I have been engaged in following my profession of mining engineer, in connection with which I have examined mining properties and became familiar with mining operations and conditions throughout Utah, Arizona, Nevada, Colorado, and Idaho.

In July, 1919, at the solicitation of Mr. Callan, Assistant United States Internal Revenue Commissioner—

The affidavit says "collector"—

I accepted an appointment as valuation engineer in the metals department of the natural resources subdivision, my understanding being that my duties would be mainly in connection with the adoption of methods for the valuation of mines, under the Government income-tax law. I immediately entered upon the discharge of my duties, and among the first acts done was, in consultation with Mr. L. C. Graton, then valuation engineer, and others, to adopt a method of mine valuation for the purpose of fixing fair values as of March 1, 1913, for depletion purposes. No method had then been adopted in the department, and serious and extended investigation was made into the subject, and a present value method, indorsed by the profession, and in most of the mining textbooks, and generally followed by the mining profession, was adopted. The general factors necessary to be settled were fully gone into and the interest rate or profit return and amortization interest rate determined, and also the prices of the metals, to be used in making such valuations.

My attention was particularly given to the fixing of lead and silver prices. I worked in conjunction with Mr. Graton, who was giving particular attention to the price of copper, and was familiar with the manner in which the copper price was fixed, and my opinion was then and is now that the price fixed and used for copper, for valuation purposes, was and is fair and conservative.

In the fall of 1919 Mr. Graton, as I was advised, was instructed to proceed immediately to value the mining properties of the various copper producers, for depletion purposes, and this he proceeded to do, and I worked more or less with him in making these valuations. The valuations made by Mr. Graton and myself at that time were necessarily provisional in character, as complete data was not then available, and in some instances were not before the department, and our understanding was that later hearings would be granted the copper

producers, the matters gone into fully, and final valuations and determinations made.

In December, 1919, I was advised by Mr. Callan, assistant commissioner, and Mr. J. L. Darnell, then head of the natural resources subdivision, that a metals valuation section was to be organized in the natural resources subdivision, and that I was to be the chief of such section, and that I should proceed to select such engineers as I required for the work. I immediately proceeded to organize such section and chose 16 engineers from the civil-service list.

Beginning about February 6, 1920, and occurring for the several companies more or less continuously in succession thereafter, hearings were granted various copper-producing taxpayers for the purpose of finally determining their several taxes for each year, 1917, and various prior years, and for the purpose of finally determining the fair value of the several properties as of March 1, 1913, for the purpose of computing the proper depletion allowances and calculating invested capital. These hearings were had before Mr. J. L. Darnell, head of the natural resources subdivision, and before me as chief of the valuation section, until Mr. Darnell left about March 15, 1920, when I conducted the hearings as acting head, and later as head of the natural resources subdivision, upon the questions of fair value and depletion allowances. The first hearings as to copper producers were those of the Anaconda Copper Mining Co., Inspiration Consolidated Copper Co., Phelps-Dodge corporations, followed a little later by the Utah Copper Co., Nevada Consolidated Copper Co., Ray, Chino, and other companies.

The same procedure in fixing the fair value of the properties as of March 1, 1913, and estimating depletion allowances therefrom were followed with each of the above-named copper companies, and in others in which hearings were had before the department. Taking the cases of the Anaconda and Inspiration companies as illustrations: When a date was set for those hearings, which as I recall it was February 10, 1920, I requested the engineers in the metals section with me to go over the data and prepare to finally fix the fair value and depletion allowance. Upon the hearing the engineers and representatives of the Anaconda Co. appeared before me; we went fully into all of the facts and figures applicable, fully considered all of the material data and arrived at what I considered fair values as of March 1, 1913, on which the depletion allowance was estimated. The provisional computations theretofore made by Mr. Graton and myself were gone over and considered by us, but the final valuations for depletion deduction and depletion in invested capital were based upon all of the facts and evidence before us, as well whatever had theretofore been prepared in the bureau as what had been submitted by the taxpayer. Whenever my figures as finally decided on corresponded with those for the same item or items in the provisional memorandum or calculation, this simply meant that after full investigation of all the evidence and arguments, I saw no occasion to vary from that figure, and that I made it the final figure in such item or items.

In the case of the Anaconda Co., as I recall it, some eight different computations were made by me and my assistants during the various stages of the tax determination proceeding, and the result finally reached was based upon these calculations. It was my understanding and view, and this was communicated to the representatives of the copper companies then before me, that the fair value then fixed and the depletion allowance made were full and final and in no wise provisional, except that they were subject to the approval of my superiors in the department.

What I have said above with respect to the case of the Anaconda and Inspiration as to the manner of proceeding and of reaching the final results applies equally, without repeating herein in detail, to the case of each other copper company in which there was a hearing.

The first cases to come before me as acting head or head of the natural resources subdivision, after Mr. Darnell ceased to function, were those of the Utah Copper Co., Nevada Consolidated Copper Co., Ray Consolidated Copper Co., and Chino Copper Co.

In each case a computation showing this final valuation allowance was made up and left in the files with my approval upon it. My instructions from my superiors, Mr. Darnell and Mr. Callan, were to finally determine these matters and these instructions were fully followed to the best of my ability, and in accordance with the practice and requirements of the department.

In the early part of March, 1920, Mr. Darnell resigned as head of the natural resources subdivision, and I became head of that subdivision, and carried on its work until my resignation on March 1, 1921.

JAMES C. DICK.

Subscribed and sworn to before me this 3d day of July, A. D. 1922.

PATRICK LEE.

Notary public for the State of New York, residing at New York City.

The CHAIRMAN. After that hearing that you referred to, before you read the affidavit, the commissioner and the Secretary of the Treasury decided to go ahead and revalue the property?

Mr. HARTSON. That is true, with the condition that such revaluation should be effective for 1919 and all subsequent years, and not be effective for 1917 and 1918.

The CHAIRMAN. Yes; notwithstanding the fact that some were marked "provisional" and some were not.

Mr. HARTSON. Under circumstances as have been outlined by Mr. Graton and these men who were in the bureau.

The CHAIRMAN. Your answer is yes, that they went ahead on those lines, regardless of whether they were marked "provisional" or not; is not that so?

Mr. HARTSON. Mr. Chairman, I believe that there were no provisional valuations, as those who were in the bureau at the time understood that term, that were finally used to close the tax years 1917 and 1918 for those companies. Mr. Graton marked his valuations "provisional," and if I understand him correctly—and it seems to be borne out by these affidavits—they were provisional at the time he made his computations, because the copper companies, in general, had not had hearings. He used the figures that they submitted in their returns, and the data that was then in the files, and, in large measure, had no additional information from the taxpayers themselves. It was his understanding, I believe, that after he arrived at these figures, which to him seemed to be correct, the copper companies and others interested would be notified and be given hearings after he left the bureau, at which time definite figures would be computed and the tax liability determined, and that when those valuations, so arrived at, were made by his successors, those would be final.

Now, that is what actually did occur. After he left, in February of 1920, Mr. Dick, Mr. Darnell, and others in the bureau, who remained, conducted hearings. They went over his figures and made some changes, and finally valuations, so far as this evidence would indicate, were made. What had been "provisional" valuations thereupon became final. The companies paid the tax, and they thought the cases were closed.

Then, in 1922, the issue was squarely raised as to whether the commissioner should change these valuations for all years, or whether he should change them for none of the years, or whether he should change them for a certain number of the years.

It was the contention of some that the valuations were provisional at all times, that the taxpayers paid their taxes on a provisional basis. This evidence and the evidence that the copper companies produced at the time of the hearings in 1922 was intended to show that they were not provisional valuations. What had been marked "provisional" by Mr. Graton became final before the taxes were paid.

The CHAIRMAN. But notwithstanding all of that, the Secretary of the Treasury and the commissioner, it seems, agreed with that and ordered a revaluation?

Mr. HARTSON. The commissioner and the Secretary determined that the valuations arrived at by Mr. Graton were incorrect, not that they were provisional or that they were final, but that they were incorrect, and they proceeded to change them; but they did not go back and change them for 1917 and 1918.

The CHAIRMAN. I understand.

Senator KING. Well, they understood that they were provisional, too, in a way, did they not?

Mr. HARTSON. They understood that the contention was made by some in the bureau, Senator, that they were provisional.

Senator KING. And they understood that the years anterior to 1919; that is, 1917 and 1918, had been marked provisional, and they knew that in some instances they had not been made, in some of those years, final upon the books for 1916, 1917, and 1918, did they not?

Mr. HARTSON. They knew that Mr. Graton's computations were marked "provisional." They knew there was an opinion in the bureau, that even after these provisional valuations were made by Mr. Graton and the companies finally paid their taxes on that basis, subject to some corrections, there was still a provisional valuation as the basis for those taxes. They knew, on the other hand, that the copper companies insisted that they were final, and it was definite, and not subject to being reopened. Now, their knowledge extended both ways, that there were contentions made that they were provisional and there were contentions made that they were final. Their decision was that the valuations fixed by Mr. Graton should remain final valuations for the years 1917 and 1918.

Senator KING. Notwithstanding the fact that they challenged their validity for subsequent years, they were put on the same basis.

Mr. HARTSON. That is correct.

Senator KING. It seems to me that is a wholly illogical course.

Mr. HARTSON. That was the decision made in 1922, Senator.

Senator KING. I can not understand the logic or the soundness or the justice of such a thing.

Senator WATSON. Are taxes ever paid on provisional reports?

Mr. HARTSON. Of course, Senator, all taxes are paid on a provisional report. It is difficult to know just what you mean by "a provisional report." The taxpayer files a return, and that is provisional, and they pay their taxes on that basis.

Senator WATSON. Yes.

Mr. HARTSON. That is subject to correction later on.

Senator WATSON. When they mark a report "provisional" what do they mean by that?

Mr. HARTSON. Well, it is not customarily done, Senator. What Mr. Graton meant by placing the word "provisional" on all of his computations was explained by him here, and we are going to show what that really contemplated and what that meant. It is a term that has no technical meaning in the bureau at all. The word "provisional" as used by Mr. Graton, and when used in the bureau now,

has a meaning which is the generally accepted understanding of the meaning. It has no technical meaning in the bureau at all. Of course, "provisional" means tentative, or it means—

Senator WATSON. We understand what it means.

Mr. HARTSON. Yes.

Senator WATSON. What I wanted to find out was whether it had a technical sense as used in the bureau?

Mr. HARTSON. I think it has not.

Senator WATSON. All of these returns are provisional, are they not?

Mr. HARTSON. Yes; they are subject to correction.

Senator WATSON. Yes.

Mr. HARTSON. What happened here, Senator, was that the copper companies filed their returns, and they paid their taxes on the basis of the valuations which they had used in computing their returns, or in making their returns. They are provisional, certainly. Later on, some two or three years later, a check was made on those returns. The bureau, through its representatives, went out and employed technical men qualified to do that. They went over the returns, and they made changes in the valuations that the copper companies had used as a basis for their returns.

Senator WATSON. Was that done upon the initiative of the bureau or upon the request of some taxpayer, or how was that brought about?

Mr. HARTSON. That was initiated by the bureau. The copper companies would have been well pleased to allow their taxes to remain as they had returned them, but it was felt that the valuations were improper, so they employed Mr. Graton to revalue the properties and determine the additional tax that was due. He did that, and it is upon the basis of his computations, which were marked "provisional" and with the understanding, as he has testified, that there be conferences held afterwards, and that there be additional data assembled, and that after that the final amount of the additional tax would be determined, and that would be then definite and settled.

The CHAIRMAN. For the benefit of the Senators who were not here at the beginning of this session, I will state that Mr. Hartson advised us that, in a few days, the Treasury Department will advise us as to whether they will be opened up for 1917 and 1918 again.

Senator KING. I did not hear that.

Senator WATSON. But they were not opened up before that?

The CHAIRMAN. No; they have opened them up for all subsequent years, and they are going to advise us later as to whether they will open them up for 1917 and 1918.

Senator KING. Let me ask you this question, Mr. Hartson, and if you have no answer, just say so, because I do not want to encumber the record: I can not understand the reason why, unless the statute of limitations had run, the department would open up those cases for revaluation after 1917 and 1918, but not including 1917 and 1918, when they knew that the same methods had been applied to determine the taxes in 1919, 1920, and 1921, as had been applied to 1917 and 1918. If they considered that they ought to be opened up because the basis of valuation was wrong for one year, and the same

basis having been applied in all, it seems to me wholly illogical and unsound for them not to open them up as to all years when that basis had been used.

Mr. MANSON. Not only the same basis, but the same value.

Senator KING. Well, of course, I use the word "basis" there as including values and all.

Mr. HARTSON. I think the department had before it that inconsistency, and considered that one of the elements that necessarily had to be taken into account when the decision was made.

The CHAIRMAN. You may proceed with your other affidavit now, if you want to, Mr. Hartson.

Mr. HARTSON. Mr. Chairman, this is the affidavit of Mr. J. W. Darnell.

Senator WATSON. Was the course pursued in this instance unusual, or was there any other case like it? Is it different from all other cases?

Mr. HARTSON. I do not know of another situation similar to it.

The CHAIRMAN. Was there not a similar situation as to silver?

Mr. HARTSON. The silver situation was not entirely similar to it, and I must make an explanation as to that. The commissioner's order, which was approved by the Secretary, directing the revaluation, and dated December 11, 1922, referred to the revaluation of the copper properties and silver properties—

The CHAIRMAN. But not lead?

Mr. HARTSON. But not lead—copper and silver.

The silver interests, however, had not been heard—and I mean by that that conferences which had been held over a period of time prior to the signing of this order that I have referred to were copper conferences. Their representatives were there. The silver people were not there, and it is quite apparent that the silver people had not been notified that their properties were being considered for revaluation; but when the order came out it included the copper properties and the silver properties as well.

The reason for that was that substantially the same methods of valuation, the same principles, and much the same factors, subject to such correction as would have to be made by reason of the different ores, had been used in valuing silver as had been used in valuing copper, so that both were included in the order. So that while the silver people were not heard, they were included in that same order.

Now, I am informed that the revaluation of the silver properties is not comparable in size or importance to the copper situation, but that is the only other one, and that was really considered as a part of this, Senator. This one order is the only order that has been issued of its kind that I am familiar with.

Senator WATSON. Were the taxes raised by this subsequent investigation?

Mr. HARTSON. Considerably, and it should be said that there have been no taxes paid on this latest valuation, but if the taxes are assessed upon the basis that is proposed—

The CHAIRMAN. You say "proposed"—but have they actually been assessed in some cases definitely?

Mr. HARTSON. I do not know, Mr. Chairman, of any of them that have been assessed. It is impossible to assess them without giving

the taxpayer the right to go before the Board of Tax Appeals, and I think the letters are out on them, in which they are notified of what the bureau contemplates doing; but there have been no assessments, because the assessment can not be made until they have had the right to appeal.

The CHAIRMAN. Those letters are not assessments, but are really "proposals to assess."

Mr. HARTSON. That is what they are.

Senator WATSON. When was this matter opened for investigation by the department?

Mr. HARTSON. In 1922.

The CHAIRMAN. You may proceed with this other affidavit.

Mr. HARTSON. This is Mr. Darnell's affidavit.

Senator WATSON. Who was he?

Mr. HARTSON. The affidavit will explain. He was an engineer in the bureau.

Mr. Darnell's affidavit reads as follows:

AFFIDAVIT OF J. L. DARNELL.

STATE OF NEW YORK,
County of New York, ss:

From October, 1918, until March, 1920, I was connected with the Income Tax Unit of the Internal Revenue Bureau, engaged principally in the determination of values of various natural resources of the country.

On July 1, 1919, there was created in the Income Tax Unit the natural resources subdivision, and at that time I was made head of this subdivision, which position I continued in until my resignation from the department in March, 1920.

Late in October of 1919 Mr. Daniel C. Roper, then Commissioner of Internal Revenue, called me into his office and showed me a letter which had been transmitted to him through Col. Daniel Porter, then revenue agent in charge at New York City, signed by Leslie J. Abbott, an internal revenue agent, in which letter Mr. Abbott stated that he had been in charge of a large corps of investigators who had been engaged for more than a year in an audit and investigation of the books and accounts of the various copper companies; that as a result of these investigations he, Mr. Abbott, had recommended an additional assessment against these copper companies of many millions of dollars; that many of the findings of these investigators had been transmitted to the department six months or more previous to the date of this letter, and the copper companies were delinquent; that he was familiar with the urgent need of the Government for money, and that with a very slight review it would be possible to make this additional assessment, and in a very short time bring into the Treasury a considerable sum. Mr. Roper had called me, as head of the natural resources subdivision, to consider this letter and to ask what progress had been made in the review of the returns of the various copper companies, and asked me if I could not get some of this money which, on the face of things, was due. I told him that nothing could be done toward the final determination of the tax due until we could determine the valuations of the various properties, because the March 1, 1913, value and the consequent reduction for depletion was, in most cases, a determining factor in the arrival at the sum due.

Within a day or two after this interview with Mr. Roper he forwarded to me an official communication, attached to a copy of the Abbot letter, in which he ordered me peremptorily to hasten with all possible speed the essential features of the valuation, to the end that the tax due from these various companies might be determined at the earliest possible date and the assessment placed on the rolls.

In conformity with the instructions contained in Mr. Roper's letter, I had instructed Mr. L. C. Graton, at that time in charge of copper valuations, and Mr. J. C. Dick, his assistant, both of whom had been engaged on this work for several months past, to bring in the valuations forthwith. Mr. Graton

told me that he had collected a vast amount of data and had given it careful consideration, but that up to that time there were two factors which were essential of which he was uncertain—one, the value of the copper metal itself; the other, the discount factor to be used in arriving at the present worth of the properties.

After considerable discussion between Messrs. Graton, Dick, and myself, and a careful consideration of the data which they had collected, we found and determined that the fair market value of metallic copper in place as of March 1, 1913, was 16¼ cents per pound, and that the minimum discount factor to be used in the computation of present worth of various copper properties was 8 per cent and 4 per cent for lode mines and 7 per cent and 4 per cent for porphyry mines. It was further determined by us, in the case of the properties of the Anaconda Copper Mining Co., which were lode mines, and the Inspiration Consolidated Copper Co., which was a porphyry mine, that, owing to the fact that their ore bodies were well developed and well marked, and the operating conditions were thoroughly understood, in the computation of the values of their properties they were entitled to the minimum rates as above stated.

After these factors had been determined, valuations as of significant dates, for the above properties, and for all the others that were valued, were prepared by the engineers of the metals valuation section, using therefor the great mass of data collected independently by the department as well as that furnished by the companies. These valuations were marked "Provisional," because they were in a way ex parte and it was known at the time they were made that after the representatives of the various companies concerned were heard modifications and changes would probably have to be made.

About November 10, 1919, at the invitation of Mr. Commissioner Roper, I attended a hearing granted to the representatives of the Anaconda Copper Mining Co. and Inspiration Consolidated Copper Co. before the commissioner and other department officials, at which time the whole matter of these tax controversies and the desire of the companies for final hearings and determinations of these matters was laid before the department. At the conclusion of this hearing I was instructed by Mr. Roper to grant such hearings as might be necessary to the copper companies and to take up and finally determine their tax liability, and to, as speedily as possible, finally dispose of all matters involved therein. Pending said hearings I was instructed by Mr. Roper to withhold the making of assessments.

Early in February, 1920, I commenced the hearings of the various copper companies in order to finally determine these tax matters, and continued such hearings until I retired from the department in the early part of March, 1920. The most important cases heard and determined by me were those of the Anaconda, Inspiration, and Phelps-Dodge corporations.

In each of these cases it was understood by me and the representatives of these companies that the determination and disposition of their tax matters then in condition to be closed should be final. Upon the hearings all matters necessary to be determined, including the fixing of the amount of invested capital of each of the companies, fair value of the mining properties as of March 1, 1913, and depletion allowances based thereon, and all other necessary factors were by me determined.

The matter of consideration of evidence, including evidence and arguments submitted by counsel and engineers regarding the fixing of the fair value of mining properties and depletion allowance, was, in the first instance, referred by me to the engineers of the metals valuation section. The result of their determinations, upon which I was consulted at intervals, was laid before me, and by me approved, and all of the findings incorporated in written memoranda which were initialed and approved by me.

After findings had been made on all points and the cases had been passed to audit, the final result in each case was embodied in a letter executed by the commissioner or assistant or acting commissioner, and such original letter was by me delivered to each case to a representative of the company affected thereby.

It was understood and agreed by myself, as head of the natural resources subdivision, by Mr. Callan, assistant to the commissioner, and by Mr. Roper, the commissioner, that the findings thus made, including the findings as to invested capital and fair value, were finally fixed and determined as the bases for the computation of excess profit and income taxes for the year 1917 and previous years, and also for such succeeding years as such findings

should be applicable thereto. There was no suggestion at any time that any of these findings or determinations were tentative or provisional. Full investigations had been made and the department was in a position to and did finally determine the matters acted upon.

J. L. DARNELL.

Subscribed and sworn to before me this 3d day of July, 1922.

PATRICK LEE,

Notary Public, Queens County, No. 2029.

Certificate filed in New York County. New York county clerk's No. 347. New York register's No. 3285.

Senator KING. What is the date of that affidavit?

Mr. HARTSON. July 3, 1922.

These affidavits—this one [indicating] and Mr. Dick's affidavit, which I have read—were both submitted to the department in connection with the hearings of the copper companies held before the Commissioner of Internal Revenue in 1922, at which time the commissioner had before him the question of whether he should revalue the properties, and, if he revalued them, how far back he should go.

Now, Mr. Chairman, that is all I desire to put into the record at this time.

As I have indicated a time or two before, the answer to the chairman's question as to the possibility of a change in decision from the one arrived at by the present commissioner and the present Secretary in December, 1922, will be made in a very short time.

Mr. MANSON. While we are on the copper matter I wish to offer one additional exhibit. The exhibit is a comparison in the case of 49 companies of the value for depletion as claimed by the taxpayer and the value as allowed by the provisional valuations made by Mr. L. C. Graton.

I wish to call especial attention to the fact that in the following cases the value, as fixed by Mr. Graton for the bureau, exceeded the value claimed by the company:

The Arizona Commercial Mining Co. claimed \$1,500,000 and was allowed \$1,538,000.

The Calumet & Hecla Mining Co. claimed \$46,447,010 and was allowed \$50,834,013.

Chile Exploration Co. claimed \$266,885,982 and was allowed \$425,576,000.

The CHAIRMAN. That is the Chile Copper Co.?

Mr. MANSON. Yes.

The CHAIRMAN. The significance of that is the fact that if Mr. Graton allowed a higher valuation it meant a reduction in tax?

Mr. MANSON. Yes.

Mr. HARTSON. But in the case of that particular company, Mr. Manson, while Mr. Graton's figures were as you have stated, my understanding is that his figures were checked by his successors immediately after he left, and that the final valuation allowed at that time by the bureau was substantially less than the four hundred odd million dollars that you have read.

Senator KING. But not lower than, or as low as, the valuation placed by the company?

Mr. HARTSON. My information is that it was less.

I want to submit the actual figures on that, because the mistake which has arisen with regard to the valuation of the Chile Explora-

tion Co. was one that did not become apparent to me until last Sunday. We had all assumed that Mr. Graton's valuations were carried into effect at that time in 1920, but I understand they were not, that they were checked by his immediate successors and changed.

Senator KING. It would be interesting to know what the Anaconda Co. paid for the Chile property in actual cash or its equivalent.

Mr. MANSON. I think that is developed in the revaluation. I have offered some exhibits which show those valuations.

The Inspiration Consolidated Copper Co. claimed \$62,214,806 and was allowed \$91,654,000.

The Iron Cap. Copper Co. claimed \$2,000,000 and was allowed \$2,391,000.

Mason Valley Mines Co. claimed \$2,161,403 and was allowed \$2,969,000.

Miami Copper Co. claimed \$21,964,026 and was allowed \$25,288,000.

Mohawk Mining Co. claimed \$6,570,000 and was allowed \$7,070,822.

Mountain Copper Co. (Ltd.) claimed \$1,416,000 and was allowed \$1,829,000.

Osceola Construction Mines Co. claimed \$12,579,013 and was allowed \$12,753,918.

Tennessee Copper & Chemical Co. claimed \$3,407,400 and was allowed \$14,800,000.

United Verde Copper Co. claimed \$25,000,000 and was allowed \$48,426,748.

Wolverine Copper Co. claimed \$1,576,000 and was allowed \$2,176,199.

The totals covering the whole 49 companies are as follows:

Claimed, \$1,503,831,852; allowed \$1,450,372,205.

The CHAIRMAN. Have you the total of the new valuations at this time? From the records that I have looked at I recall that they were very much lower than either the amounts claimed or allowed.

Mr. MANSON. I have not them here, but the new valuations on these same properties are all set up in the schedules which I have offered as exhibits. I have not any of those papers here. I did not know that this matter was coming up this morning, and this was just handed to me.

Senator WATSON. Do they usually allow the amount that is claimed?

Mr. HARTSON. Do you ask whether they usually allow the amounts claimed?

Senator WATSON. Yes.

Mr. HARTSON. In reporting the values of properties, I think it is the tendency of most taxpayers to claim a value which is not lower than the fair value of the properties.

Senator KING. The higher the value, if it is a producing property, the greater the reduction.

Mr. HARTSON. The greater the depletion unit.

Senator KING. The greater the depletion unit; yes, certainly.

The CHAIRMAN. And the lower the tax?

Senator KING. The lower the tax.

The CHAIRMAN. Certainly.

Senator JONES of New Mexico. It would be interesting to know the valuation put upon these properties for local taxation purposes.

Senator KING. Yes; I would suggest that we get that, if we can, without too much trouble.

(The statement submitted by Mr. Manson is as follows:)

Table showing comparison between values for depletion as (1) claimed by taxpayer and (2) allowed by L. C. Graton

Name of company	(1) Form A. M. M. S. value claimed by taxpayer	(2) Value allowed by L. C. Graton	Remarks
Ahmeek Mining Co.....	\$30,832,355	*\$20,719,343	*Total value, mine and plant, found by L. C. Graton.
Allouez Mining Co.....	6,199,757	*4,901,923	Do.
Anaconda Copper Mining Co.....	194,152,965	132,125,401	
Arizona Copper Co. (Ltd.).....	15,554,899	14,755,000	
Arizona Commercial Mining Co.....	1,500,000	1,538,000	
Calaveras Copper Co.....	*2,700,000	314,000	*Based on cost.
Calumet & Hecla Mining Co.....	46,447,010	50,834,013	
Centennial Copper Mining Co.....	2,228,912	1,490,658	
Cerro de Pasco Copper Corporation.....	50,988,997	*44,617,765	*Paid-in surplus at acquisition, 1915.
Champion Copper Co.....	23,523,400	17,151,780	
Chile Exploration Co.....	*266,885,982	425,576,000	*On basis of estimate as of Jan. 29, 1921.
Chino Copper Co.....	117,842,909	96,274,000	
Consolidated Arizona Smelting Co.....	2,400,000	1,697,953	
Copper Range Co.....	9,250,000	8,012,731	
Ducktown Copper, S. & I. Co.....	940,500	930,798	
East Butte Copper Mining Co.....	576,995	237,400	
Gila Copper Sulphide Co.....	2,032,763	1,056,000	Dec. 22, 1919.
Giroux Consolidated Mining Co.....	8,679,770	5,991,000	
Great Western Copper Co.....	1,000,000	63,000	Dec. 23, 1919.
Inspiration Consolidated Copper Co.....	62,214,806	91,654,000	Nov. 28, 1919.
Iron Cap. Copper Co.....	2,000,000	2,391,000	Dec. 28, 1919.
Isle Royale Copper Co.....	8,396,458	5,522,000	Dec. 20, 1919.
Kennecott Copper Corporation.....	*45,995,415	31,822,619	*Dec. 1, 1919.—(Combined Kennecott and Beatson mines).
Braden Copper Co. mines.....	219,358,227	154,811,000	Dec. 2, 1919.
Magna Copper Co.....	20,000,000	9,034,798	
Mason Valley Mines Co.....	2,161,403	2,969,000	Dec. 11, 1920.
Miami Copper Co.....	21,964,026	25,288,000	
Mohawk Mining Co.....	6,570,000	7,070,822	
Mountain Copper Co. (Ltd.).....	1,416,000	1,829,000	
Mass. Consolidated Mining Co.....	1,661,688	1,490,000	
Nevada Consolidated Copper Co.....	110,137,000	75,998,000	
New Cornelia Copper Co.....	22,830,210	21,975,000	
North Butte Mining Co.....	9,757,377	7,944,000	
Old Dominion Co.....	12,000,000	11,615,000	
Osceola Consolidated Mines Co.....	12,579,013	12,753,918	
Penn Mining Co.....	3,815,000	2,531,446	
Pittsmtont Copper Co.....	8,219,100	4,166,590	
Ray Consolidated Copper Co.....	127,417,291	84,187,300	
Superior Copper Co.....	598,459	584,000	
Tennessee Copper & Chemical Co.....	3,407,400	14,800,000	
United Verde Copper Co.....	25,000,000	48,426,748	
White Pine Mining Co.....	1,522,975	*1,005,000	*Dec. 20, 1919.—Not operating in 1913.
Wolverine Copper Co.....	1,576,000	2,176,199	
Total.....	1,503,831,852	1,450,972,205	

(Whereupon at 12.30 p. m. the committee adjourned.)

ALUMINUM COMPANY OF AMERICA CASE

INVESTIGATION OF THE BUREAU OF INTERNAL REVENUE

WEDNESDAY, JANUARY 21, 1925

UNITED STATES SENATE,
SELECT COMMITTEE TO INVESTIGATE THE
BUREAU OF INTERNAL REVENUE,
Washington, D. C.

The committee met, pursuant to adjournment, at 10 o'clock a. m., in the Senate Finance room, Senator James Couzens presiding.

Present: Senator Couzens.

Present also: L. C. Manson, Esq., of counsel for the committee; Mr. L. H. Parker, chief engineer for the committee; Mr. C. Thomas, investigating engineer for the committee; and Mr. James M. Robins, assistant engineer for the committee.

Present on behalf of the Bureau of Internal Revenue: Mr. C. R. Nash, assistant to the Commissioner of Internal Revenue; Mr. Nelson T. Hartson, Solicitor, Bureau of Internal Revenue; Mr. James M. Williamson, office of Solicitor Bureau of Internal Revenue; Mr. S. M. Greenidge, head engineering division, Bureau of Internal Revenue; and Mr. John A. Grimes, chief metals valuation section, Bureau of Internal Revenue.

Mr. MANSON. I desire at this time, Mr. Chairman, to call the committee's attention to the amortization determination on the claim of the Aluminum Co. of America.

I was informed yesterday that the matter of the Aluminum Co. of America is before the solicitor's office. I called up the solicitor's office on the telephone. Mr. Hartson did not happen to be there, and I asked his secretary to ascertain whether or not this case was before the solicitor's office and, if so, whether any question with regard to amortization was being considered by the solicitor's office. She later called me and told me that the case was before the solicitor's office but that no question arising out of the amortization determination had been referred to the solicitor. So I take it that that matter, the question of the amortization allowance to the Aluminum Co. of America, is not before the solicitor's office.

The CHAIRMAN. In that connection, I would like to ask what is the number of the agreement that you enter into with the taxpayers?

Mr. HARTSON. We call it under the 1921 act, the 1312 agreement. Under the 1924 act, it is the 1006 agreement. Those are the sections of the law which authorize the agreement to be entered into.

The CHAIRMAN. It was my understanding, from the hearings before the committee last spring, that the case of the Aluminum Co. of America was closed under agreement 1312?

Mr. HARTSON. That is not the case.

The CHAIRMAN. There was a statement made in the record, I think, and yet I am relying absolutely on my memory, that all cases in which Mr. Mellon was interested were closed before he entered the Treasury Department.

Mr. HARTSON. The Senator is misinformed about that, because that is not the fact, and I have no recollection of the record stating that all of the companies in which Mr. Mellon was interested were closed before he came into the Treasury Department. The Gulf Oil Company case was closed under circumstances that were brought out before the committee last spring, but that was the only one closed before he came in, so far as I know.

The CHAIRMAN. I thought the case of the Standard Steel Car Co. was closed, and that the representative of the Standard Steel Car Co. appeared before the committee and expressed Mr. Mellon's desire to have them all closed before he became Secretary of the Treasury.

Mr. HARTSON. I think it was his desire that they all be closed before he came into the department, but no doubt the status of some of the cases of the companies in which he was interested did not permit of their being closed in a very short time.

The CHAIRMAN. I just wanted to get that clearly in my mind, because I was under the impression that this case was closed.

Mr. MANSON. I had the same impression, based upon some hearsay statements that have been made to me; from what source I do not know. I therefore requested the engineers to ascertain the fact. They could not find the agreement in the records. I wrote to Mr. Nash requesting a copy of the agreement, and have a letter from him stating that there is no such agreement.

The original claim in this case for amortization was for \$6,852,697.36. This claim was based upon a flat 25 per cent of the war expenditures, and was not made in accordance with the regulation, and was rejected by the bureau for that reason. The taxpayer then filed a revised claim for \$18,124,339.28. Upon this the unit made an allowance of \$15,151,840.92.

The CHAIRMAN. It would have been better to have accepted the taxpayer's original claim, would it not?

Mr. MANSON. The taxpayer protested this allowance and filed a final claim for \$18,268,435.82, upon which a final allowance was made of \$15,589,614.39.

It is difficult for us to approximate what we consider a proper allowance to have been, for the reason that we take the position that there was no evidence before the bureau when this determination was made which was sufficient to sustain any determination at all. We are able to point out objections to certain items. Other items, as shown by exhibits, are passed over, for the reason that there is not sufficient evidence in the record upon which to base a specific objection. But we feel safe in saying that of the \$15,589,614.39, at least \$6,500,000 is an overallowance.

The amortization was determined upon the same basis as was applied in the United States Steel Corporation Case, namely, by comparing the plant capacity—the war capacity, of the plant—with the average of actual production for 1921, and estimated production for 1922 and 1923.

The CHAIRMAN. Did they have the actual production for 1921?

Mr. MANSON. Yes; they had the actual production for 1921.

The facilities of the taxpayer upon which amortization was claimed are grouped into two classes--those that are known as balanced plants, and those that are considered as unbalanced plants. The balanced plants are that portion of the facilities which are in 100 per cent use when the production is equal to the estimated capacity. The unbalanced plants are those plants which are apparently considered to have been not in use at all, or in so small a percentage of use that they are not considered in the estimated capacity of the taxpayer.

The amortization on the balanced facilities was determined to be 44 per cent of the cost, the value in use being determined to be 56 per cent of the cost.

Our first objection to this allowance is, that for purpose of determining value in use, according to this method, it was necessary for the bureau to have before it the production figures which could be made the basis of the computation. We maintained that the burden was upon the taxpayer, if it sought amortization based upon a percentage in use, to furnish such information as would make the computation of such a percentage possible.

This final determination was made in June, 1923. At that time the production for the year 1922, and for at least several months of 1923 could have been ascertained. So far as appears from the record, no attempt was made to ascertain the actual production figures.

The matter has not as yet been disposed of; that is, I mean the entire case has not as yet been closed, although the amortization features of the case appear to have been disposed of, yet, there is nothing in the record to disclose the production for 1923, which can now be ascertained; nor does it appear from the record that any attempt has been made upon the part of the bureau to secure the production figures for 1923.

The CHAIRMAN. Does that also apply to 1922?

Mr. MANSON. Yes; that applies to 1922 also.

Your counsel attempted to secure this information. Believing that the actual production figures, as well as expenditures for capital improvements, would be shown by the annual reports of the Aluminum Co. of America, Mr. Davis wrote to the president of the Aluminum Co. of America on December 5, asking for copies of the annual reports of the company to its stockholders for the war and postwar years.

In reply to that letter, Mr. Davis received a letter, which is as follows:

ALUMINUM COMPANY OF AMERICA,
New York, N. Y., December 15, 1924.

Mr. EARL J. DAVIS,
Counsel Senate Committee for Investigation Bureau of Internal Revenue,
United States Senate.

DEAR SIR: We acknowledge receipt of yours of December 5 asking for our annual reports.

The Aluminum Co. of America, having only a few stockholders, does not publish its annual reports. If you will let us know what particular information your committee desires for its uses in the investigation it is conducting on the income-tax law, we will be glad to see what can be done toward furnishing it.

Yours, very truly,

ARTHUR V. DAVIS, *President.*

On December 29, 1924, I wrote Mr. Davis as follows:

DECEMBER 29, 1924.

Mr. ARTHUR V. DAVIS,

President, Aluminum Co. of America, New York, N. Y.

DEAR SIR: In regard to your letter of the 15th instant, addressed to Mr. Earl J. Davis, in which you kindly offer to furnish us with information in regard to your company necessary for our work, will you please furnish us with the following for each year from 1913 to 1923, both inclusive.

- (a) Total production of bauxite (Company and all subsidiaries).
- (b) Total production of Aluminum (Company and all subsidiaries).
- (c) Total capital expenditures (for plant and equipment).
- (d) Total capital expenditures (real estate).

We trust this information is readily available and we would appreciate it greatly if you could furnish same promptly.

Very respectfully,

L. C. MANSON,

*Counsel Senate Committee for
Investigating Bureau of Internal Revenue.*

I have received no answer to that letter.

Mr. HARTSON. Mr. Manson, what was the date of that letter?

Mr. MANSON. December 29. I have not even received an acknowledgement of the receipt of it.

Being unable to ascertain the facts which are necessary before any determination of amortization can be made, we have resorted to such information as is available for the purpose of determining what the indications are as to whether or not this allowance is a proper one.

We find in the claim of the Aluminum Co. of America for amortization, the statement that approximately 5 tons of bauxite are required to manufacture 1 ton of aluminum. From sources indicated in our exhibits, principally the statistics published by the United States Geological Survey, we have ascertained that the consumption of bauxite by the Aluminum Co. of America for the eight-year period preceding 1922, has been approximately 81.4 per cent of the total production of bauxite in this country. Applying that percentage to the total production of bauxite in 1922, as shown by the United States Geological Survey statistics, we estimate the consumption of bauxite by the Aluminum Co. of America in 1922 to have been 252,000 tons, and we estimate the consumption of bauxite in 1923 by the Aluminum Co. of America to have been 425,000 tons.

Applying to those figures the ratio of 5 tons of bauxite to 1 ton of aluminum, we estimate the production of aluminum by the Aluminum Co. of America in 1922 to have been 138,600,000 and in 1923 to have been 234,000,000 pounds.

The claim of the Aluminum Co. of America for amortization is based upon the theory that the capacity of the plant was 146,000,000. In other words, applying those terms to the plant capacity, the 1922 production would be very close to the plant capacity, and the 1923 production would be away beyond the plant capacity used as the basis for determining amortization of this matter.

The CHAIRMAN. What was the production used by the bureau in determining amortization in 1922 and 1923?

Mr. MANSON. I am just coming to that.

On page 68 of the report of the bureau's engineer who computed the amortization determination in this matter appears the follow-

ing—I can state these facts more briefly in the language of the engineer than I could attempt to summarize them myself:

In considering the value in use of the taxpayer's balanced facilities on the basis of the three postwar years, it will be necessary to take into consideration the average of the actual and the estimated annual production of aluminum for the years 1921, 1922, and 1923. This annual average amounts to 87,000,000 pounds of aluminum.

On page 60 of this report it will be noted that the bureau's engineers estimated that the taxpayer's capacity production was 146,000,000 pounds of aluminum per annum. Thus, with no allowance being made for stock on hand, there would be established a ratio of 87:146 or 59½ per cent.

The taxpayer on page 39, volume 1, of the schedule of amortized property, claims the following production of aluminum for the three postwar years.

	Pounds
Sales for the three postwar years.....	300,000,000
Amount proposed to be used from stock.....	40,000,000
<hr/>	
Total amount to be produced.....	260,000,000
Average total annual production.....	87,000,000

An average of 87,000,000 multiplied by 3 would be 261,000,000. The taxpayer claims for capacity production 156,000,000 pounds of aluminum per annum.

Mr. HARTSON. Is that 156,000,000 or 146,000,000?

Mr. MANSON. It should be 146,000,000.

Mr. PARKER. No; the taxpayer's claim is 156,000,000.

Mr. MANSON. Yes; the taxpayer's claim is 156,000,000. The bureau's determination of their capacity was 146,000,000.

The taxpayer's claim for capacity production being 156,000,000 pounds of aluminum per annum, establishes a ratio of 87:156 or 55.7 per cent. The taxpayer, however, claims 59 per cent as value in use and 44 per cent for amortization.

At this point, I call attention to the fact that an error has been made, amounting to 10,000,000 pounds in capacity.

I would further call attention to the fact that that error is overcome by a compensating error, which brings the bureau's determination back to the taxpayer's percentage of value in use claimed, after the bureau has determined that a part of the taxpayer's reductions from production are not to be allowed. In other words, after the bureau determines that the taxpayer is not entitled to deduct all of this production that it intends to take from stock, they still get the same result that the taxpayer claims, by making another error of computation.

If no stock had been drawn upon, the taxpayer would have had to produce, according to its own figures, 300,000,000 pounds of aluminum in the three postwar years, or an average of 100,000,000 pounds per annum. Had this been the case it would have established a ratio of 100:156 or 64 per cent value in use upon the balanced facilities.

The bureau's engineers do not consider that it gives the correct indication of what the taxpayer's normal output would amount to, by reducing "output" at the expense of stock on hand, as it has done in 1921 and proposes to do in the years 1922 and 1923. The bureau's engineers do, however, recognize that the taxpayer's average annual normal output will be lessened for some time to come by throwing upon the market salvage of large quantities of aluminum which was manufactured during the war time. They are willing to take this fact into consideration as well as recommend a reasonable allowance for the reduction of the taxpayer's aluminum stock.

It is recommended that a reduction of 10,000,000 pounds of aluminum from the taxpayer's stock be taken into consideration as well as an additional 5,000,000 for the taxpayer's reduced output caused by salvage products and

foreign competition, this reduction allowance to be spread over the three post-war-year periods.

I wish to interject at this point that it will be noted that if you were to deduct 15,000,000 pounds from the 300,000,000 pounds to be produced during the three years, it would leave you 285,000,000 pounds, or an average of 95,000,000 pounds per year. That would be taking the 300,000,000 pounds estimated by the taxpayer and deducting from it the 15,000,000 pounds which the bureau engineer here holds they are entitled to deduct, instead of the 40,000,000 which they deducted, and that will give you a result of 285,000,000, instead of 260,000,000.

The CHAIRMAN. Just what difference does that make in dollars and cents in the tax?

Mr. MANSON. It will make a difference of about a million dollars, when we get through here.

For value in use of the taxpayer's balanced facilities there will be established the following ratio:

Total estimate of normal output for three postwar years in pounds of aluminum.....	201,000,000
Reduced output allowance.....	15,000,000
Annual estimate of three postwar-year output.....	246,000,000
Average annual three postwar-year output.....	82,000,000

I would call attention to the fact at this point that, after determining they were not entitled to deduct 40,000,000 from an output of 300,000,000, but that they were entitled to deduct 15,000,000, this engineer actually deducts 39,000,000 of the 40,000,000 and then deducts the 15,000,000 on top of it, arriving at a result of an annual estimate for the three years of 246,000,000 instead of the 285,000,000, which would be the mathematical result of deducting his 15,000,000 from his 300,000,000, so he gets an average for the three years of 82,000,000 instead of 95,000,000.

Then he determines the ratio of annual output to production capacity to be 82 divided by 146, or 56.16 per cent.

It will be noted that a part of this difference, due to the second error, is overcome in ascertaining the percentage by using a capacity of 146,000,000 instead of 156,000,000.

The bureau's engineers recommend that for the balanced facilities the taxpayer be allowed 56 per cent of the estimated cost upon these facilities as "Value in use" and 44 per cent as amortization.

The engineer then constructed a chart, beginning back in the pre-war period, by the use of which he attempted to estimate what the production of the Aluminum Co. of America would have been in 1921, 1922, and 1923, if there had been no war.

I am unable to figure out exactly his course of reasoning, but his results are an aggregate of 293,000,000 pounds, or an average of 97,800,000 pounds.

It will be noted that this result is quite close to what his results would have been if he had not made this error in computation, and he rejects this figure entirely. His purpose in making it is not evident because he proceeds to use the 87,000,000 arrived at as the result of these erroneous computations. The difference in the tax by reason of that error is approximately \$1,000,000.

The CHAIRMAN. In favor of the taxpayer?

Mr. MANSON. In favor of the taxpayer.

There is one other point in connection with this case to which I wish to call the committee's attention, and that is the amortization that is allowed on the ocean fleet. The taxpayer had under construction in 1918 two steamships and two barges, upon which they had made very substantial payments in 1918. The taxpayer finished the construction of these vessels and they went into use.

The CHAIRMAN. When?

Mr. MANSON. In 1920.

The taxpayer claimed 75 per cent amortization on these ships. We learned from the Shipping Board that these ships have been sold. There is nothing in the records in the Income Tax Unit which indicates that they have been sold or which shows what was received for them.

If the salvage value of these ships—that is, what the Aluminum Co. of America received for these ships—exceeded 25 per cent of their cost, it is very clear that they are not entitled to 75 per cent amortization upon them, as the amortization should be computed by, in the first place, determination of depletion on the ships during the period that they were in use by the Aluminum Co. of America, and then deducting from the depreciated value what the Aluminum Co. of America actually received.

The CHAIRMAN. Have you any information as to when those ships were sold?

Mr. MANSON. They were sold in 1923.

The CHAIRMAN. Have you any figures as to what they were sold for?

Mr. MANSON. No, sir; we have not those figures. I do maintain, however, that, as in the case of the production figures, the bureau can make no determination, no sound determination, and no valid determination of any sort, without this kind of information.

I would also call the committee's attention to the fact that, in determining amortization of those ships, the engineers first came to the conclusion that the Aluminum Co. of America, at the conclusion of the war, should have canceled the contract, that the amounts that they had paid on the ships did not warrant the completion of them, and they allowed them 100 per cent of what had been paid in 1918, 15 per cent contractor's profit, and about 15 per cent damages, as the amount to be amortized.

The CHAIRMAN. When did the engineer come to that conclusion; at what date?

Mr. MANSON. That conclusion was arrived at in 1921.

The taxpayer objected to that, and the final determination is arrived at by allowing them 100 per cent of the 1918 charges, and arbitrarily allowing them 50 per cent of the 1919 charges, and this is done without any apparent reason. The 50 per cent is arrived at without any basis being stated at all, and the only apparent reason is that it was necessary to satisfy the taxpayer. It makes a difference of something over \$200,000.

The CHAIRMAN. In the tax?

Mr. MANSON. No; in amortization. It would make a difference of at least \$60,000 in taxes.

The CHAIRMAN. Your contention is, then, that before they settled this total amortization allowance, the bureau should have determined what became of the ships, and those other elements that you have referred to?

Mr. MANSON. Yes. My contention in this matter is that there is not sufficient information before the bureau.

The CHAIRMAN. Seventy-five per cent was what was claimed by the taxpayer?

Mr. MANSON. Yes.

The CHAIRMAN. And 75 per cent is what was allowed by the bureau?

Mr. MANSON. On the boats?

The CHAIRMAN. Yes.

Mr. PARKER. No.

Mr. MANSON. No. They allowed 100 per cent of the 1918 charges and 50 per cent of the 1919 charges on the boats; but I take the position that as to the entire claim the burden was upon the taxpayer to furnish the bureau with such information as would enable it to determine the percentage in use, if that were the theory upon which amortization was to be determined.

I have the same objection to the determination of amortization upon that theory as I urged in the case of the United States Steel Corporation. I maintain in this case, as I did in that case, that the proper method of determining it is by allocating the particular property upon which it is claimed and determining whether or not that property is useful to the taxpayer in its business during a reasonable peak period.

The CHAIRMAN. Were there engineering examinations made of this property after the claim for amortization was made?

Mr. MANSON. Yes; there were engineering examinations made of this property after the claim was made; but, unlike the United States Steel Corporation case, there appears to have been no examination made for the purpose of determining whether the property was actually useful to the taxpayer in its going business.

The CHAIRMAN. In other words, on that particular item they took the basis of the taxpayer's claim?

Mr. MANSON. Yes. There is no attempt by the bureau to gather evidence for a determination upon any theory other than the percentage-in-use theory, and there is no evidence in the bureau to make a computation in accordance with that theory.

The CHAIRMAN. In presenting this case, Mr. Manson, have you gone over the records of the earlier hearings of this committee, where complaint was made to the committee about the settlement of the case of the Aluminum Co. of America?

Mr. MANSON. I knew that that complaint was made to the committee about this settlement. I read that record last summer. In presenting this case, I have not that record in mind.

The CHAIRMAN. You do not know, then, whether you have covered all of the complaints that were made at that time or not, do you?

Mr. MANSON. No; I do not.

The CHAIRMAN. I think you might look that up, so as to make a thorough job of it.

Mr. MANSON. Yes, I will. I understand the engineer did have that record in mind at the time he investigated the case.

Mr. PARKER. I read the record about a week ago.

The CHAIRMAN. Mr. Parker, do you think you have covered the ground?

Mr. PARKER. I think we have covered the ground in a general way, yes, sir; Mr. Chairman. By the way, it was stated there the very thing that we brought up here in the beginning about the 1312 agreement. Mr. Whitney, the engineer in this case, made the statement with regard to various phases of this matter, and the figures agree with the figures that were given here. It was rather general, and not specific. I think we have covered that.

Mr. HANSON. I wish to offer in the record now our Exhibits A to F, together with the report of Mr. Thomas, the engineer who made the investigation of this case, which is approved by Mr. Parker, the chief engineer for the committee, as Exhibit G. I will furnish the bureau with copies of those.

The CHAIRMAN. Does Mr. Hartson know why this case is before the solicitor's office now?

Mr. HARTSON. Only in a general way, and when I returned to my office last night my secretary informed me that Mr. Manson had phoned to inquire about the cause of the case being in the office. I had no opportunity to read the memorandum transmitting the case to the office in which was set forth the request for advice, but I understand that it is there on the question of the effect of the affiliated status of the group of companies in the Aluminum Company of America, on the company inventories, as to whether intercompany transactions should be ignored and the inventory of the affiliated group should be used. I have not the exact point in mind, because I did not examine it, but Mr. Manson is correct in saying that the case was not referred to the solicitor's office for any advice on the amortization claim.

The CHAIRMAN. When Mr. Hartson refers to the affiliated subject, I wish to draw counsel's attention to the fact that I have heard a number of complaints about the manipulation—and I do not imply anything improper at all—in connection with the affiliating of these companies so as to get lower taxes. In some cases I understand that the affiliating of these companies in tax matters has been objected to by taxpayers because of the fact that it raises their taxes, and in other cases it has been urged because of the lowering of their taxes. I would like to have counsel look into that because I have no information as to how that may work. I would suggest that counsel look into that phase of the work to see whether there have been any such things as have been charged.

Mr. MANSON. I would like to say, Mr. Chairman, that that whole subject is under investigation.

The CHAIRMAN. We will adjourn here until 10.30 o'clock to-morrow morning.

(Whereupon, at 12.05 o'clock p. m., the committee adjourned until to-morrow, Thursday, January 22, 1925, at 10.30 o'clock a. m.)

INVESTIGATION OF THE BUREAU OF INTERNAL REVENUE

TUESDAY, JANUARY 27, 1925

UNITED STATES SENATE,
SELECT COMMITTEE TO INVESTIGATE THE
BUREAU OF INTERNAL REVENUE,
Washington, D. C.

The committee met at 11 o'clock a. m., pursuant to call of the chairman.

Present: Senators Couzens (presiding), Watson, Ernst, and King.

Present also: Mr. L. C. Manson, of counsel for the committee, and Mr. Edward T. Wright, investigating engineer for the committee.

Present on behalf of the Bureau of Internal Revenue: Mr. C. R. Nash, assistant to the Commissioner of Internal Revenue; Mr. Nelson T. Hartson, Solicitor Bureau of Internal Revenue; Mr. James M. Williamson, attorney, office of Solicitor Bureau of Internal Revenue; Mr. S. M. Greenidge, head engineering division Bureau of Internal Revenue; and Mr. Emil L. Koenig, appraisal engineer Bureau of Internal Revenue.

Mr. HARTSON. I have, Mr. Chairman, a statement to make with regard to the Aluminum Co. of America. It is complete, with the exception of the criticism which counsel made to the use of the so-called formula in determining the value in use of the facilities of the Aluminum Co. of America.

The CHAIRMAN. Have you found the actual production during those years?

Mr. HARTSON. Yes; those have been found. I would like to ask Mr. Manson whether he has them.

Mr. MANSON. We got them yesterday.

Mr. HARTSON. You got them yesterday?

Mr. MANSON. Yes.

The CHAIRMAN. Does counsel desire to read that into the record?

Mr. HARTSON. I do, Mr. Chairman.

Referring, Mr. Chairman, to the amortization allowance in the case of the Aluminum Co. of America, counsel has criticized the bureau's action in four particulars:

(1) The use of estimated figures showing the production of the company for the years 1922 and 1923.

(2) Errors by the bureau's engineers in the calculations of the company's capacity.

(3) The allowance of amortization on an ocean fleet of the taxpayer.

(4) The failure to make an examination to determine whether the property on which amortization was allowed was actually useful to the taxpayer in his going business.

As to the first criticism above set forth, that estimated production figures, for 1922, and 1923 were used instead of actual production figures, attention is directed to the fact that the field examination of the company's property was made by the bureau's engineers in the latter part of 1921; that the first report was made early in 1922; that a supplemental report was made in May, 1922, and that final allowance of the claim was made in June, 1923. It is apparent, therefore, that the actual production figures of the company for 1923 were not available when the final report was made nor is there any evidence that the figures for 1922 were then available.

The CHAIRMAN. Do your mind being interrupted at this point?

Mr. HARTSON. Not at all, Senator.

The CHAIRMAN. Why was it not available for 1922 in June, 1923?

Mr. HARTSON. Why was 1922 not available in June, 1923?

The CHAIRMAN. Yes. That is when your final determination was made.

Mr. HARTSON. The final determination was made in June, 1923. The reports of the engineer had been made prior to that time, the first one in January, 1922, and the second one in May, 1922. The statement that I have just made is that there is no evidence in the files to show that the actual figures in June, 1923, were available for 1922. I think it is possible; in fact, it strikes me as being probable, Mr. Chairman, that they were available somewhere, but the chances are that they were not in the files.

To postpone the determination of this claim until the actual production figures for 1923 were available would have required the withholding of action on the case until some time in 1924, and to have the bureau's action consistent, a similar postponement would have been required in a large number of amortization cases which were then pending and which had to be determined as rapidly as possible if the tax liability of these taxpayers was to be arrived at within any reasonable time. The use of estimated production figures in this case for the years 1922 and 1923, therefore, appears to have been justified.

It has not been shown by actual production figures of the company that the production for these years as estimated by the bureau's engineers was wrong, but the allegation that there has been an over-allowance of amortization in this case is founded entirely upon an estimate of the company's production prepared by the committee's engineers. This estimate is based wholly on statistics for the production of aluminum in the entire United States and not upon the production figures of this company, and it can not be admitted that such an estimate is entitled to great weight. In addition thereto certain gross errors in computation have been made by the committee's engineers, or by counsel, which render their estimate entirely unreliable. The estimate is computed on the basis of a consumption of bauxite by the taxpayer amounting to 252,000 tons in 1922 and 425,000 tons in 1923. Applying to those figures a ratio of five tons of bauxite to one ton of aluminum, the estimated production of the company in 1922 was given as 138,600,000 pounds and in 1923, 234.

000,000 pounds. A correct computation of the figures given, using a ton of 2,240 pounds, results in a production of 112,896,000 pounds for 1922 and 190,400,000 pounds for 1923. Using a ton of 2,000 pounds brings an even smaller result. It is obvious, therefore, that either the committee's counsel or its engineers were in error in the actual computations of their estimate, to say nothing of the fundamental factors used.

The CHAIRMAN. Does not counsel think it is fair to consider the fact that an effort was made to get the actual production before this criticism was made?

Mr. HARTSON. Oh, absolutely, Senator. The only point I am trying to make here, and I think it is a proper one, is that the results of the computations made by counsel, which I concede were the only basis on which you could make an estimate at the time, were misleading; but I make no criticism of an effort on the part of counsel to make some showing as to what the result was and the method used by the bureau.

That the estimate of the committee's engineers is fundamentally wrong is fully demonstrated by taxpayer's actual production figures which have recently been furnished the bureau. They are as follows:

A request was made in writing—I have not a copy of the letter here—after this case was called up before the committee the last time, within the last week or 10 days, upon the company to produce to the bureau the actual production figures, and it was in compliance with that request that we secured the actual production figures which the committee is now possessed of. We got them three or four days ago, did we not, Mr. Williamson?

Mr. WILLIAMSON. Yes, sir.

Senator ERNST. You say those figures are now in the possession of the committee?

Mr. HARTSON. Yes.

Mr. MANSON. We got them yesterday.

Mr. HARTSON. The committee has them. We got them three days ago. It was not longer ago than that. We did not have them when the case was first referred to here.

Mr. MANSON. We have had no opportunity to make a computation on the basis of actual production.

Mr. HARTSON. The actual production figures for 1921 are 54,531,996; for 1922, 73,632,867; and for 1923, 128,658,222.

On comparison it will be seen that the estimate of the committee's engineers for 1922 is nearly 90 per cent in excess of actual production and for 1923 about 80 per cent in excess of actual production. As will be shown later the estimate of the bureau's engineers for this production was substantially accurate, being within 3.5 per cent of the average annual production for these years.

The actual production figures of the company, as reported to us, are 3.5 per cent in excess of the annual average production which was estimated by the bureau's engineers in making the amortization allowances.

In the second general criticism by counsel it is alleged that the bureau's engineers made certain gross errors in the calculation of production and capacity of the taxpayer which also resulted in an

an overallowance of amortization. The chief points of criticism in this respect were that the bureau's engineers had estimated an annual postwar production of 97,000,000 pounds, but in making their calculations, had through error, substituted taxpayer's figures of 87,000,000 pounds, making a difference of 10,000,000 pounds in favor of the taxpayer; that the engineers also made a compensating error by using a capacity of 146,000,000 instead of 156,000,000 pounds as claimed by the taxpayer. An examination of the computation of the bureau's engineers reveals that they were not in error.

As to the production figures, the computations of the engineer included the company's production figure for 1921, and his own estimated figures for 1922 and 1923. They are as follows:

	Pounds
1921, company's production.....	60,000,000
1922, estimated production.....	98,200,000
1923, estimated production.....	103,000,000
Total for 3 postwar years.....	261,000,000

In round numbers, 261,000,000 pounds.

Average postwar year, 87,000,000 pounds.

In estimating the production for 1922 and 1923, the bureau's engineer made an estimate for 1921, but the estimated figure for 1921 was then discarded and the company's figure substituted; that is, the company's actual production figure. Using only the estimated figures for the three years, the average annual production was 97,000,000 pounds, but using the company's production figures for 1921 and estimated production for 1922 and 1923 the result of 87,000,000 pounds was arrived at, and this was the figure used by the engineer.

Senator ERNST. By whose engineer?

Mr. HARTSON. By the engineer of the bureau.

However, from this 87,000,000 pounds a deduction of 5,000,000 pounds per year was taken because of the use of the taxpayer of certain stock in inventory which had been manufactured in years prior to 1921 but had been carried over in inventory from the previous years. This left the average annual production as finally arrived at by the bureau engineer—82,000,000 pounds.

In connection with this deduction—and I might say right here, parenthetically, that, according to the actual production figures which were submitted to us recently, had that subtraction of the 5,000,000 pounds which the bureau engineer thought represented the accumulated surplus of stock due to manufacture during the war years, and, therefore, it being on hand, it should not be computed in the production for the postwar years; had we left that out, had we not taken the 5,000,000 pounds out, his estimated figures for the three postwar years would have been only very slightly in excess of the actual production figures, and by taking out the 5,000,000 pounds, he was, as we have indicated, 3.5 per cent under the actual figures; his estimates were about 3.5 per cent under the actual figures.

Mr. MANSON. Is it not a fact, Mr. Hartson, that the actual production figures supplied by the company show that for the postwar years they had production in excess of 128,000,000 pounds and for

one of them in excess of 137,000,000 pounds and an average of 104,000,000 pounds, and the estimate of the bureau's engineer was an average of 87,000,000 pounds?

Mr. HARTSON. No; I think that is not a fact. I have just read the figures.

Mr. MANSON. Then they have furnished us with different figures than they furnished to you.

Senator ERNST. I suggest that you continue with your statement, Mr. Hartson.

Mr. HARTSON. I had just read the production figures, which, for 1922, are 73,632,867 pounds, and for 1923, 128,658,222.

The CHAIRMAN. Where did you get your figures from, Mr. Manson?

Mr. MANSON. If I remember right, the year 1919 shows 128,000,000 plus, the year 1920, 137,000,000 plus, and the year 1923, 128,000,000 plus.

Mr. HARTSON. You have used the years 1919 and 1920, which are not the years that the bureau has uniformly taken as the three postwar years.

Mr. MANSON. I have used the postwar years. That is what I am saying.

The CHAIRMAN. But you have not used the years that we have had under discussion here, Mr. Manson.

Mr. MANSON. No; I am talking now about the postwar period.

Senator WATSON. Where did you get your figures, Mr. Manson?

Mr. MANSON. From the company.

The CHAIRMAN. You are not dealing with the years that are before the committee. We are dealing with the same years as we had in the case of the United States Steel Corporation.

Senator ERNST. Go on, Mr. Hartson.

The CHAIRMAN. You may proceed.

Mr. HARTSON. In connection with this deduction for carried-over stock, counsel for committee charged that the engineers had at first rejected the claim of the taxpayer to deduct 40,000,000 pounds for the three years under consideration but afterwards had not only permitted the deduction of the 40,000,000 pounds but had allowed an additional deduction of 15,000,000 pounds.

As shown above this charge is not correct; the engineer having arrived at his estimated production figures through an entirely different method. I hope that that method which was used by the engineers is understood. It is true that both the engineer and the taxpayer arrived at a figure of 87,000,000 pounds, but it should be noted the engineer's figure represented production before the deduction of the 5,000,000 pounds for carried-over stock, whereas the taxpayer's 87,000,000 pounds represented production after the deduction of approximately 13,000,000 pounds for carrier-over stock. It is clear, therefore, that the two figures are the result of different methods, and that the bureau's engineer did not substitute taxpayer's figure for his own. A detailed statement of the engineer's method in arriving at his estimates is attached hereto as Exhibit A.

Counsel for the committee also alleges that the bureau's engineers made an error of 10,000,000 pounds in the capacity figures by using 146,000,000 pounds instead of the taxpayer's claimed capacity of

156,000,000 pounds. This allegation is not correct. Attention is called to the engineer's original report from which it will be noted that pages 53 to 60 and Tables 6, 7, and 8, a copy of which is attached hereto as Exhibit B, have been devoted to an explanation of the bureau's method of arriving at the estimated capacity of the taxpayer's facilities. On page 60 the statement is set forth, as a conclusion from the data discussed, that the capacity production of aluminum is 146,000,000 pounds. The allegations of error in this case are based on a misunderstanding of the calculations of the bureau's engineers, not on actual errors in the report.

The actual production figures of the taxpayer for the years 1921, 1922, and 1923 as recently furnished the bureau by the taxpayer, are as follows:

	Pounds
1921	54,531,996
1922	73,632,867
1923	128,658,222

That makes a total of 256,823,085 pounds production for the three postwar years, the three postwar years customarily used by the bureau.

It will be noted that the estimated production used by the bureau's engineers was 82,000,000 pounds or within 3.5 per cent of the actual average production for the three years.

Point 3 of counsel's criticism, involved the allowance of amortization on two steamships and two barges owned by the taxpayer. It is said by counsel that these ships were under construction in 1918; that they went into use in 1920 and were sold by taxpayer in 1923; that there was no record in the bureau of this sale and that no sound or valid determination of amortization could be made without this information. It is said further that taxpayer claimed 75 per cent amortization on its ships and that if the salvage value of these ships exceeded 25 per cent of their cost, taxpayer is not entitled to 75 per cent amortization.

Whether or not taxpayer claimed 70 per cent amortization is not material. The fact is that 75 per cent was not allowed on the cost of these ships. The total cost of the ships as shown by the engineer's report was \$2,516,931.40 and the total allowance for amortization was \$725,652.71 or a little less than 29 per cent of the cost.

With reference to the statement that a sound or valid determination of the amortization allowance on these ships could not be made without information as to their sale in 1923, the basis of such a statement is not comprehended. It would appear to be counsel's contention that prior to the final determination of the amortization allowance, there should have been another investigation by the bureau to determine whether any of the taxpayer's property had been sold, and, if sold, whether the price received was greater than the cost, after deducting therefrom depreciation and the proposed amortization. Then, if the sale price were greater than the residual value thus arrived at the amortization claim should be recomputed and as maller allowance granted. It is presumed that conversely counsel would argue that if the sale price was less than residual value as above calculated, the amortization allowance should be increased.

If such a practice had been adopted the delays in settling these cases would be interminable. In fact, it is difficult to see that they would have been settled. No sooner would a proposed allowance be determined than it would become necessary to make another investigation to find out whether the taxpayer had meanwhile sold any of his amortizable facilities and the investigations would be innumerable. It is obvious that there must be some date as of which examinations and investigations of a taxpayer's claim must cease, if a determination is to be made. In the present case there had been an examination of the taxpayer's property and several subsequent conferences and a further examination immediately prior to the allowance of the claim would appear to have been useless.

An inspection of the company's income tax return for 1923 with respect to the sale of these ships shows that not only were they not sold at a price in excess of the residual value as above described but they were sold at a considerably smaller price.

Senator KING. That is less than the difference between the \$700,000 and the \$2,000,000, plus the cost?

Mr. HARTSON. That is right.

Senator KING. I can not understand how there could be a deterioration of \$700,000 in so short a period.

Mr. HARTSON. The Senator will no doubt remember that sales of ships that cost very large amounts were made in the postwar years for a nominal consideration in many cases.

Senator KING. I know, but I am speaking on the question of amortization of \$700,000.

Mr. HARTSON. Yes. The amortization was based on what was estimated to be the value of the property after the war.

The CHAIRMAN. I think it was a rather small deduction, as a matter of fact, as compared with the experience of the Shipping Board?

Senator WATSON. Yes; the Shipping Board has not even been able to give them away.

Senator ERNST. Proceed, Mr. Hartson.

Mr. HARTSON. By reason of this fact the company made claim for a loss in its 1923 income tax return. The figures as shown in the return are as follows:

Original cost of assets, 1920	\$2,506,078.68
Less: Depreciation and amortization to date of sale.....	974,641.68
<hr/>	
Depreciated cost (that is, the difference).....	1,531,437.00
Sale price.....	240,000.00
<hr/>	
Net loss	1,291,437.00

If counsel's suggested plan of investigating this sale had been carried into effect it would appear that the company would have received a very much larger allowance for amortization than was actually granted.

The CHAIRMAN. If they had sold the property at a price in excess of what the bureau allowed for amortization purposes, they would have shown an increase in income and would have been taxed on that.

Mr. HARTSON. Yes; beyond any question; and by following the company's practice of returning it in the way they did, and taking into account their 1923 return with the amortization that had been

allowed for ships for earlier years, the result would be that the Senator's suggestion would have been brought about.

MR. MANSON. It does not make any difference how they would take the loss. They got the actual loss in two pieces or in two chunks.

MR. HARTSON. It makes all the difference in the world, because if they had a greater amortization allowance it would have been a deduction against the war income for the high tax years. The deduction in 1923 would not have anywhere nearly offset the advantage that they would have gained had they taken it up by way of amortization.

In further criticism of the allowance for the taxpayer's ocean vessels, it is said that the bureau first allowed 100 per cent of the amounts paid on the ships during 1918 plus 15 per cent contractors' profits and about 15 per cent damages; that subsequently after objection by the taxpayer, this allowance was arbitrarily changed to 100 per cent of the amounts expended in 1918 and 50 per cent of the amounts expended in 1919, and that this was done for no apparent reason other than that such action was necessary to satisfy the taxpayer.

In reply to this allegation it may be said that the bureau's engineer's report dated May 26, 1922, shows that the basis of the additional allowance of a part of the expenditures for 1919 was the fact that a contract had been let for the construction of these vessels in the year 1918 and that in that year \$380,422.21 had been expended on construction work. In addition thereto a large part of the material for the construction of these ships such as shafting, engines, condensers, pumps, piping, structural steel and other numerous items were either ordered by the contractor or were on the premises of the taxpayer in 1918, and although these items did not appear on taxpayer's books until 1919 the obligation for their payment had been actually incurred in 1918. This fact was not known when the first engineer's report was submitted, but was brought out in subsequent conference with the taxpayer.

The CHAIRMAN. That is analogous with the Berwind-White case, is it not?

MR. HARTSON. That is not the situation, Senator, and I have already criticised that sentence because it is a little misleading. The point that is made in that sentence does not raise the question of accruing commitments or amortizing commitments. The point here is that the—

Senator WATSON. What do you mean by "accruing commitments," Mr. Hartson?

MR. HARTSON. In the Berwind-White case, that the chairman has referred to, Senator Watson, the criticism that certain items, which had not actually been expended, such—

The CHAIRMAN. Commitments.

MR. HARTSON. Commitments—and we have used that term frequently and rather loosely, I think, sometimes—were permitted to be deducted as costs of the taxpayer in 1918, when, as a matter of fact, the money was not paid until 1919. That point is not raised here, and that sentence may mislead you, as it did me. The point that is made here is that the contract was a binding agreement in

1918, and these costs that did not appear on the company's books in 1918 and did in 1919, were not costs which we have allocated to 1918, but are costs which went to increase the 1919 allowance from 15 per cent as originally made in the first engineer's report, to 50 per cent in the second engineer's report.

The CHAIRMAN. In other words, the difference between this case and the Berwind-White case is that this material was actually on the ground and in course of construction, while in the Berwind-White case it was only a promise to pay.

Mr. HARTSON. Well, that would be the difference if the facts were just as the Senator presents them. My recollection of what the proof showed in the Berwind-White case is that a very large share of these deliveries had been made in 1918, and that the question was raised, whether, if they were properly chargeable and allocatable to 1918, and they had been accrued on the taxpayer's books in 1918, that permitted deductions to be made in that year or costs to be allocated to that year.

The CHAIRMAN. And counsel for the committee contended that that was not in accordance with the statute.

Mr. HARTSON. That is right.

The exact amount of the material delivered before December 31, 1918, and shown on the books in 1919 was not definitely known. The actual allowance on this account, was, therefore, limited to 50 per cent of the costs incurred prior to September 30, 1919, and not 50 per cent of the total costs for 1919. The figures are as follows:

Schedule of costs incurred

Date	Costs incurred	Percentage of total
1918	\$380,422.21	15.1
1919, from Jan. 1 to Sept. 30	690,461.00	27.5
Total costs to Sept. 30, 1919	1,070,883.21	42.6
Total costs incurred subsequent to Sept. 30, 1919	1,416,048.19	57.4
Total cost of steamers	2,486,931.40	100

Amortization allowance recommended

Total allowance of 1918 costs	\$380,422.21
50 per cent of costs, Jan. 1 to Sept. 30, 1919	345,230.50
Total amount recommended for amortization	725,652.71

Under the rulings of the bureau the allowance in question was conservati. In I. T. 2101, published in I. R. B. November 3, 1924, page 3, to which counsel for the committee adverted in the case of the United States Steel Corporation, it was said with respect to the denial of amortization on expenditures incurred subsequently to November 11, 1918:

This does not apply to cases where the taxpayer had carried such equipment or facilities to such degree of completion that it would have been an economic waste not to complete them or where amounts had actually been paid out or work progressed to such a state that good business judgment would have required carrying the contract to completion.

Applying that rule in the present case, it would appear that the taxpayer might reasonably be entitled to amortization of the entire costs instead of the limited amounts allowed in this case.

The statement, Mr. Chairman, with regard to the criticism of the method that was used in this case of determining the value in use of these facilities, which was also used in the United States Steel Corporation case, has been the subject of sharp attack by counsel for the committee, and that portion of the bureau's reply in this case which deals with that point I am not prepared to continue with. I would like to have an opportunity to-morrow, when I can assure the chairman that I will be prepared to finish.

INVESTIGATION OF THE BUREAU OF INTERNAL REVENUE

WEDNESDAY, JANUARY 28, 1925

UNITED STATES SENATE,
SELECT COMMITTEE TO INVESTIGATE
BUREAU OF INTERNAL REVENUE,
Washington, D. C.

The committee met at 10.30 o'clock a. m., pursuant to adjournment of yesterday.

Present: Senators Couzens (presiding), Watson, and Jones of New Mexico.

Present also: Mr. L. C. Manson, of counsel for the committee; Mr. L. H. Parker, chief engineer for the committee; and Mr. Raleigh C. Thomas, investigating engineer for the committee.

Present on behalf of the Bureau of Internal Revenue: Mr. Nelson T. Hartson, solicitor; Mr. James M. Williamson, attorney, office of solicitor; Mr. S. M. Greenidge, head engineering division; and Mr. W. S. Tandrow, appraisal engineer.

The CHAIRMAN. The absence of Senator Ernst and Senator King is due to the fact that the former is attending a meeting of the Judiciary Committee and the latter attending a meeting of the Committee on Naval Affairs.

Mr. HARTSON. Mr. Chairman, Mr. Nash is ill in bed to-day, so he will not be present at to-day's session.

The CHAIRMAN. Do you want to finish your statement this morning, Mr. Hartson?

Mr. HARTSON. Yes; Mr. Chairman.

The final criticism of counsel is the same as one of the criticisms in the case of the United States Steel Corporation, namely, that the taxpayer's property was not examined and compared in detail to determine the efficiency in use of the amortizable facilities, their comparative life, and their salvage value. The same reasons exist for the failure to make such an examination in this case as existed in that case, namely, that it was impracticable, that it involved more time and expense than the bureau could bestow upon it, that it would have involved an extreme hardship on many taxpayers, and that it would have been of doubtful value in producing additional revenue for the Government.

During the 5-year period subsequent to 1920, the bureau has examined approximately 5,000 claims for amortization, covering property located in every State in the Union and, in a limited number of cases, in foreign countries. Claims of the above character range from nominal sums to many millions of dollars, the deductions being rep-

resented by hundreds of thousands of items of property. The time required to make detailed examinations and comparisons of such items would be very great, and it is to be remembered that the examination of amortization claims was only a very small part of the work of the bureau for which there was available only a limited appropriation. To make the detailed examinations and comparisons suggested would require men experienced in each line of industry involved and, while the staff of the unit handling amortization has always been composed of engineers trained in analytical methods, it has not been possible to obtain men directly experienced in each line of industry, because of the several hundred industries involved. All major claims have been covered by a field examination based largely upon information submitted by taxpayers, but it has been impracticable to conduct detailed investigations, because of the limited number of men available for such work, and because conclusions had to be promptly reached in order to enable the bureau to arrive at the tax liability of these taxpayers.

To arrive at a valuation solely on the basis of conditions at a taxpayer's plant which would appear during an examination of only a few days would be unfair both to the taxpayer and to the Government, because of the very limited amount of information which could thus be obtained and because of the fact that the particular time of examination might be a period of extreme depression or of high activity in the business. Again, experience has shown that taxpayers generally do not welcome or cooperate in extended detailed investigations largely because the contributions of both time and money are nonproductive. The only proper way therefore to make the detailed examinations suggested would appear to be by arranging for investigations covering perhaps weeks or months which, in view of the existing appropriations and small engineering force, were not practicable.

During brief examinations, such as the engineers of the bureau have made, it is possible to translate ultimate postwar productions into general comparatives by observing the physical functions performed by groups of facilities or the productive labor employed to accomplish the production of a given unit. Because such a method produces reasonably correct results and neither burdens the Government nor the taxpayer with undue expense, it was adopted and has been followed.

In the practical application of this method it has been necessary to group plant operations for the reason that claims embrace thousands of major and minor amortized facilities and appurtenances. It is seldom possible to ascertain the exact extent of use of a particular item or machine over a long period by reason of the fact that production of operating records, even in the most progressive or advanced industries, do not reflect relative functioning of individual productive units. During the war, with labor shortages and urgent demands for delivery, detailed systems covering costs and operations were not regularly maintained. If such records were available, their value would be uncertain, owing to wide departure from usual lines of production entered into to meet demands for particular products necessary to prosecute the war. With the knowledge that detailed records are not available, it may be safely stated that the time and

cost of attempting to determine the exact value of each item of amortized property would have been unwarranted.

With reference to the solicitor's memorandum published as income tax ruling 2101, to which attention has been directed by committee's counsel, it is not believed that the writer intended that an examination and comparison was necessary of each machine, implement or other small facility on which amortization was being claimed, but that a reasonable application of the opinion should be made.

An idea of the time and expense involved in a detailed examination such as has been suggested by counsel may be formed by a brief reference to the work of valuing the railroads of this country, upon which the Interstate Commerce Commission is now engaged.

I understand that that examination, Mr. Chairman which is being made by agents of the Interstate Commerce Commission, is a detailed examination of each piece of property and a physical inspection of all of the assets of the railroads throughout the country.

The valuation act directing the commission to find the value of railroad property was passed in 1913. At the present time the work has been in progress 12 years and its completion will require a further 5 years. A total of 17 years will have elapsed in assembling all facts bearing upon property tentatively valued at \$20,000,000,000. Up to June 30, 1924, the commission had expended \$25,000,000 on valuation investigations. A further cost of \$5,000,000 will be incurred, bringing the total cost to \$30,000,000. Experience indicates that the total human effort will not be less than 12,000 man years. From a valuation standpoint and considering only such expenditures as have been borne by the commission, it will cost approximately \$1,500,000, or 600 man years, to find a value of \$1,000,000,000. If the Income Tax Unit had adopted or should adopt a method similar to that followed by the Interstate Commerce Commission, the determination of allowable amortization would extend over many years and would cost millions of dollars. Increased appropriations for the bureau would also have been necessary.

But the time and expense to the Government are not the only considerations against the adoption of such a plan. The delays involved and the uncertainty over the tax liability would have worked great hardship on many of the taxpayers. From the taxpayer's standpoint, it has always been desirable and the unit has been and is now being urged to submit final assessments in order to enable industries and business in general to arrange definite financial programs and to proceed with expenditures without being called upon at some indefinite future date to promptly meet the payment of large tax deficiencies which had accrued in prior years. In many cases taxpayers have reported that the settlement of their tax liability for past years was essential to their obtaining loans from the banks in order to carry on their business.

When the revenue act of 1921 became effective, the unit adopted the policy of measuring postwar use upon the basis of productive application of war facilities during the years 1921, 1922, and 1923. In recommendations submitted prior to the termination of the above period, it was necessary, owing to the absence of actual facts, to estimate certain production. To hold cases open for the sole pur-

pose of ascertaining actual production during the entire period would have resulted in the Government's losing vast sums of interest on taxes collected as the result of prompt determination. Although there may be a probability of error in some of the estimates, such errors from the Government's standpoint are compensated to a great extent and are largely offset by the use of the taxes actually collected on which there is no loss of interest such as would result from the failure to determine a deficiency. In explanation of this last statement, attention is directed to the fact that in the revenue act of 1918, under which the amortization claims arise, no provision was made for the payment of interest on deficiencies in taxes found by the bureau. It was not until the revenue act of 1921 that provision was made for the Government's collection of interest on deficiencies in taxes and this provision did not apply to deficiencies discovered under the revenue acts prior to the revenue act of 1921. (See section 250 (b), revenue act of 1921, and article 1001, regulations 62.)

The purpose of the amortization provisions of the law was to deal with a condition growing out of the war. Investigations such as proposed would be so completely removed from the circumstances of operation for war production that the purpose of the law would be obscured by changed conditions. During the postwar period entire amortized plants have been converted or rearranged to meet the demands of peace-time pursuits. Such changes occur at intervals to meet current demands, and in many cases records of alterations have not been made. Difficulty would be experienced not only in identifying the war facility, but it would be practically impossible to correctly estimate a precise value as of the date their use was discontinued on war production because of uncertain information in respect to depreciation or other losses occurring subsequent to the end of the war. Inequitable treatment would result through the confusion of losses to be covered by amortization with similar losses in the form of obsolescence, loss of useful value or depreciation. Avenues for misrepresentation would thus be opened which would enable taxpayers to claim postwar losses as amortization affecting high tax rates prevailing during war years.

This, Mr. Chairman, is a brief statement of the reasons why the bureau, in determining the amortization of taxpayers whose facilities were spread over the country, and whose expenditures for war purposes ran into the millions of dollars, used the average method, the formula which has been the subject of criticism here. What we have said, of course, applies to the use of the formula in other cases, and that closes the statement that the bureau wishes to make on the Aluminum Co. of America.

The CHAIRMAN. When you received the actual production of any of these industries which we have under investigation, have you attempted to check them or to verify them in any way?

Mr. HARTSON. These actual production figures that are submitted, Mr. Chairman, are submitted by the taxpayer as a part of his showing, it is ordinarily done under oath. I think, as a matter of practice, they are not checked against the books of the company to make certain that they are absolutely correct. We are dealing with reputable concerns, and we do take their sworn statements as being cor-

rect statements. Examinations occur in the field, and if there is any suspicion that has been aroused, I think there is a check made, but I believe I am safe in saying that, as a general practice, all of these production figures which are submitted by the taxpayers, under oath, are not verified in the field.

Attached to this statement, Mr. Chairman, there were exhibits A and B, which I desire not to have introduced in evidence, but to be attached as exhibits in the case.

(The exhibits referred to by Mr. Hartson are made a part of this record and are attached hereto, as follows:

EXHIBIT A

Detailed Explanation of Bureau's Method of Estimating Taxpayer's Production for 1921, 1922, 1923

TAXPAYER'S ESTIMATE FOR POSTWAR PRODUCTION

In its claim for production the Aluminum Co. of America has set forth in its schedule the following estimate:

	Pounds
Sales of aluminum for the year 1921.....	60,000,000
Sales of aluminum for the years 1922 and 1923.....	240,000,000
Total sales for the three postwar years.....	300,000,000
The amount of aluminum which it is proposed to sell from a total stock of 70,000,000 pounds in inventory	40,000,000
Total amount of aluminum which it is estimated will be produced in the above three war years.....	260,000,000
Average annual postwar production for the three years.....	87,000,000
The claimed capacity production is.....	156,000,000
The value-in-use of the facilities (which were used in producing the average annual postwar production, 87,000,000 pounds, based on the capacity for such production, 156,000,000) reduced to a per cent is.....	56

THE BUREAU'S METHOD OF ESTIMATING THE POSTWAR PRODUCTION

The bureau's engineers, who made the examination and wrote the amortization report on the amortization claim of the Aluminum Co. of America, made their investigation in the latter part of the year 1921. The total production of aluminum was not available but from a check of such production as was available and an estimate for December, 1921, it was decided that an allowance of 60,000,000 pounds for the 1921 aluminum production would be reasonable.

The method of arriving at the estimate for the years 1922 and 1923 production was to compute what the estimated production would have been from 1914 to 1923, inclusive. This estimate was based on the premises that conditions would remain normal during this period and each year's output would continue to increase over the previous year's output as it had continued to increase in the seven years preceding the above period. A full explanation is given in the original report from pages 60 to 67. The estimated normal production for each of the years 1921, 1922, and 1923, as given in table 11, page 62 A, is as follows:

	Pounds
Estimated production for 1921	92,300,000
Estimated production for 1922	98,200,000
Estimated production for 1923	103,000,000
Total	293,500,000

It will be noticed that the average of these three years amounts to 97,800,000.

Only the above estimated production for 1922 and 1923 were used by the engineers in their report. The actual figures were used for the year 1921.

org. 60,000,000 pounds. This is very clearly set forth on page 68 of the engineer's original report, which reads as follows:

"In considering the value in use of the taxpayer's facilities on the basis of the three postwar years, it will be necessary to take into consideration the average of the actual and the estimated annual production of aluminum for the years 1921, 1922, and 1923. This annual average amounts to 87,000,000."

"On page 60 of this report it will be noted that the bureau's engineers estimated that the taxpayer's capacity production was 146,000,000 pounds of aluminum per annum. Thus with no allowance being made for stock on hand, there will be established a ratio of 87,146 or 59½ per cent."

The following was the method of arriving at the 59½ per cent value in use:

	Pounds
Actual 1921 production.....	60,000,000
Estimated 1922 production.....	98,200,000
Estimated 1923 production.....	103,000,000
Total.....	261,200,000
Average of above three years.....	87,000,000

This estimated average annual production figure was reduced by 5,000,000 tons to allow for a certain amount of depletion of an excessive stock which the taxpayer had on hand due to war cancellations, etc. This reduced the engineer's average annual production to 82,000,000 pounds of aluminum, or for the total three years 246,000,000.

EXHIBIT B

TOTAL PRODUCTION CAPACITY OF THE TAXPAYER'S VARIOUS FACILITIES AS MEASURED BY THE HYDROELECTRIC HORSEPOWER AVAILABLE AT THE SMELTING FURNACES OF THE VARIOUS SUBSIDIARIES

In the analysis of the taxpayer's claim that it has a value in use of 56 per cent, based upon a total capacity of 156,000,000 pounds of aluminum output per year, the bureau's engineers have endeavored to find the number of hydroelectric horsepower available at the smelting furnaces of each of the several plants owned by the taxpayer and to make a determination of what its smelting capacity would be in pounds of aluminum smelted per annum. Under date of December 16, 1921, the taxpayer states its claim in a letter written by Mr. I. W. Wilson. This letter states certain claims concerning the total output in pounds of aluminum of the following plants: Badin, N. C.; Alcoa, Tenn.; Massena, N. Y.; Niagara plant 2, Niagara Falls, N. Y.; Niagara plant 3, Niagara Falls, N. Y.

This is more clearly set forth in a later part of this report under Table 9, in which the taxpayer states that it has a total capacity output of 159,593,000 pounds of aluminum per year.

Analysis of the capacity of the Badin plant, Badin, N. C.—The taxpayer states that stream flow during certain seasons of the year is "greatly in excess of its generating capacity." This is as would naturally be expected on account of rainfall, floods, and other natural conditions being so much in excess of certain seasons over and above what they would be at other times of the year. On account of the enormous storage capacity required to carry over a small amount of hydroelectric horsepower for a short time it is practically impossible to avoid losing a great part of the stream flow during the flood seasons. The taxpayer has submitted figures that apparently show the power as being used to its utmost. From a study of the tables which are submitted in conjunction with the above letter of December 16, 1921, it would appear that according to the claim the taxpayer is able to throw various furnaces and pot rooms on or off at will and in as small or large units as may be necessary to have the production curve fit the curve of hydroelectric horsepower average output.

It is the understanding of the engineers that: (a) A furnace has to be in operation for at least 30 days before it is properly functioning; (b) it injures a furnace to eliminate same for any length of time, and when started in operation it is generally necessary to have it relined; (c) it is not generally advisable to run pot rooms for less than a year; (d) it is more economical to run two pot rooms one year than four pot rooms six months; (e) pot rooms

are not run in sections but are either put into commission as a total series of furnaces or are left as a total; (f) furnaces are connected in series with the intention of operating under seven-volts; thus 500 volts in a pot room of 77 furnaces produces $6\frac{1}{2}$ volts per furnace. Eighty furnaces would take about $6\frac{1}{4}$ volts.

From the above it would appear that the taxpayer should be prepared to always have a surplus of equipment to carry it over a period when the output is 50 per cent beyond the normal output in order to reimburse the stock on hand.

In the case of the pot rooms they should be equipped so as to throw one or more into commission than its present necessities demand in order to take advantage of years of plentiful stream flow and thus replenish its stock.

From the taxpayer's statement it has an average of 78,350 E. H. P. available over a term of 23 years. This average is available for the furnaces after all losses are accounted for. This means that in order to furnish 78,350 E. H. P. for smelting purposes it is necessary to have available at the switchboards of the power house 84,666 E. H. P. In order to take care of certain transmission losses. According to the taxpayer 78,350 E. H. P. at the furnaces will produce 43,092,500 pounds of aluminum.

If an examination will be made of table 3 of the supplement to taxpayer's letter of December 16, 1921, it will be noted that the capacities of the streams will produce from 40,000 to 92,000 E. H. P. at the switchboards of the power house.

As the strength of a chain is determined by the weakest link, so should the output of power from a hydroelectric plant be determined for a series of low-stream flows. The average for the last six months, as shown by table 4, is 78,000 E. H. P. available at the switchboards or 72,000 E. H. P. at the furnaces. This would mean that the maximum number of pot rooms that would be available provided that low-stream flows were not encountered during these periods would be seven pot rooms, each pot room being estimated at 10,000 horsepower.

Referring again to taxpayer's table 4, it will be noted that the average for the year 1918 is 80,000 E. H. P. available at the switch boards, but in analyzing the available power during the year it will be noted that for the months of July, August, September, and October it does not average 67,500 E. H. P. and in October it drops down to 60,000 E. H. P. This would mean an average at the furnaces of possibly 62,000 E. H. P. and that not more than 6 pot rooms could be placed into commission for this year. In referring to the same table for the year 1905 the average at the switch boards was 78,500 E. H. P. whereas at the furnaces there would possibly be 73,000 E. H. P. available. By analyzing it into months it will be noted that for September, October, November, and December an average of only 60,000 E. H. P. is available at the switch boards which would mean about 55,000 at the furnaces. This would make available only 5 pot rooms for operating purposes instead of what would apparently be 7 pot rooms presuming that the taxpayer's average was assumed for the year through.

The average E. H. P. available at the switch boards in the year 1904 is less than 70,000 and approximately 64,000 E. H. P. at the furnaces in the various pot rooms, showing that the taxpayer could not have over 6 pot rooms in commission.

For over 6 consecutive months the power available at the switch boards was not more than 62,000 E. H. P. which would not be sufficient to run 6 pot rooms. The last three months of this year the power average is only 42,500 E. H. P. at the switch boards, which would not have been quite sufficient to run 4 pot rooms. In only a very few cases would the taxpayer have been able to operate 7 pot rooms a year through without the aid of auxiliary power from some other source than that upon which it is at the present time relying.

For economic value in use, it is considered necessary to have from 7 to 8 pot rooms available but that the taxpayer should not count on an average maximum output of more than 6 pot rooms under the conditions as outlined above. Estimating as a maximum output of 6 pot rooms with 78 furnaces per pot room each furnace producing 200 pounds of aluminum daily, they have a total producing capacity for Badin of 35,624,000 pounds of aluminum.

An analysis of the Alcoa smelting plant, Alcoa, Tenn.—The following is an analysis of the smelting possibilities at the Alcoa smelting furnaces as figured from the power plant output of the Cheoah development.

Table 6 is a tabulation showing the average hydroelectric horsepower which could have been developed from the Cheoah power plant had same been in operation from the years 1898 up to and including 1920. These figures were taken from the tables as submitted by the taxpayer under date of December 16, 1920, in conjunction with a letter written by L. W. Wilson.

Table 7 is a tabulation showing the hydroelectric horsepower available at the Cheoah power plant and also the Alcoa smelting furnaces after all line losses and transformer losses are accounted for. This power includes (a) the average over 23 years; (b) the average for the year 1898; (c) the year 1904; (d) the year 1919.

These tables indicate that while the average horsepower taken from a series of years may be averaged, as the taxpayer has noted, 39,100 E. H. P. at the pot rooms, yet, as has been explained on the previous page, the taxpayer can not forecast from time to time when power will be plentiful and when there will be a scarcity. As has been previously mentioned, it is necessary that there be available a reasonable number of pot rooms to take care of the maximum demand, consequently there will be a certain amount of idle equipment during normal production.

By referring to table 6 it will be evident that there were years such as 1901 and 1906 when there was available 50,000 E. H. P. at the switchboards of the power house for practically the entire year. This amount of horsepower at the switchboards would number 43,800 E. H. P. at the switchboards and would run four pot rooms, which in turn would smelt 22,766,000 pounds of aluminum from alumina, presuming that each furnace was capable of producing an average daily output of 200 pounds of aluminum and that each pot room averages 78 furnaces.

TABLE 6.—Showing hydroelectric horsepower that could have been developed at Cheoah power house during years 1898-1920

Year	Power given in thousands of E. H. P.											
	Jan-uary	Feb-ruary	March	April	May	June	July	Aug-ust	Sep-tember	Octo-ber	Nov-ember	Dec-ember
1898	47	45	40	52	46	32	48	52	52	52	52	42
1899	52	52	52	52	52	52	35	22	22	22	22	46
1900	40	50	52	52	52	52	52	39	30	22	35	48
1901	51	52	52	52	52	52	48	52	52	52	36	51
1902	52	52	52	52	52	40	43	22	30	32	40	52
1903	52	52	52	52	52	52	48	35	22	22	31	23
1904	35	52	52	52	52	45	35	15	30	20	20	30
1905	44	51	52	50	52	52	52	51	44	32	22	50
1906	52	52	52	52	52	52	52	52	52	52	50	52
1907	52	52	52	52	52	52	52	45	38	35	38	38
1908	52	52	52	52	52	52	51	45	38	33	35	52
1909	52	52	52	52	52	52	52	49	15	52	35	41
1910	51	45	51	48	51	52	52	48	10	37	28	42
1911	52	52	52	52	51	41	43	38	33	41	45	47
1912	52	52	52	52	52	52	52	46	31	38	27	38
1913	52	52	52	52	52	51	43	30	25	25	25	43
1914	48	52	52	52	49	33	30	28	18	30	33	52
1915	52	52	52	52	52	52	49	35	39	48	41	52
1916	52	52	52	52	52	52	52	52	42	36	36	52
1917	52	52	52	52	52	52	52	40	42	37	33	30
1918	41	52	52	52	52	52	40	39	39	33	52	52
1919	52	52	52	52	52	52	52	34	125	118	126	126
1920	52	52	52	52	52	52	52	25	143	145	130	127
Average	50	51	51	51	51	49	47	39	36	35	35	43

¹ Actual development.

TABLE 7.—Showing the hydroelectric horsepower available at the Cheoah power plant and also at the Alcoa smelting furnaces for the average years and also for 1898-1904 and 1919

Month	Power available at the switch-board at power house, Cheoah plant (figures show E. H. P. in thousands).				Amount of power possible to have been delivered to furnaces of the Alcoa division of the Aluminum Co. of America.			
	Average for 23 years	1898	1904	1910	Average for 23 years	Average for 1898	Average for 1904	Average for 1919
January.....	50	52	35	52	43,800	45,800	30,200	45,800
February.....	51	52	50	52	44,800	45,800	43,800	45,800
March.....	51	52	52	52	44,800	45,800	45,800	45,800
April.....	51	52	49	52	44,800	45,800	42,900	45,800
May.....	51	52	47	52	44,800	45,800	41,100	45,800
June.....	49	47	45	52	42,900	41,100	39,500	45,800
July.....	47	35	35	52	41,100	30,200	30,200	45,800
August.....	39	22	15	34	33,300	18,200	29,300	29,500
September.....	36	22	30	25	31,100	18,200	25,500	20,500
October.....	35	22	20	18	30,200	18,200	16,594	14,300
November.....	35	22	20	26	30,200	18,200	16,594	22,030
December.....	43	40	39	23	37,500	34,400	33,300	21,000
Average.....	45	30	39	41	36,150	33,800	33,300	35,500

¹ Actual development

In the study of the year 1918 is illustrated a fairly average condition with which the taxpayer will have to contend. It will be evident that 4 pot rooms could have been operated for 7 months, 3 pot rooms could have been operated for 1 month and 2 pot rooms could have been operated for 4 months, making a total of 39 pot rooms for the entire year. Thirty-nine pot room months at the rate of 474,500 pounds of aluminum per pot room month would produce a total of 18,505,500 pounds of aluminum per annum. This is presuming that the taxpayer was clairvoyant enough to forecast what water power would be available and make provision to operate its pot rooms in harmony with such power as was forecast.

In the above cases it is taken into consideration that the taxpayer will utilize its steam turbine during the periods when sufficient power for operation is not available from the stream flow. The bureau's engineers are of the opinion that from their analysis of the situation of the power produced by the taxpayer at its Cheoah development with the aid of its auxiliary power, it is capable of operating an average of 4 pot rooms for 6 months and 3 pot rooms at an average of 6 months per year, giving a total of 42 pot room months per annum. The above power, in their opinion, is sufficient to produce 20,000,000 pounds of aluminum per year.

ANALYSIS OF THE MASSENA SMELTING PLANT, MASSENA, N. Y.

The power available at the furnaces of the pot rooms of the Massena smelting plant is indicated in column 19, of the taxpayer's Table 6, accompanying its letter under date of December 16, 1921, and signed by their official, Mr. I. W. Wilson. For the convenience of this report, column 19 is indicated in Table 6. This tabulation is used to illustrate the possible producing capacity of the electric power available at Massena, N. Y., when used for smelting the aluminum from alumina. The first column gives the month considered, and the second the average E. H. P. available at the furnaces, the third gives the number of pot rooms that will probably be used when having the amount of horsepower available as shown in the second column. The fourth gives the number of pounds of aluminum that could be smelted from the furnaces at the rate of 474,500 pounds of aluminum per pot room month. After careful study of the above conditions and taking into consideration the various factors as mentioned in the previous part of this smelting analysis regarding the necessity of having reserve equipment and allowing for an overproduction during a series of years of plenty to provide for the years of scarcity, the engineers are of the opinion that the normal production of aluminum at Massena, N. Y., should be considered as 61,216,000 pounds per annum.

TABLE 8.—*Tabulation showing the available power for reducing alumina and the normal production of aluminum therefrom, at Massena, N. Y.*

Month	F. H. P. available at furnaces	Number of pot rooms per month	Total production of aluminum in pounds
January.....	81,600	8	3,800,000
February.....	68,400	7	3,320,000
March.....	83,400	8	3,800,000
April.....	114,800	11	5,219,000
May.....	129,700	12	5,694,000
June.....	128,900	12	5,694,000
July.....	126,000	12	5,694,000
August.....	126,000	12	5,694,000
September.....	128,900	52	5,694,000
October.....	126,000	12	5,694,000
November.....	126,000	12	5,694,000
December.....	112,630	11	5,219,000
Total.....		129	61,216,000

ANALYSIS OF THE SMELTING PLANTS FOR THE TAXPAYER, NIAGARA PLANTS 2 AND 3, NIAGARA FALLS, N. Y.

Plants 2 and 3, at Niagara Falls, N. Y., have sufficient power through the year to produce the amount of aluminum as claimed by the taxpayer. The taxpayer has sufficient equipment to smelt the above quantity.

The engineers recommend that the amount of aluminum as being smelted by Niagara plant 2 be accepted as 6,600,000 pounds per year and Niagara plant 3, 20,405,000 pounds per year.

RECAPITULATION OF BADIN, ALCOA, MASSENA, NIAGARA PLANTS 2 AND 3

It will be borne in mind that the bureau's engineers figured the capacities of the taxpayer's various plants on the following basis. It was assumed that each furnace was capable of producing 200 pounds of aluminum in a period of 24 hours. If this is reduced to horsepower it will be noted that it is equivalent to one E. H. P. per year smelting 569.5 pounds of aluminum. The taxpayer claims the capacity of one E. H. P. per year is equivalent to smelting of 550 pounds of aluminum. Thus it will be noted that the method adopted by the bureau's engineers gives the taxpayer 3 per cent advantage by comparison.

Table 9 gives the summary of the capacity as mentioned under the analysis of production. Column 1, table 9, gives the names of the plants as outlined above. Column 2 gives the taxpayer's estimate of the annual production of the various subsidiaries, whereas column 3 gives the bureau's estimate of the annual production of aluminum. It will be noted from the above that the taxpayer bases its annual production as being 159,593,000 pounds of aluminum per year and lays a claim of 156,000,000 pounds of aluminum when considering the capacity in its calculation for value in use. The bureau's engineers estimate as a total production of the taxpayer as being 143,845,000 pounds of aluminum per year.

Inasmuch as the taxpayer has certain reserve power of which it is possible to take advantage during the seasons of plentiful stream flow, there should be made a certain allowance for same. The engineers believe that it should be equal to the following or one pot room of 78 furnaces running for a period of six months and equivalent to the production of 2,855,000 pounds of aluminum, making a grand total of 145,700,000 pounds annual production. For the purpose of estimating the value in use of the balanced equipment of the taxpayer, the Government engineers have considered that the taxpayer's capacity production will be 146,000,000 pounds of aluminum per annum.

Table 9

Name of plant	Capacity of output *in pounds of aluminum per year	
	Taxpayer's estimate	Government estimate
Badin.....	43,092,500	35,624,000
Alcos.....	21,532,500	20,000,000
Massem.....	67,963,000	61,216,000
Niagara 2.....	6,600,000	6,600,000
Niagara 3.....	20,405,000	20,405,000
Total.....	159,593,000	143,845,000

The CHAIRMAN. Mr. Manson.

Mr. MANSON. Mr. Chairman, in presenting this case of the Aluminum Co. of America to the committee, it will be recalled that I took the position that our objection at that time to the allowance was that there was no data before the bureau upon which an allowance could be predicated, upon the theory upon which this allowance was based, namely, the theory of comparing production with capacity, for the reason that the production figures for the years used were not available. Since then, those production figures have been supplied. As I stated yesterday, we received them the day before yesterday.

I have listened to counsel's answer to my statement in this case. I believe that when counsel's attention is called to some statements made in this answer, the solicitor will desire to correct his statements, as I know the solicitor has no desire to misquote me.

There are other matters stated in this answer to which I desire to reply at length.

I also desire to show approximately what the overallowance of amortization has been in this case, now that the actual production figures are available. The engineers have made these computations, and I understand they are just about to finish them. I have had no opportunity to go over them as yet, and unless there is something else to take precedence over it, I would like to present my reply to the bureau's answer in the case of the Aluminum Co. of America to-morrow morning. I understand, however, that the bureau will have a witness here, with reference to the copper situation. I do not desire to hold anybody over or to inconvenience anybody. If it is preferable, I would be perfectly willing to make my reply on Friday. In the meantime, I have another case to present to the committee.

INVESTIGATION OF THE BUREAU OF INTERNAL REVENUE

THURSDAY, FEBRUARY 5, 1925

UNITED STATES SENATE,
SELECT COMMITTEE TO INVESTIGATE THE
BUREAU OF INTERNAL REVENUE,
Washington, D. C.

The committee met at 10.30 o'clock a. m., pursuant to adjournment of yesterday.

Present: Senators Couzens (presiding), Watson, Jones of New Mexico, and King.

Present also: Mr. L. C. Manson, of counsel for the committee; Mr. L. H. Parker, chief engineer for the committee; and Mr. Raleigh C. Thomas, investigating engineer for the committee.

Present on behalf of the bureau: Mr. C. R. Nash, assistant to the Commissioner of Internal Revenue; Mr. Nelson T. Hartson, solicitor, Bureau of Internal Revenue; Mr. James M. Williamson, attorney, solicitor's office; Mr. S. M. Greenidge, head engineering division, Bureau of Internal Revenue; and Mr. W. S. Tandrow, appraisal engineer.

The CHAIRMAN. I understand that you wish to continue with the case of the Aluminum Co. of America now, Mr. Manson?

Mr. MANSON. Before proceeding to a further discussion of the matter of the Aluminum Co. of America, I wish to offer as Exhibit H a letter from the Aluminum Co. of America addressed to me, dated January 23, 1925, giving the amount of bauxite produced by the Aluminum Co. of America and its subsidiaries in the years 1913 to 1922, inclusive, together with the aluminum production, in pounds, of the Aluminum Co. of America and its subsidiaries for the years 1913 to 1923, inclusive, and the amount of capital plant expenditures of the Aluminum Co. of America and its subsidiaries for the years 1913 to 1923, inclusive.

I offer that as Exhibit H.

I also offer as Exhibit K a statement of the monthly production of aluminum, in pounds, of the Alcoa, Tenn., smelting plant of the taxpayer, for the years 1915 to 1920, inclusive, and a diagram or chart, which is marked Exhibit J, and the original of which is before the chairman now.

Mr. MANSON. The bureau in its answer in this case lays considerable stress upon the unsoundness of the estimates presented by us and some inaccuracies in the production estimates stated by me in presenting this case on January 21st.

I stated that actual production figures for this company for 1922 and 1923 were not available in the bureau, and related our futile

effort to secure the figures as to actual production for these years from the company. I then made the following statement, which appears on page 2352 of the transcript:

Being unable to ascertain the facts which are necessary before any determination of amortization can be made, we have resorted to such information as is available, for the purpose of determining what the indications are as to whether or not this allowance is a proper one.

I submit that that language can not be construed to mean that we even pretended to be able to say what constituted a proper allowance upon this claim, or that we attached any significance whatever to the estimates we had made, except as mere indications of the accuracy or inaccuracy of the estimates used by the bureau in determining this amortization allowance.

Now that we have the actual figures, our estimates, as well as the bureau's estimates, are immaterial, except that the amortization has been allowed upon the basis of the bureau's estimates.

I have just presented to the committee, in the form of Exhibit II, a letter which I received from the company, giving these actual production figures. That the record may be kept straight, however, I desire to correct some figures that I read into the record in presenting this case before.

I stated that our estimate of production of aluminum for the Aluminum Co. of America in 1922 was 138,600,000 pounds and in 1923 was 234,000,000 pounds. These figures should be 112,600,000 pounds for 1922 and 190,000,000 for 1923.

This error was due entirely to the fact that in reading these figures from a table my eye fell upon the wrong column. The correct figures are shown on page 11 of the engineer's report, which is Exhibit G, a copy of which was furnished the bureau. Had they examined the exhibits furnished them, they would have seen that no error was made in calculating our estimates, and that this error, made by me in reading these figures, in no way affected our results. My attention was never called to this error until the bureau presented its answer, or I would have corrected it before this.

As I have stated, the real issue raised by me was as to the propriety of using estimates when the actual figures are available. The bureau answers that work upon this claim was stated in 1921, and the allowance was finally made in June, 1923, and that to have used actual production figures would have required postponing action until sometime in 1924.

The fact is that while this allowance was made in June, 1923, this case has not been finally disposed of yet. It is now pending in the solicitor's office on other questions. The actual production for 1922 and 1923 was ascertainable soon after January 1, 1924. No effort was made by the bureau to obtain the figures as to actual production until after this matter was presented to this committee on January 21, 1925, and had it not been called to the attention of the committee there is no reason to believe that the company would ever have been called upon to produce these figures.

The bureau in its answer calls attention to the fact that the average production for the years 1921, 1922, and 1923, according to the figures recently furnished by the taxpayer, is 85,607,695 pounds, which is about 3.5 per cent in excess of the estimate of 82,000,000

pounds which was used by the bureau as the basis for determining the amortization to be 44 per cent. It appears to be the position of the bureau that these actual figures justify its method of handling this case and the allowance made. Your counsel takes the position that had this allowance not been questioned and the actual figures called for, there would have been no way to determine the propriety of this allowance, even if we assume the bureau's methods to have been correct.

But even this 3.5 per cent amounts to a very substantial amount when translated into amortization allowance. The costs to which the 44 per cent was applied to determine amortization were approximately \$23,737,000, 3.5 per cent of which is \$830,775.

The plant capacity of the taxpayer which is useful for normal postwar purposes is assumed to be equal to the average production for the years 1921, 1922, and 1923. In determining amortization upon the balanced facilities of this taxpayer, 82,000,000 pounds was estimated to be its required capacity. The actual capacity of the balanced facilities was determined by the bureau engineers to be 146,000,000 pounds. It was therefore determined that the value in use was 56 per cent and the amortization was 44 per cent of the war expenditures for balanced plants.

We take the same exceptions to this method of determining amortization as were urged by us in the United States Steel case. Summarily stated, these are:

1. No deduction is made from the war expenditures to cover the salvage value of the amortized facilities before applying the percentage representing amortization.

2. No consideration is given to the fact that the facilities installed during the war years will have a longer period of useful life than the older facilities with the capacity of which they are averaged.

3. No consideration is given to the fact that the facilities installed during the war, being more modern, are likely to be more efficient than the facilities with which their capacity is averaged. As a large part of this claim is for amortization upon electrical generating apparatus, this objection is of great consequence in this particular case.

These objections were admitted by the bureau to be sound in the United States Steel case and they are as sound in this case as in that.

As was pointed out in the United States Steel case, a capacity sufficient to produce the average product of any series of years makes no provision for the capacity required to meet the demand of peak years.

I now call the attention of the committee to Exhibit J, the original of which is lying before the chairman. The heavy, irregular line on Exhibit J, shows the actual production of aluminum in pounds by the Aluminum Co. of America, according to the figures furnished in Exhibit H. The lowest dotted line across this irregular line represents 82,000,000 pounds. That is the capacity which has been assumed by the bureau to represent the taxpayer's required capacity for postwar needs.

I would call the committee's attention to the fact that only for the period 1921-22 was it possible for the taxpayer to produce the

aluminum it actually did produce, with a capacity such as the bureau assumed to be its required capacity.

The CHAIRMAN. In other words, whenever this irregular line goes above this dotted line, it indicates that the taxpayer needed those facilities to take care of its business?

Mr. MANSON. It does.

Now, the second dotted line, the dotted line above the lowest dotted line, represents 87,000,000 pounds. That is the capacity which the taxpayer, in its claim for amortization, set up as its requirements.

The CHAIRMAN. That is, they admitted this?

Mr. MANSON. They admitted that.

The taxpayer, in its claim for amortization, admitted that it requires a capacity equal to 5,000,000 pounds in excess of the amount the bureau determined they needed.

When I presented this case, I took the position that in arriving at that 82,000,000 as against the taxpayer's claimed requirement of 87,000,000 pounds, the engineer had made a mistake.

In the bureau's answer they take the position that he made no mistake, that he arrived at that figure deliberately, and take issue with me when I say that he arrived at it by making an error of calculation.

I submit that I was charitable in attributing that error to a mistake. I did not care to assume, to say nothing of accusing this engineer of deliberately allowing them a capacity of 85,000,000 pounds below that their own claim showed they required.

The production for the years 1919 to 1923, inclusive, as shown by the company itself, in the letter of January 23, 1925, which I have offered as Exhibit H, is as follows:

1919, 128,461,052 pounds; 1920, 137,930,298 pounds; 1921, 54,531,996 pounds—

Senator JONES. That was a year of extreme depression in practically all industries, was it not, 1921?

Mr. MANSON. It certainly was.

1922, 73,632,867 pounds; and in 1923, 128,658,222 pounds. The total for the years named was 523,214,435 pounds.

At a later stage in my presentation of this matter, I will call the committee's attention to testimony offered by officers of the taxpayer before the Federal Trade Commission.

The CHAIRMAN. Have you averaged those years, to see how closely it is related to the amount allowed by the bureau?

Mr. MANSON. I have. The average for the five-year period is indicated by the third dotted line, on the bottom of the page. That average is 104,642,887 pounds. That is the average for the total postwar period of 1919 to 1923, inclusive, and, as I say, is indicated by the third dotted line on the bottom of the page.

It will be noted that a capacity of even that amount would not take care of the actual production for the years 1919, 1920, or 1923. In other words, if they had a capacity equal to the average of this entire period, which would be 25 per cent more than the bureau has assumed as being their required capacity, it would still be only sufficient to provide for the production of two out of the five years which have elapsed since the war closed. It has been only during the abnormally slack years of 1921 and 1922 that the capacity assumed

by the bureau would have been adequate; and I wish to state at this time that I shall present evidence here which was offered by the officers of the Aluminum Co. of America before the Federal Trade Commission, to show that in those years they were not producing what the customers were demanding; that in those years they were from 30 to 60 days behind in making agreed deliveries. I do not say from 30 to 60 days behind the orders, but from 30 to 60 days behind the dates when their orders matured and they agreed to deliver.

The CHAIRMAN. That indicates that at no time did they have capacity enough?

Mr. MANSON. Either they did not have the capacity or they were refusing to use their capacity for the purpose of driving people out of business who were depending upon them for raw material.

Senator JONES of New Mexico. Was it not specifically claimed by them that they did not have the capacity?

Mr. MANSON. It was specifically claimed by them that they did not have the capacity.

The CHAIRMAN. And yet they received a greater amortization allowance because of excess capacity?

Mr. MANSON. Because of excess capacity.

If the production of the full five years postwar period is taken into consideration, we find that the average is 104,642,887. Comparing this average with the capacity of 146,000,000 pounds found by the bureau, we get a value in use of 71.6 per cent instead of 56 per cent, and an amortization equal to 28.4 per cent of the balanced plants instead of 44 per cent. This would reduce the amortization allowed upon the balanced plants approximately \$3,703,000. It is manifest that a capacity which would not have produced the aluminum which actually has been produced during the three of the five years which have elapsed since the close of the war, can not be said to be the maximum plant which has a value to the taxpayer.

The average production of these three years, 1919, 1920, and 1923, was 131,683,191 pounds. This is 90.2 per cent of the capacity as determined by the bureau. On this basis the amortization on the balanced plants would be 9.8 per cent instead of 44 per cent of \$23,737,000, or \$8,118,054 less than was allowed.

I wish to again call attention to Exhibit J. The third line from the top represents the average production for the years 1919, 1920, and 1923. It will be noted that even that capacity is not sufficient to take care of the production for 1920, and if my position is correct, that a taxpayer can not be said to have suffered a loss because he has invested in plant equipment which is required to meet the reasonable requirements of a peak year, when prices are highest and profits are highest, then even a capacity based upon 131,683,191 pounds would not be adequate; but even upon that basis the amortization is reduced from 44 per cent to a little less than 10 per cent, making a difference of over \$8,000,000 in the amount of amortization allowed.

The CHAIRMAN. What would the result of that be in the tax?

Mr. MANSON. I have that figured out at the end of this statement.

In the United States Steel case we advanced the argument that it is during the peak year, when prices are high, that the most profit is made. It can not be maintained that the facilities required to

meet the demand of peak years represents a loss. Therefore, in considering whether or not this company has suffered a loss because of its investment in facilities, we must consider the demand of 1920 when this taxpayer produced 137,930,298 pounds.

The CHAIRMAN. What year was that?

Mr. MANSON. That is 1920.

Unless a part of the capacity required for this actual production is to be considered a loss, the useful postwar capacity can not be less than its 1920 actual production.

On this basis the value in use of the balanced plants is 94.5 per cent and the amortization is 5.5 per cent instead of 44 per cent. In 1920 production is to be accepted as the basis for determining the value in use, the amortization on the balanced facilities will be reduced by 38.5 per cent of \$23,737,000 or \$9,138,745.

The CHAIRMAN. They had all of those figures when they arrived at this conclusion, had they not?

Mr. MANSON. No.

The CHAIRMAN. Did they not have the production for 1920?

Mr. MANSON. Oh, they had 1920.

The CHAIRMAN. That is what I mean.

Mr. MANSON. They had the 1920 figures.

The CHAIRMAN. So that they knew what the plant required at that particular time.

Mr. MANSON. They knew what actually had been used during the postwar period.

As in the United States Steel Co. case, we take the position that the amortization properly allowed is the loss suffered by the taxpayer by reason of its investment in useless facilities. In that case we called attention to the fact that the taxpayer, by making additional capital expenditures for plant extensions since the war, was stopped from claiming amortization upon the ground that the increase in capacity created by war expenditures was not of 100 per cent value in use. Our question: Why has the taxpayer increased its capacity since the war if its war capacity represents a loss?—is still unanswered.

Since the close of the war this taxpayer—and I am talking now about the Aluminum Co. of America—has made capital plant expenditures aggregating \$42,043,585.96.

I am unable to say for exactly what purpose those expenditures have been made, for the reason that the company's letter says, "It is not possible without an inordinate amount of work, to itemize the capital plant expenditures."

Senator KING. Was it really new capital put into the business, or was it earnings and undivided profits which they attributed to capital investment?

Mr. MANSON. From sources entirely independent of the income tax, I am able to say that those expenditures were made out of undivided profits.

Its capital expenditures during the years 1917 and 1918 were \$34,227,275.52. It spent more as capital plant charges during the five years succeeding the war than it did while we were in the war. During the year 1920 alone it spent \$19,887,600.51, which was more than it spent for capital plant purposes during any other year from 1913 to 1923, inclusive.

In other words, there was no war year when this company spent so much for capital plant charges as it did in the year 1920.

If this taxpayer had more plant capacity than it found useful to it by reason of its war expansion, and has thereby suffered a loss which it should be permitted to deduct from taxable income, why, in the name of common sense, has it increased that loss by a greater expenditure since the war closed than it made during the war?

Now, it may be said that I have not shown that these capital expenditures for plant have resulted in an increase of capacity. I admit that. I did the best I could to secure the information. I have read the extract from the company's letter. I maintain that the plant expenditures, running, as they do, to \$42,000,000, could not be made without increasing the capacity, and I say that, in determining this matter of amortization, even under the bureau's own rulings, it was bound to ascertain and it was bound to put upon the taxpayer the burden of showing, for what purpose it did make that \$42,000,000 of plant expenditures, if they did not result in increasing the plant capacity.

Senator KING. Have you determined whether, in their formal returns, they showed such enormous profit as that after paying dividends and allowing for depreciation and so forth, there was this great surplus and undivided profit?

Mr. MANSON. I have made no personal investigation of their income tax. I will say this: In response to the Senator's former question I said that, from sources outside of the Income Tax Bureau, that is, from sources other than the information derived from the Income Tax Bureau, I was able to make that statement. I have read the report of Federal Trade Commission dealing with the operations and earnings of this company, and the fact developed there.

Senator KING. Is that the report which was submitted to the Attorney General? My recollection is that after an investigation by the Federal Trade Commission they submitted a report to the Attorney General recommending a prosecution, or, rather, saying that there has been violations of the Sherman antitrust law, which would warrant and justify action by the Department of Justice.

Mr. MANSON. I am unable to answer the Senator's question. This report is the result of an investigation made in compliance with Senate Resolution 127, Sixty-seventh Congress, second session. The report was made a few months ago. There is nothing on the face of the report, of course, which furnishes the information the Senator desires, and I know nothing about it, except what is contained in this report.

All of the computations heretofore mentioned have been made by comparing annual production figures with capacity. This capacity estimate, made by the bureau, is based upon the power available. It assumes a steady demand in proportion to its available power, and not a fluctuating demand. If the demand upon this taxpayer's facilities is to some extent fluctuating, the plant capacity required to meet this fluctuating demand will, to that extent, exceed the required plant capacity reflected by the annual production.

At the time I presented the Steel case, I went somewhat thoroughly into the effect upon plant requirements of a monthly fluctuation of production.

To use a simple illustration, assume that we have a plant which has a capacity of 10,000,000 pounds a month. Its annual capacity would be 120,000,000 pounds. Such a plant could not produce 20,000,000 pounds in any one month, so that the plant requirements of a manufacturer are not necessarily reflected by annual production. The amount of plant requirements is reflected more by its monthly production than it is by its annual production. I have submitted an exhibit, Exhibit K, which shows the monthly production for a period of six years of one of the smelting plants of this company, and it shows that if we arrive at the capacity of the plant each year by multiplying the peak monthly production by 12, we have an excess of capacity over production in the year 1915 of 35.34 per cent. In the year 1916, we have an excess of capacity over production of 22.89 per cent. In the year 1917, we have an excess of capacity over production of 25.22 per cent. In the year 1919, we have an excess of capacity over production of 17.88 per cent; and in the year 1920, an excess of capacity over production of 19.67 per cent.

In the United States Steel case, the Steel Corporation admitted, in its claim—and the same engineer as the one who determined this claim determined it in the Steel case—that in determining what capacity was required for postwar needs, it was necessary to add a margin over the annual production for the purpose of arriving at the required plant capacity.

I maintain that these figures as indicated by Exhibit K show the necessity for adding that margin in the Aluminum Co. case for the purpose of determining what excess over the amount of its annual production is required to produce that quantity of metal, when the fluctuating demand from month to month is taken into consideration, and it shows that anywhere from 18 to 35 per cent margin is required.

I have already called the committee's attention to the fact that if you take the maximum production for the year 1920, if you take 1920, which was the peak year since the war, when the production was approximately 95 per cent of capacity, and add to that production from 17 to 35 per cent, you have more than 100 per cent value in use, even if you take the average for the three years 1919, 1920, and 1923—

Senator KING. 1921?

Mr. MANSON. No; the three good years since the war were 1919, 1920, and 1923.

Senator KING. Oh, yes.

Mr. MANSON. The average of those years will show a value in use of about 90 per cent. If you add to 90 per cent, 17 or 18 or up to 35 per cent, you have more than 100 per cent value in use.

For that reason, I say I do not care whether you take the peak year, which I maintain is the only proper basis for the determination of the value in use, if we are going to use this formula at all, or whether you take the average of the three highest years out of the five-year period, for the purpose of determining what the required plant capacity is, and add to it a margin of even 10 per cent, you have 100 per cent value in use.

Senator JONES of New Mexico. Has it not been the history of this company since the beginning that it has been continually increasing its plant capacity?

Mr. MANSON. Oh, yes; there is no doubt about that.

The production figures show that this company's production has gone up from 791,600 pounds in 1915 to such an extent that in the month of July, 1920, they produced over 2,000,000 pounds. They produced over 2,500,000 pounds in one month in 1917.

The plant expenditures show that there has been a constant increase in plant away back to 1913. The plant expenditures for 1913 were something over \$600,000. In 1914 they went up to nearly \$7,000,000; in 1915, \$12,500,000; in 1916, \$15,000,000; in 1917, nearly \$17,500,000; in 1918, \$16,700,000; in 1919, \$12,800,000; in 1920, \$19,887,000.

Senator JONES of New Mexico. Was the increased production brought about by plant expansion, by additional units, or in what way?

Mr. MANSON. As I have stated, I do not know. I am not able to say what this \$42,000,000 that has been spent since the war was spent for. I submit, however, that it would be impossible to spend \$42,000,000 for legitimate plant purposes, without its being reflected in increased plant capacity, and if that is not final, at least the expenditure of that amount of money is sufficient to put the bureau upon inquiry to determine whether or not, since the war, the company has spent money for the purpose of increasing capacity, when, at the same time, it was basing its claim for amortization upon a claimed excess of capacity.

Senator KING. I would be glad, before the hearing closes, to have put into the record a statement showing the amount actually paid in to the Aluminum Co. of America as to and for capital, the amount which has been charged or credited, whichever it was, that they entered as capital coming from undivided profits, from earnings, and the so-called surplus, the gross earnings shown during the past ten or twelve years, and the amount of taxes paid during the past ten or twelve years, the amount each year. I am speaking of the Federal tax, of course.

Mr. MANSON. In response to the Senator's question, I will say that there appears on page 10 of a report of the Federal Trade Commission, entitled "Kitchen Furnishings and Domestic Appliances," which report is the third report of the housefurnishing industries, undertaken in response to Senate Resolution 127, Sixty-Seventh Congress, second session, the following:

Under this monopoly the company's investment of \$20,000 in 1899, supplemented by a subsequent additional investment of about two and three-quarters million dollars, including a considerable amount issued for patents, grew to a combined capital and surplus amounting to \$110,883,461 on July 31, 1921. On August 31, 1906, the first balance sheet published by Moody's Manual showed capital and surplus amounting to \$7,199,322. During these 15 years, from August 31, 1906, to July 31, 1921, without any addition to capital by the stockholders the capital and surplus increased, as the figures above indicate, by \$103,684,139, while in addition to this increase in surplus the company, as computed from figures in Moody's Manual, declared and paid cash dividends during this period amounting to \$15,370,032, indicating aggregate net earnings of \$119,054,171.

Senator KING. On an original capital of less than \$4,000,000?

Senator JONES of New Mexico. \$7,000,000.

Senator KING. No; a part of that was earnings.

Senator JONES of New Mexico. Yes; you are right, but I am taking it from 1906 on.

Senator KING. Yes.

Mr. MANSON. Continuing from this report:

These net earnings from 1906 to 1921 could have been realized by a uniform annual rate of return on the total investment of about 24 per cent, assuming the payment of dividends as computed from published statements.

Senator KING. I would like to ask Mr. Hartson if he recalls whether there has been any refund to this company recommended or paid?

Mr. HARTSON. I have no definite recollection. Senator, about that; I do not know.

Senator KING. Would it be possible for the bureau to furnish us the information which I suggested in my question a moment ago.

Mr. HARTSON. Senator, we can furnish the information as to whether any refunds have been granted or not, but the additions which may have been made to capital account, or contributions of stockholders to the corporation is something that I do not know we can furnish.

Senator KING. I was wondering whether the returns made by this company would not show that. How could they make a proper return, when they claimed for depreciation and all that sort of thing, without showing the capital?

Mr. HARTSON. The returns might not show from what source the capital came, but if they do show it, Senator, we will be glad to furnish it.

Senator KING. All right.

Mr. HARTSON. Any information, though, about the contributions by the stockholders to the corporation on account of the capital amounts, ought to come from the corporation itself.

Senator KING. Yes; I agree with you, unless you have it.

Mr. HARTSON. It ought to come from the corporation itself instead of from the bureau.

Senator KING. Mr. Manson, the Federal Trade Commission went down only to 1921. Have you followed it down to determine whether there have been any capital investments?

Mr. MANSON. Since then?

Senator KING. Since then, and what have been paid out in dividends since then?

Mr. MANSON. No; I have not.

Senator KING. And what has been charged as capital investment since then?

Mr. MANSON. No; I have not.

Senator KING. I wish your engineers, Mr. Chairman, if it meets with your approval, would get that information.

The CHAIRMAN. All right.

Mr. MANSON. The matter contained in the report of the Federal Trade Commission which I have just read verifies the conclusions which I base on Exhibit K; that the demand upon this company is a demand which fluctuates more or less from month to month. This matter, as I have already stated, also shows that this company

claims to have suffered during this period from a lack of adequate producing capacity.

The report further says:

A prominent manufacturer of cooking utensils made the following statements in August, 1923, quoting from the stenographic report of the interview: "Deliveries have been very poor this year. In 1919 they almost broke us * * * we were closed down 20 per cent of the time and in 1920 we only run one full month. They are now making 60-day deliveries. They have been making 60 to 90 day deliveries since last September. The deliveries are absolutely out of our hands and we have no say. I know of one instance where metal that was bought in February has not been delivered yet."

Mr. HARTSON. Mr. Manson, is that the statement of an official of the Aluminum Co. of America or of some other company that does business with the Aluminum Co. of America?

Mr. MANSON. Oh, I assume it is a statement of somebody that does business with the Aluminum Co. of America. This says, "A prominent manufacturer of cooking utensils made the following statements in August, 1923."

I do not read this into the record with the idea that this is the kind of proof that, were I making a determination of amortization in this case, I would entertain. I do read it into the record for the purpose, however, of showing that there was extant in this report the kind of proof which should have put the bureau on its notice that inquiry along these lines should be made.

The purchasing agent of another company stated to the agent of the commission that deliveries were not made as stipulated in the contracts and, moreover, that it was difficult to get any authoritative information on orders as to when deliveries would be made. He further stated that he had never been able to determine whether this was purposely done or resulted from the large volume of business, as a result of which they were unable to keep in proper touch with their various branches.

When questioned concerning the ability of the Aluminum Co. of America to supply all the sheet metal required by the different industries, A. V. Davis, president of the company, made the following statements, quoting from the stenographic report of the interview:

"In the first place, unless you get clearly into your head the difference between a shortage of ingot and a lack of rolling mill capacity you do not comprehend the situation at all. There has never been a shortage of rolling mill capacity on our part. * * * Whatever shortage there has been in the sheet business is a reflection of the shortage in the ingot business."

I would call the committee's attention to the fact that this claim is based upon ingot aluminum production. This whole claim is based upon the theory that there is a surplusage of 44 per cent, or, rather, it is allowed upon the theory that there is a surplusage of 44 per cent in their ingot producing capacity.

The CHAIRMAN. When did he testify that they were short?

Mr. MANSON. I think this investigation was in 1923—either 1923 or 1924. This report was just issued a few months ago.

"The utensil manufacturers are more unreasonable in their demands in the spring and fall of the year; they want to get their metal with a week's notice."

The CHAIRMAN. You are still continuing to quote from the report?

Mr. MANSON. Yes; I am reading from it.

"There is no such thing as a legitimate shortage of sheet, and never has been, based upon our ability to roll sheet."

E. K. Davis, vice president and general sales manager, claimed that they have sufficient production at all times to take care of the needs of the industry. He admitted that during the early part of 1920 they were unable to meet the demands of their customers, but that their sheet mill at Alcoa, Tenn., was completed in August, 1920, and that since that time they had ample sheet capacity to take care of any demands that might be dumped upon them.

According to Roy A. Hunt, vice president of the production department of the Aluminum Co. of America: "Since August, 1920, when we completed our new sheet mill at Alcoa, we have had a capacity of 8,000,000 to 9,000,000 pounds per month." Asked as to what the total sheet requirements of the cooking utensil manufacturers would average, Mr. Hunt replied that his guess would be from 1,750,000 to 3,000,000 pounds per month.

Senator JONES of New Mexico. What margin is allowed there in the sheet metal capacity.

Mr. MANSON. As you see, there is a very wide margin allowed between a capacity of eight to nine million pounds and an average requirement of 1,750,000 pounds to 3,000,000 pounds.

Senator JONES of New Mexico. Would that not indicate that in building that new sheet mill they spent their own money in anticipating an increased demand for the product?

Mr. MANSON. Why, certainly. It can not indicate anything else. Even if that plant which went into operation in August, 1920, is one of those that were started during the war, it shows that that plant and its capacity were required to meet the ordinary business of the company, and it was still behind.

The CHAIRMAN. In 1920?

Mr. MANSON. In 1920.

The CHAIRMAN. At what time was the claim made for amortization—what year, do you remember?

Mr. MANSON. I do not remember exactly; no. They made the first investigation, I think, in 1921.

The CHAIRMAN. Can either Mr. Parker or Mr. Thomas give us the date when they first made their claim for amortization?

Mr. PARKER. The first supplemental claim was filed in December, 1921.

The CHAIRMAN. I am not talking about the supplemental claim, but I want to know when the first claim was filed.

Mr. PARKER. The original claim was filed in 1919, but that was very tentative. Then they filed a claim in December, 1921, which was the subject of the first engineer's report. He went out there and investigated it in the spring of 1922, and there was an attempt made to finish up this claim, as shown by the correspondence on record, before Secretary Mellon came in.

The CHAIRMAN. I understand that, but I just want to point out that when they were making this claim they were going through a great period of stress in order to fill orders.

Mr. MANSON. Yes; in that year spending \$19,000,000 for new plant extensions.

Continuing to read this document:

For the 12 months of 1922 only 66.26 per cent of the Aluminum Co. of America's obligations were shipped either in the month when the obligation was due or within the first month thereafter, while 25.38 per cent was shipped in the second month and nearly 8 per cent in the third month after the maturity of the obligation. For the first six months of 1923 approximately 75 per cent of the obligations were shipped in the month due or within a month thereafter, 17.75 per cent in the second month, and 6.60 in the third month, after the obligation matured.

I believe that the situation is this, that even during the years 1921 and 1922, when they had a low production compared to these other years, these facts show that that low production was not due to lack of demand for the product, and I do not believe the bureau is doing its full duty in assuming a capacity which was very largely based upon the production of those two years, in view of the fact that, for some reason or other, whether it be to bolster up a claim for amortization, or whether it was to put some manufacturer who was dependent upon them for raw material out of business. I do not know, but for some reason or other they did not choose to use these facilities, and I do not believe the bureau has done its full duty until it makes inquiry, if it is going to use those years, as to why the production during those years was not greater.

Senator JONES of New Mexico. And there is nothing in the record about that?

Mr. MANSON. There is nothing in the record about it at all.

The Income Tax Unit allowed amortization on balanced plant facilities, due to loss of value in use amounting to \$10,443,677 and on unbalanced facilities amounting to \$5,001,276.35. An additional allowance of \$144,096.54 was then made, making a total of \$15,589,614.39 allowed by the unit.

The CHAIRMAN. That was the total for the balanced and unbalanced?

Mr. MANSON. Yes; that is the total balanced and unbalanced.

We believe the actual production figures show these balanced plant facilities to have a value in use of 100 per cent; and permit me to say at that point that I believe that if a full and proper investigation were made of this case, it would develop that a large part of the capital plant charges which have been made since the war period have brought facilities which were unbalanced facilities into the state where they became balanced facilities, because a large number, practically all, of these balanced facilities were uncompleted plants, which had not yet reached the point where they could enter into production.

We have not questioned, in making our computations, the allowances made upon those unbalanced plant facilities, for the reason that we have no information upon which we could base a computation; but I do say that, having spent \$42,000,000 since the war for plant extensions and plant charges, it is more than reasonable to assume that a large part of it has gone to complete the plants which were carried in this claim and allowed as unbalanced plant facilities.

We believe the actual production figures show these balanced plant facilities to have a value in use of 100 per cent, when the necessary margin between annual production and the capacity required to meet the fluctuating monthly demand is considered. This does not mean, however, that we take the position that this taxpayer was not entitled to any amortization on these balanced facilities.

I want to call attention at this time to the fact that I have repeatedly made the statement that there was no uniformity in the treatment of amortization. I have called attention already to the published rule for determining value in use, and to the method which was followed in the United States Steel case, in the Berwind-White case, and in this case, for determining value in use.

I called attention to the fact that in the United States Steel case the company was allowed the difference between the war cost and the postwar cost of its war facilities. We did not question that allowance.

In this case no such allowance was made. There is no doubt in my mind that there is a difference. Our engineers have estimated that difference to be about 20 per cent.

In order that we may not overstate this case, and in order that we may state it frankly to the committee, we take the position now that they were entitled to an allowance of about 20 per cent on the balanced plant facilities to cover the difference between the war cost and the postwar cost of reproduction.

The CHAIRMAN. Was that element ever mentioned in the consideration of the amortization?

Mr. MANSON. It was not.

The CHAIRMAN. It seems strange that that whole negotiation should have gone on without any mention being made of the difference between the war and postwar costs.

Mr. MANSON. It might seem strange, but you must consider the fact there are no published rules for the guidance of a taxpayer, that one taxpayer comes in and does business with one engineer, and another comes in and does business with another engineer, although this case was examined by the same engineer, Mr. Whitney, who examined the United States Steel case.

We believe that this taxpayer was entitled to the difference between the cost during the war and the postwar cost of reproduction.

Senator JONES of New Mexico. Wouldn't that, however, be somewhat modified by the fact, if it existed, that during the use of it during the war enormous profits were made?

Mr. MANSON. I can not say that I quite agree with the Senator on that point. If these allowances for deductions are properly determined, these allowances become taxable income.

Senator JONES of New Mexico. I am inclined to think that the point is not well taken, under the law.

Mr. MANSON. Yes.

Senator JONES of New Mexico. But it seems to me that the law itself might very well have taken some such element as that into consideration. If they produced these appliances at a war price, a price higher than the postwar price, and yet if they made tremendous profits from the use of it during the war, that might well have been taken into consideration in making the allowance for amortization. I do not mean to say that that would be proper under the law as it exists, but I was wondering whether the law itself should not have taken such things into consideration. It seems to me that that is the question.

The CHAIRMAN. The point that particularly appeals to me, however, is that in one case the taxpayer gets consideration for the difference between war and postwar costs, and in another case he does not, and in still another case he does, and if he is a good thinker he gets everything that is coming to him, and if he is a poor thinker he does not.

Mr. MANSON. This difference is estimated by our engineers to be \$5,102,422.20. Adding the allowance made by our engineers on unbalanced facilities of \$4,048,554.02—and, as I have stated before,

we add that because we have no information to form the basis of questioning it—we estimate the total proper allowance to be \$9,151,076.22, and that the excessive allowance is \$6,438,538.16. The difference in tax on this basis is approximately \$2,150,000.

There are some other observations I desire to make in reference to that portion of the bureau's answer dealing with the difficulties and expense of making a proper examination for the purpose of determining amortization. It is getting late, and I do not know whether the committee desires to hear me on that at this time.

The CHAIRMAN. I would like to ask Mr. Hartson if the bureau wants to make any reply to Mr. Manson's statement of to-day?

Mr. HARTSON. I believe, Senator, that the general statement should be made here that—

Senator JONES of New Mexico. I do not think you had better make your statement now.

Mr. HARTSON. Very well, Senator. I will be glad to postpone it until the next session.

Senator JONES of New Mexico. You will want some time for reflection, anyhow.

The CHAIRMAN. Do you want to go ahead to-morrow morning, Mr. Manson?

Mr. MANSON. Yes; it is agreeable to me. I will say this, though, that this is the only case I have ready. I want to present the oil situation next, and while that is all worked up, it is going to take me several days to familiarize myself with that oil situation. I wish to present it as a whole. I think I can lay that before the committee in a short time.

The CHAIRMAN. Will you be ready to go ahead on Monday?

Mr. MANSON. Probably.

The CHAIRMAN. Probably? Will you be ready to go ahead on Monday?

Mr. MANSON. I am not sure. I am sure that I will be ready on Tuesday, though.

The CHAIRMAN. We may want to take something up on the prohibition feature of the matter to-morrow, but the representatives of the Income Tax Unit will be excused until the call of the committee.

(The exhibits submitted by Mr. Manson in the Aluminum Company of America are as follows:)

EXHIBIT A

Chart showing plants of the Aluminum Co. of America and subsidiaries which were expanded during the war period and on which amortization is claimed

Aluminum Co. of America:

Logans Ferry, Pa.....	Bronze powder mill.	B.
Massena, N. Y.....	Smelting plant.	B.
Alcoa, Tenn.....	Town site, planing mill, farm.	B.
	Smelting plant.	Partially B.
	Remelting equipment.	B.
	Nitride plant.	U.
	Cement block works.	B.
Mexico, Ky.....	Flourspar mines.	B.
Aluminum Ore Co.:		
East St. Louis, Ill.....	Ore refineries.	B.
Baltimore, Md.....	Ore refinery.	U.
Bauxite, Ark.....	Bauxite mines.	B.

American, Bauxite Co.:	
Bauxippi, Ark.....	Docks, etc. U.
Mobile, Ala.....	Ocean fleet. B.
Aluminum Seal Co., Arnold, Pa.....	Food container caps and seals. B.
Electric Carbon Co.:	
Massena, N. Y.....	Carbon plant. B.
Alcoa, Tenn.....	Carbon plant. U.
Knoxville Power Co., Calderwood, Tenn.	Transmission line. B.
	Town site, farm, etc. B.
Pine Grove Realty Co., Massena, N. Y.	Town site. B.
Republic Mining & Manufacturing Co., Little Rock, Ark.	Sweet Home mine (bauxite). B.
St. Lawrence River Power Co., Massena, N. Y.	Power development. B.
	Farms. B.
St. Lawrence Transmission Co.:	
Potsdam, N. Y.....	Transmission lines. B.
	Colton power development. B.
Badin, N. C.....	Smelting plant. B.
	Remelting equipment. B.
	Carbon plant. B.
	Yadkin Narrows, power development. B.
	Yadkin Falls, power development. B.
	High Rock, power development. B.
Tallassee Power Co.:	
Eastern division, general.....	Town site. B.
	Farms. B.
	Transmission line. B.
Tapoco, N. C.....	Cheeah power development. B.
	Town site. B.
	Western general division. B.
Renouf's Beach, Pa.....	Coal mine. B.
Niagara Falls, N. Y.....	Sheet mill, Niagara Works No. 3. B.
Massena, N. Y.....	Wire mill. B.
	Remelting plant. B.
The United States Aluminum Co.:	
New Kensington, Pa.....	Remelting equipment. B.
	Sheet mill. B.
	Cooking utensil department and job shop. B.
	Four dry. B.
Arnold, Pa.....	Remelting equipment. B.
	Tube mill. B.
	Foil mill. B.
	Molding mill. B.
Edgewater, N. J.....	Remelting equipment. B.
	Sheet mill. B.
	Cooking utensil department. B.

EXHIBIT B

EXTRACT FROM REPORT ON AMORTIZATION CLAIM OF THE ALUMINUM CO OF AMERICA, PITTSBURGH, PA., DATED FEBRUARY 16, 1922

ANALYSIS OF THE ALUMINUM PRODUCTION

The manufacture of aluminum started on a commercial basis in the year 1883 and gradually increased in volume up to the termination of the World War. Increase in the volume of the production is well illustrated in Table 10.

TABLE 10

In column 1 are given the various years for the aluminum production from 1883 up to and including the years 1922 and 1923. Column 2 gives the production of aluminum in the United States as given by the metals industry for the years 1891 and 1919, and column 3 gives the percentage of increase of the aluminum production as calculated in column 2. Decreases in percentage are

marked by an asterisk (*). In column 4 are given the United States Geological Survey estimates of the aluminum production in the United States for the years dating from 1883 to 1904. The years from 1904 to 1915 are the geological surveys for the consumption of aluminum. It will be noted that while the values of columns 2 and 4 differ materially for various years, the quantity for 1915 is practically the same.

Column 5 gives the quantity, in long tons, of bauxite produced in the United States in 1890 and 1920, and in column 6 is shown the relative percentage of increase for these various years. Where marked by an asterisk it notes a decrease from the previous year. Columns 7 and 8 are taken from figures furnished by the Aluminum Co. of America and are the actual production quantities, column 7 being the number of long tons of bauxite shipped from Bauxite, Ark., for the years 1903 and 1921. In 1903 is the percentage of increase from year to year during this period, the quantities marked with an asterisk indicating a decrease from the previous year's production. Column 9 indicates cumulative quantity from the year 1903 up to 1921 of bauxite shipped from the taxpayer's mines at Bauxite, Ark., and is compiled by taking the 1903 production and adding on each successive year's supply.

TABLE 10.—Showing the production of aluminum, bauxite, and alumina in the United States for the various years from 1883 to 1921

Year	Metal industry		U. S. Geological Survey, Jan. 13, 1917			Aluminum Co. of America, tons of bauxite		
	Production in pounds	Per cent increase	Pounds aluminum	Tons bauxite	Per cent increase	Per annum	Per cent increase	Cumulative quantities from 1903 to 1921
1	2	3	4	5	6	7	8	9
1883-84			233					
1885			283					
1886			3,000					
1887			18,000					
1888			19,000					
1889			47,468					
1890			61,281	728				
1891		30.0	150,000	1,844	153.0			
1892	150,000	143.0	259,885	3,593	95.0			
1893	259,885	73.3	333,629	10,518	191.0			
1894	333,629	28.4	333,629	9,179	13.0			
1895	530,000	61.8	550,000	11,066	12.0			
1896	920,000	67.3	920,000	17,069	55.0			
1897	1,300,000	41.3	1,300,000	18,364	12.0			
1898	4,000,000	207.7	4,000,000	20,590	12.5			
1899	5,200,000	30.0	5,200,000	25,149	22.0			
1900	6,500,000	25.0	6,500,000	35,290	40.0			
1901	7,150,000	10.0	7,150,000	23,184	34.5			
1902	7,150,000	00.0	7,150,000	18,905	18.2			
1903	7,300,000	2.1	7,300,000	27,322	44.5			
1904	7,500,000	2.7	7,500,000	48,087	76.5	9,827		9,827
1905	7,700,000	2.6	8,600,000	47,661	1.0	18,650	90	28,483
1906	11,350,000	47.4	11,347,000	48,129	1.0	29,836	14	55,329
1907	14,350,000	26.4	14,910,000	75,332	56.5	42,276	57	97,605
1908	20,000,000	81.2	17,211,000	97,776	30.0	52,584	24	150,189
1909	33,000,000	150.0	11,152,000	52,167	46.7	28,997	46	179,186
1910	15,000,000	15.4	34,219,000	129,101	148.0	98,608	240	277,794
1911	12,000,000	20.0	47,734,000	148,932	15.4	107,176	9	384,970
1912	28,000,000	138.3	40,125,000	150,618	5.0	119,203	12	504,173
1913	40,000,000	39.8	65,607,000	159,865	2.0	108,984	9	613,157
1914	64,000,000	62.2	82,397,000	210,241	31.5	157,571	45	770,728
1915	90,000,000	38.6	79,129,000	219,318	4.4	174,577	11	945,305
1916	99,000,000	10.0	99,806,000	297,041	35.5	244,298	40	1,189,603
1917	139,000,000	40.4		425,100	43.0	339,465	39	1,529,068
1918	200,000,000	43.8		568,690	33.5	450,627	33	1,979,695
1919	225,000,000	12.5		605,721	6.7	480,510	7	2,460,205
1920	198,000,000	12.0		376,566	138.0	316,892	134	2,777,097
1921				521,308	39.0	437,172	38	3,214,269
						114,031	74	3,328,300

↑ Indicates decrease.

Table 10 was tabulated in order to illustrate from various different points the enormous increase of the aluminum production from 1883 onward and to show that up to the present time there was practically no decrease in production but one continuous increase from year to year over that of the previous year's supply. The figures as set forth in columns 7, 8, and 9 of actual production of bauxite will be later used in compiling Tables 11, 12, and 13.

TABLE 11.—Showing the production of bauxite, alumina, and aluminum as given by the United States Geological Survey, the "metal industry," and the Aluminum Co. of America with the estimate in columns 6 and 7 of the normal production of bauxite and aluminum by the income tax unit.

Date	1	2	3	4	5	6	7	8	9	10	11	12	13
	Metal industry		Aluminum Co.		Geological Survey		Aluminum Co.				Estimate of income tax		
	Pounds of aluminum	Increase	Pounds of aluminum	Increase	Long tons of bauxite	Increase	Long tons of bauxite	Increase	Pounds of aluminum	Increase	Tons of bauxite	Pounds of aluminum	Increase
		<i>Per cent</i>		<i>Per cent</i>		<i>Per cent</i>		<i>Per cent</i>		<i>Per cent</i>			<i>Per cent</i>
1913.....	64,000,000	62.5	46,000,000	12.2	210,241	31.5	157,571	45.0	112,447,747		157,571	51,000,000	
1914.....	90,000,000	38.6	56,000,000	21.7	219,318	4.4	174,577	11.0	136,238,936	22.0	173,328	56,000,000	10
1915.....	99,000,000	10.0	89,000,000	58.8	297,041	35.5	244,296	40.0	189,410,775	39.0	190,000	61,500,000	9½
1916.....	139,000,000	40.4	113,500,000	27.5	425,100	43.0	339,465	39.0	272,552,813	43.0	207,100	67,000,000	9
1917.....	200,000,000	43.8	127,500,000	12.0	568,690	33.5	450,627	33.0	314,250,884	15.2	224,600	73,000,000	8½
1918.....	225,000,000	12.5	122,500,000	14.0	605,721	6.7	480,510	8.0	334,038,678	6.2	242,568	79,000,000	8
1919.....	198,000,000	12.0	126,500,000	3.5	376,566	61.0	316,892	34.0	1245,999,861	126.4	250,800	81,000,000	7½
1920.....			136,000,000	7.5	521,308	39.0	437,172	38.5	338,941,538	38.0	268,356	87,000,000	7
1921.....			60,000,000	56.0			114,031	74.0	1119,992,321	64.5	302,956	92,300,000	6½
1922.....			100,000,000	67.0							319,606	98,200,000	6
1923.....			100,000,000	66.0								103,000,000	5½
Total.....			1,077,000,000		3,223,985		2,715,143		2,063,865,563		2,722,493	879,000,000	

¹ Decrease.

² Estimated.

NOTE—The total shipment of bauxite between 1913 and 1921 was tons..... 2,715,143
 The production of alumina between 1913 and 1921 was pounds..... 2,063,865,563
 The manufacture of aluminum as on schedules from 1913 and 1921 was do..... 877,000,000
 The constant used in reducing tons of bauxite to pounds of alumina as taken from above data is 324

TABLE 11

Table 11 gives the comparison of the taxpayer's figures and the metal industry's figures for the production of aluminum in the relative per cent of increase in each case, as set forth in columns 1, 2, 3 and 4. The taxpayer's figures were taken from the production chart as furnished by it in volume 1, page 46, of its schedule for amortized properties.

Columns 5 and 6 are the quantities of bauxite used in the United States and the percentage of increase from year to year as furnished by the United States Geological Survey. Columns 7 and 8 are the actual production figures for bauxite and were furnished by the taxpayer. It gives bauxite shipments from Bauxite, Arkansas, for the years 1913 to 1921 with the relative percentage of increase or decrease for each of these years. The decrease is noted by ¹. Columns 9 and 10 are the figures which were furnished by the taxpayer and indicate the total amount of alumina produced at East St. Louis for the years 1913 to 1921, column 10 being the percentage of increase or decrease of one year over that of its predecessor. The decrease is marked by ¹.

The total production of alumina compared with the total production of bauxite for the series of years from 1913 to 1921, bears a very close relation to the taxpayer's statement that it took 5 tons of bauxite to produce two tons of alumina. In calculations made from figures furnished by the taxpayer, we find that there were 2,286,923 long tons of bauxite shipped from the Bauxite Mines at Bauxite, Ark., to the taxpayer's plant at east St. Louis, for the purpose of alumina production. In reducing this to pounds, we find that the above tonnage is equivalent to 5,132,880,000 pounds of bauxite and we also find that during these years, 1913 to 1921, there were produced 2,094,513,563 pounds of alumina, thus checking the proportion of 5 to 2.

Columns 11 and 13 are taken from Table 12, which will hereinafter be described. Column 11 is the estimate placed by the Income Tax Unit of what would have been the taxpayer's normal production of bauxite for the years 1913 to 1923 inclusive, had not the world war occurred. Column 13 is the relative increase of one year over that of its predecessor as calculated by the bureau's engineers.

It will be noted that the amounts arrived at for the years 1913 and 1923 are in very close relation to those estimated by the taxpayer for the same period. The taxpayer's figures for the years 1922 and 1923 were 100,000,000 pounds of aluminum to be produced per annum.

It will also be noted from column 3 that a total number of pounds of aluminum produced for the years 1913 to 1921 was 877,000,000 pounds. The total tons of bauxite produced for the same period were 2,715,143 tons. This establishes a constant of 324, which, when multiplied by the tons of bauxite as indicated in column 11, will give the relative number of pounds of aluminum which this bauxite would have produced. Thus, we have the basis for the figures as set forth in column 12, the total of which amounts to 879,000,000 pounds of aluminum as the estimated production for the years 1913 to and including 1923.

TABLE 12.—*Aluminum Co. of America Report—Tabulation showing the basis for constructing the production curves A, B, and C on curve sheet No. 1*

Date 1	Basis for curve A actual shipments of bauxite			Basis for curve B estimated normal shipments			Basis for curve C 1911 to 1914, annual average	
	Annual shipment 2	Increase 3	Cumulative amounts 4	Annual shipments 5	Increase 6	Cumulative amounts 7	Annual shipments 8	Cumulative amounts 10
		<i>Per ct.</i>			<i>Per ct.</i>			
1913	157,571	45	770,728	157,571	10	770,728	140,000	910,000
1914	174,577	11	945,307	173,328	10	944,056	140,000	1,050,000
1915	244,298	40	1,189,603	190,000	9½	1,134,056	140,000	1,190,000
1916	339,465	39	1,529,068	207,000	9	1,341,156	140,000	1,330,000
1917	450,627	33	1,979,695	224,600	8½	1,565,756	140,000	1,470,000
1918	480,510	8	2,460,205	242,568	8	1,808,324	140,000	1,610,000
1919	316,892	32	2,777,097	250,800	7½	2,059,124	140,000	1,750,000
1920	437,172	38	3,214,269	268,356	7	2,327,480	140,000	1,890,000
1921	114,031	74	3,328,300	258,806	6½	2,613,386	140,000	2,030,000
1922				302,956	6	2,916,242	140,000	2,170,000
1923				319,606	5½	3,235,848	140,000	2,310,000
Total	2,715,143			2,722,493			164,000	

NOTE.—Quantities used in columns 2, 3, and 4 are taken from column 8 of Table 10, the actual shipments as submitted by taxpayer, and are the basis for constructing curve A on curve sheet No. 1. Quantities in columns 5, 6, and 7 were obtained by using the cumulative amount up to December 31, 1912, and using the 1913 years output increased by 10 per cent for 1914; 1914 output is increased by 9½ per cent for 1915, etc., each year reducing per cent of increase by one-half per cent. Curve C is the average production of 1911 to 1914, used as normal throughout 1913 to 1923.

TABLE 12

Table 12 is used as a basis for the construction of the production-curve of 1913 to 1923, which will be later described. Columns 2, 3, and 4 are the basis for the curve of actual production, which is indicated as curve A.

Column 2 gives the actual shipment of bauxite from the taxpayer's mines, Bauxite, Ark.

Column 3 gives the percentage of increase or decrease of the production of the previous year. The percentage of decrease is indicated by a *. Column 4 is the cumulative amount of the shipments and it is this data which is used in stepping off the points shown in curve A. Column 2, 3 and 4 were taken from columns 7, 8, and 9, Table 10.

Columns 5, 6, and 7 are used as a basis of curve B, and it is the vital part of this analysis. It is the pivot upon which the basis of normal production swings. The method of compiling curve B will be described later. It is sufficient at this time to say that it covers a period starting with 1913 and ending with the year 1923.

The cumulative amounts of bauxite shipped are taken the same as is shown in columns 2 and 4 of this same table. The bureau has estimated a normal increase of 10 per cent over the 1913 shipment for the 1914 production. The 1914 production, in turn, is increased by 9½ per cent for the 1915 estimated normal production, thus decreasing the percentage of increase each year for one-half of 1 per cent until finally in 1923 the percentage of increase over the 1922 shipment is only 5½ per cent.

Columns 8, 9, and 10 are used for constructing curve C, and it is used to indicate what the effect would have been in the cumulative amounts had the shipments of bauxite remained normal as averaged for the years 1911 to 1914. In this curve of increase, there is presumed to be no increase or decrease from one year's production to that of another.

TABLE 13.—Actual shipments of bauxite from 1909 to 1914 compared to what would have been a like amount with a regular per cent of increase above that of the previous year

Year 1	Actual shipments		Income estimate of normal increase	
	Shipments 2	Increase 3	Shipments 4	Increase 5
1909.....	98,608		98,608	<i>Per cent</i>
1910.....	107,176	9	110,361	12
1911.....	119,203	12	123,053	11½
1912.....	108,984	10	136,688	11
1913.....	157,571	45	151,040	10½
1914.....	174,577	11	166,144	10
Total.....	766,119		785,894	

† This indicates a decrease from the year previous.

TABLE 13

This table is compiled from the information furnished from columns 7 and 8 of Table 10. The tabulation is used in arriving at the percentage of normal increase in use in compiling the data set forth in Columns 5 and 6 and 7 of Table 12 as above described.

In column 1 of Table 13 are indicated the years previous to the beginning of the World War. In column 2 are shown the shipments of bauxite for the period set forth in column 1. Column 3 gives the relative increase in the percentage of bauxite shipments over that of the previous year. In column 4 it has been decided to so arrange the amounts indicating the shipments of bauxite that the sum total will coincide with the sum total of the actual quantities given in column 2, column 4 being the income tax estimate of what the normal increase should have been had this increase taken place in a uniform instead of an erratic manner as indicated in column 2.

In studying the estimated quantities as shown in column 4, compared with the actual quantities as indicated in column 2, and referring in each case to the percentage of increase given in columns 3 and 5, it will be noted that in column 2 for the year 1912 there is a marked decrease in production, whereas in 1913 there is an abnormal increase in production. Nineteen hundred and fourteen is about normal. If an inspection be made of curve "A" on the diagram No. 1, it will be noted that the rate of increase is extremely regular up to 1914, there being no apparent difference except during the years 1907, 1908, and 1911. In 1914 it is evident that the taxpayer has begun to feel the influence of the demands of the World War and the following years 1915 to 1921 are very much in evidence of the fact and show abnormal increase in production.

It has been the endeavor of the bureau's engineers to take the five years previous to 1914 and give to them a gradual decreasing percentage of production over that of each previous year's percentage of increase and arrive at a per cent which will be used as a starting point for the year 1913 and so continuing this gradual reduction of percentage of increase through the series of years from 1913 and ending with 1923. To this end columns 4 and 5 were computed with a quantity production represented in column 4, the total of which would compare favorably with that of the total of actual production as shown in column 2. The excess of the total of column 4 over the total as shown by column 3 is satisfactory, inasmuch as the bauxite shipment at the starting of this period was rather an abnormally high year compared with the previous year 1908. Column 5 is the percentage used to reduce the irregularities of column 2 to a mathematical regularly decreasing per cent of increase.

CURVE DIAGRAM NO. 1

The exhibit marked "curve diagram No. 1" is compiled from Table 12. Its object is to give diagrammatically the actual amounts of bauxite shipped by the taxpayer from 1903 to 1921 and what effect each successive year had upon the preceding or succeeding year. It clearly indicated influence exerted by the demands due to the World War as shown by the abrupt rise in the curve, indicating the shipments beginning in the year 1914.

Curve A starts with the shipment of beauxite in the year 1903 and continues up to and including the year 1921 and is the actual curve of production. The actual quantities shipped are indicated by the stop lines and estimated normal curve by the curved lines. The complete data for curve A was compiled from information furnished by the taxpayer. The curve of actual production is very regular up to the latter part of 1914. From this date the bureau's engineers have indicated what they considered as the curve of normal production, curve B is taken from Table 12, Column 7.

Curve B starts with the last prewar normal year 1913 and continues through the war period, including postwar year 1923.

INFLUENCE OF IMPORTATION

The bureau's engineers have not taken into consideration the influence that will be exerted by the imports of aluminum from foreign countries. There is no doubt that foreign imports of aluminum have a tendency to reduce the normal output of the taxpayer's product. In order to give the proper relation that exists, prewar and postwar, regarding the number of pounds of aluminum imported compared with the taxpayer's production, there has been prepared Table 14.

Table 14 was compiled from information furnished on page 30 of the United States Geological Survey pamphlet entitled "Mineral Resources of the United States in 1920." This table takes in the years 1913, 1915, 1916, 1917, 1918, 1919 and 1920. For this series of years it gives the pounds and value of crude aluminum imported into the United States. Columns 4 and 5 give the value of manufactured aluminum utensils and the total value of aluminum imports.

It will be noted under the heading of crude and semicrude aluminum that imports for the years 1913 and 1920 bear the relation of 25 to 39, as far as proportions go. This indicates an increase of the 1920 imports of 57% over the 1913 imports. If we refer to column 11 of Table 11, it will be noted that the taxpayer's increase in production for 1920 over and above 1913 is 87,000,000 pounds, compared to 51,000,000 pounds or an increase of 70%. If the increase of the foreign imports was in keeping with the increase of the taxpayer's normal production, there would have been imported in 1920, 42,500,000 pounds of crude aluminum instead of 39,298,649 pounds.

From the above facts, the bureau does not consider that sufficient evidence is at hand to indicate that the taxpayer is suffering at the present time any greater proportion of loss in value of its facilities, due to foreign importations of aluminum, than it was during the prewar time.

TABLE 14.—Aluminum imported for consumption in the United States, 1913, and 1915 to 1920

Date	Crude and semicrude		Manufacture of utensils	Total value
	Pounds	Value		
1913.....	25,095,441	\$4,388,283	\$396,019	\$4,784,302
1915.....	9,293,574	1,765,967	75,612	1,841,779
1916.....	9,698,615	1,752,918	32,952	1,785,570
1917.....	89,291	35,386	21,504	56,890
1918.....	1,690,683	533,704	20,882	554,586
1919.....	13,825,065	4,530,579	38,016	4,568,595
1920.....	39,298,649	12,183,891	883,131	13,077,022

CONCLUSIONS FROM ANALYSES

In considering the value in use of the taxpayer's balanced facilities on the basis of the three postwar years, it will be necessary to take into consideration the average of the actual and the estimated annual production of aluminum for the years 1921, 1922 and 1923. This annual average amounts to 87,000,000 pounds of aluminum.

On page 60 of this report it will be noted that the bureau's engineers estimated that the taxpayer's capacity production was 146,000,000 pounds of aluminum per annum. Thus, with no allowance being made for stock on hand, there would be established a ratio of 87:146 or 59½ per cent.

The taxpayer on page 39, volume 1, of the schedule of amortized property, claims the following production of aluminum for the three postwar years:

	Pounds
Sales for the three postwar years.....	300,000,000
Amount proposed to be used from stock.....	40,000,000
Total amount to be produced.....	260,000,000
Average total annual production.....	87,000,000

The taxpayer's claim for capacity production being 156,000,000 pounds of aluminum per annum, established a ratio of 87:156 or 55.7 per cent. The taxpayer, however, claims 56 per cent as value in use and 44 per cent for amortization.

If no stock had been drawn upon, the taxpayer would have had to produce, according to its own figures, 300,000,000 pounds of aluminum in the three postwar years, or an average of 100,000,000 pounds per annum. Had this been the case it would have established a ratio of 100:156 or 64 per cent value in use upon the balanced facilities.

The bureau's engineers do not consider that it gives the correct indication of what the taxpayer's normal output would amount to, by reducing "Output" at the expense of stock on hand, as it has done in 1921 and proposed to do in the years 1922 and 1923. The bureau's engineers do, however, recognize that the taxpayer's average annual normal output will be lessened for some time to come by throwing upon the market salvage of large quantities of aluminum which was manufactured during the war time. They are willing to take this fact into consideration as well as recommending a reasonable allowance for the reduction of the taxpayer's aluminum stock.

It is recommended that a reduction of 10,000,000 pounds of aluminum from the taxpayer's stock be taken into consideration as well as an additional 5,000,000 for the taxpayer's reduced output caused by salvage products and foreign competition, this reduction allowance to be spread over the three postwar-year periods.

For value in use of the taxpayer's balanced facilities there will be established the following ratio:

Total estimate of normal output for three postwar years in pounds of aluminum.....	261,000,000
Reduced output allowance.....	15,000,000
Annual estimate of three postwar-year output.....	246,000,000
Average annual three postwar-year output.....	82,000,000

Ratio of annual output to production capacity $\frac{82}{146} = 56.16$ per cent.

The bureau's engineers recommend that for the balanced facilities the taxpayer be allowed 56 per cent of the estimated cost upon these facilities as "Value in use" and 44 per cent for amortization.

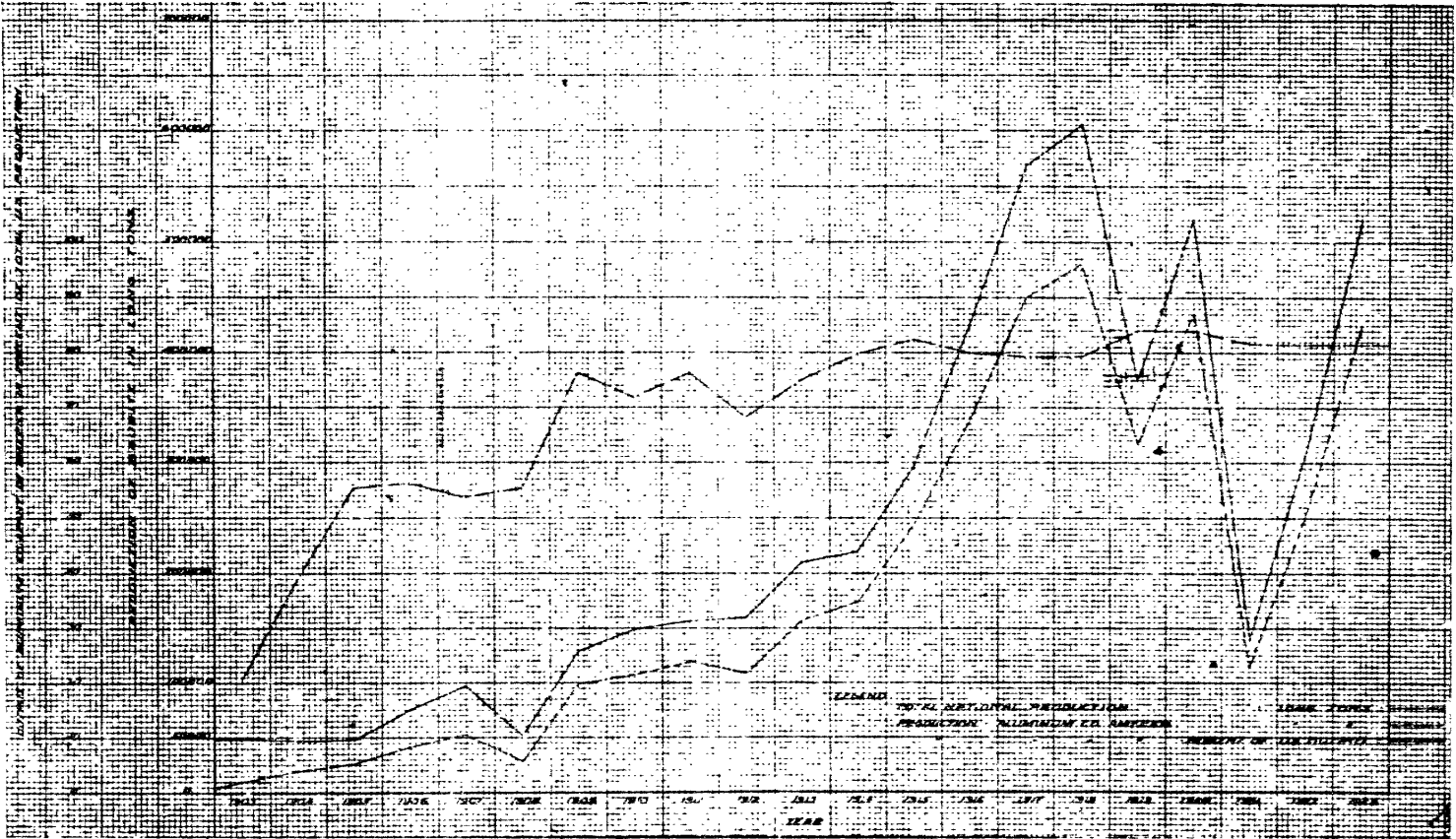
It is recommended that amortization to the amount of \$15,151,840.92 be allowed on a total expenditure of \$30,194,119.62, being approximately 49.7 per cent value in use and 50.3 per cent amortization.

EXHIBIT C

In the engineer's final report there appears in the taxpayer's claim under a paragraph headed "Alumina" the following:

"Alumina: The refining of bauxite produces alumina. This operation requires 5 tons of bauxite, 6 tons of coal, 1 ton of limestone, and one-half ton of soda ash and sundry other raw materials to make 2 tons of alumina. Bauxite is pulverized, mixed with lime and soda ash in solution. In this process the lime is precipitated, carrying with it the impurities of the ore and leaving the alumina (hydrated oxide of aluminum) in the solution. The lime and impurities are then filtered out in what are known as the red mud filter presses. The solution is thence pumped to the precipitating tanks and diluted, which causes the alumina to precipitate, having solubility only in a strong alkaline solution. From the bottom of the precipitation tanks it is then drawn to the white filter presses, in which the alumina is recovered by filtration. The alumina thence is carried by a conveyor to the calciner, in which it is dehydrated and from which it issues in the form of a fine, white powder. This powder contains about 52 per cent of aluminum. It is then shipped to the smelting plants which are located at Badin, N. C., Alcoa, Tenn., Niagara Falls, N. Y., and Massena, N. Y."

From the above it will be seen that in the production of aluminum the ratio is 5 to 1, or in other words, it requires 5 tons of bauxite ore to produce 1 ton of aluminum.



INVESTIGATION OF BUREAU OF INTERNAL REVENUE 1841

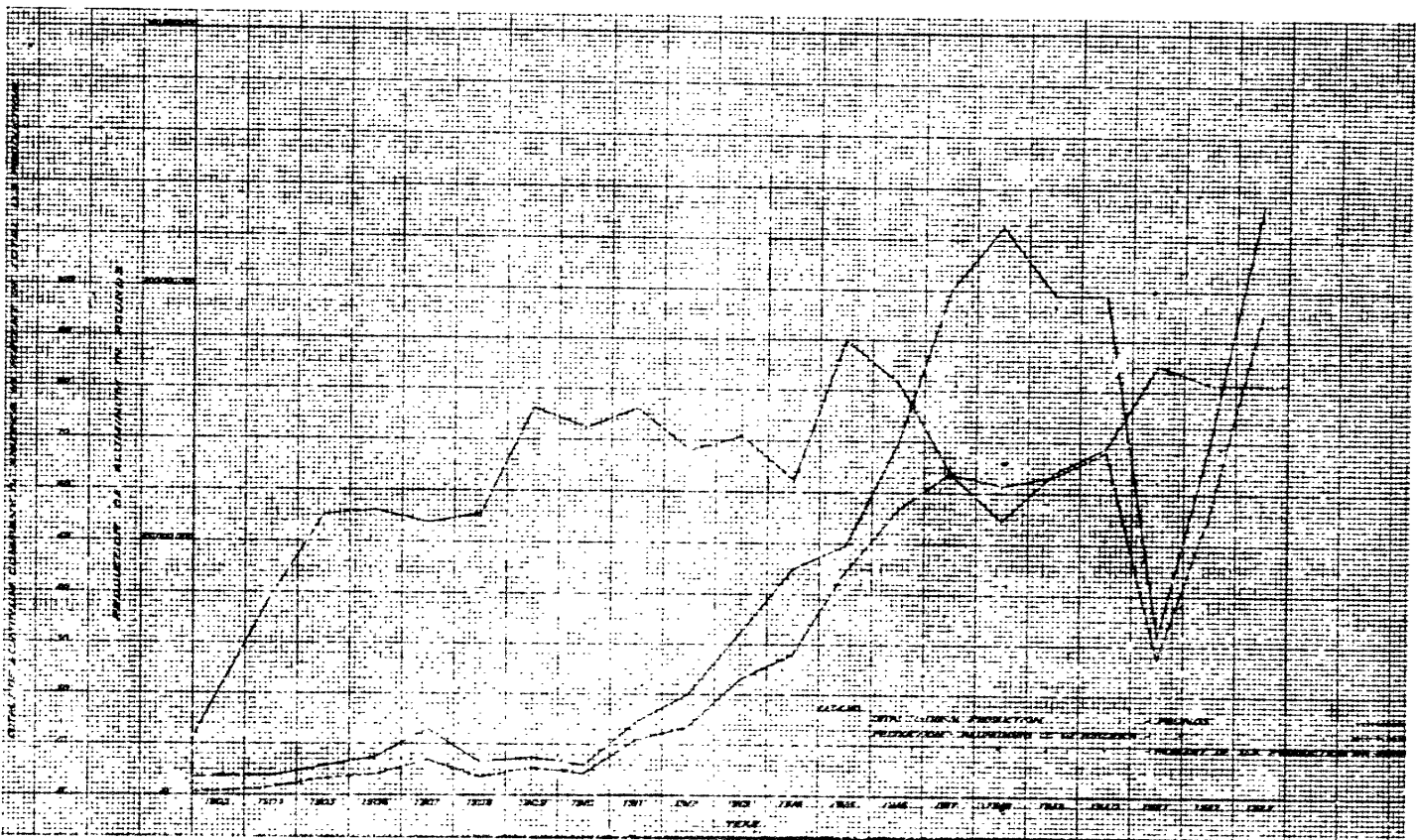


EXHIBIT F
Amortization

Name of plant	Expenditures upon which amortization is allowed				Amortization allowed by unit				Committee engineer's estimates			Remarks	
	1917-18	1919	Total	Value in use	1917-18	1919	Total	Value in use	Approximate proper allowances		Total amortization allowed		
									Approximate ratio between post-war and war cost	Amortization allowed, 1917-18			Amortization allowed, 1919
ALUMINUM CO. OF AMERICA, PARENT COMPANY				<i>P. ct.</i>				<i>P. ct.</i>	<i>P. ct.</i>				
Aluminum plant (unbalanced), Alcoa, Tenn. ¹	\$1,109,026.70	\$445,026.61	\$1,154,053.31	40	\$665,415.98	\$27,016.01	\$692,431.99	40	80	\$665,415.98	\$27,016.01	\$692,431.99	No charge on account of lack of information.
Aluminum plant (balanced), Alcoa, Tenn. ¹	651,948.80	195,672.12	832,620.92	56	286,857.47	79,495.73	366,353.20	100	80	130,389.76	36,134.42	166,524.18	1923 production exceeds war capacity.
Townsite (balanced), Alcoa, Tenn. ¹	328,737.98	-----	328,737.98	56	144,644.72	-----	144,644.72	100	80	65,747.60	-----	65,747.60	Do.
Do. ²	410,922.54	-----	410,922.54	-----	180,805.91	-----	180,805.91	100	80	82,184.51	-----	82,184.51	Do.
Construction equipment ¹	48,176.27	-----	48,176.27	56	21,197.56	-----	21,197.56	100	80	9,635.25	-----	9,635.25	Do.
Do. ²	-----	60,220.33	60,220.33	56	-----	26,496.94	26,496.94	100	80	-----	12,044.07	12,044.07	Do.
Aluminum plant (balanced), Messena, N.Y. ¹	427,944.10	-----	427,944.10	56	188,295.40	-----	188,295.40	100	80	85,588.82	-----	85,588.82	Do.
Bronze powder plant, Logans Ferry, Pa. (balanced). ¹	396,320.00	16,398.01	412,718.01	90	39,632.00	1,640.00	41,272.00	100	80	79,264.00	3,279.60	82,543.60	Do.
Nitride plant, Alcoa, Tenn. (unbalanced). ²	62,197.18	-----	62,197.18	25	46,647.89	-----	46,647.89	25	-----	46,647.89	-----	46,647.89	No charge on account of lack of information.
Construction material, Alcoa (unbalanced). ²	-----	127,018.18	127,018.18	50	-----	63,891.14	63,891.14	50	-----	-----	63,891.14	63,891.14	Do.
Total	3,435,223.48	429,335.34	3,864,558.82	-----	1,573,496.93	198,539.82	1,772,036.75	-----	-----	1,164,873.81	142,865.24	1,307,239.05	

ALUMINUM ORE CO.													
Haffaw mine, Mexico Ken. (balanced). ¹	115,676.12		115,676.12	56	50,897.49		50,897.49	100	80	23,135.22		23,135.22	1923 production exceeds war capacity.
River navigation (unbalanced). ¹	108,747.60		108,747.60	30	76,123.32		76,123.32	30		76,123.32		76,123.32	
Electrolyte plant, East St. Louis (balanced).	330,263.79	12,434.79	342,698.37	56	145,316.06	5,471.22	150,787.28	100	80	66,052.76	2,486.92	68,539.68	1923 production exceeds war capacity.
Dwellings, East St. Louis (balanced). ¹	21,550.00	1,159.62	22,709.62	56	9,482.00	510.23	9,992.23	100	80	3,310.00	2,231.92	4,541.92	Do.
Works No. 1, East St. Louis (balanced). ¹	593,218.00		593,218.00	56	261,015.92		261,015.92	100	80	118,643.60		118,643.60	Do.
Works No. 2 (balanced). ¹	2,558,943.88	152,732.62	2,711,676.50	56	1,125,935.32	67,202.35	1,193,137.67	100	80	511,788.78	30,546.52	542,335.30	Do.
Refinery (unbalanced). ²	1,452,061.72	68,216.86	1,383,844.86	25	1,089,046.29	51,162.64	1,037,883.65	25		1,089,046.29	51,162.64	1,037,883.65	No change account lack of information.
Total	5,180,961.11	98,109.96	5,278,571.07		2,757,816.40	22,021.16	2,779,837.56			1,889,099.97	17,697.28	1,871,202.69	
ELECTRIC CARBON CO.													
Carbon plant, Massena, N. Y. (balanced). ¹	664,937.49	68,606.93	733,589.22	56	292,572.50	30,187.05	322,759.55	100	80	132,987.50	13,721.39	146,708.89	1923 production exceeds war capacity.
Carbon plant, Alcoa, plant item A (unbalanced). ³	1,160,659.08		1,130,659.08	43	661,575.69		661,575.69	00	80	232,131.82		232,131.82	
Carbon plant, Alcoa, plant item B (unbalanced). ³	194,653.07		194,653.07	86	27,251.43		27,251.43	100	80	38,930.61		38,930.61	Do.
Total	2,020,249.64	68,606.93	2,088,901.37		981,399.62	30,187.05	1,011,586.67			403,049.93	13,721.39	417,771.32	
KNOXVILLE POWER CO.													
Transmission line (balanced). ²	804,065.74	314,412.79	489,652.95	56	353,788.93	138,341.65	215,447.30	100	80	160,813.15	62,882.66	97,930.59	1923 production exceeds war capacity.
Alcoa Dam (balanced). ¹	33,494.02		33,494.02	56	14,737.37		14,737.37	100	80	66,988.04		66,988.04	
Total	837,559.76	314,412.79	523,146.97		368,526.30	138,341.65	230,184.67			227,801.19	62,882.66	164,918.63	
PINE GROVE REALTY CO.													
Pine Grove Realty Co., Massena, N. Y. (balanced). ¹	525,581.82		525,581.82	56	231,256.01		231,256.01	100	80	46,251.20		46,251.20	Do.

¹ Completed in time for war use.

² Not completed in time for war use.

Amortization—Continued

Name of plant	Expenditures upon which amortization is allowed			Amortization allowed by unit			Committee engineer's estimates					Remarks	
	1917-18	1919	Total	Value in use	1917-18	1919	Total	Value in use	Approximate proper allowances				
									Approximate ratio between post-war and war cost	Amortization allowed, 1917-18	Amortization allowed, 1919		Total amortization allowed
REPUBLIC MINING AND MANUFACTURING COMPANY													
Sweet Home Mine, Little Rock, Ark. (balanced) ²	53,990.00	7,185.78	61,184.87	<i>P. ct.</i> 56	23,759.60	3,161.74	26,921.34	<i>P. ct.</i> 100	<i>P. ct.</i> 80	10,799.82	1,437.16	12,236.98	1923 production exceeds war capacity.
ST. LAWRENCE RIVER POWER CO.													
Massena, N. Y. (balanced) ¹	754,399.85	67,913.00	822,312.85	56	331,935.93	29,881.72	361,817.65	100	80	130,879.97	13,982.60	144,862.57	Do.
ST. LAWRENCE TRANSMISSION CO.													
Power Plant, Colton, N. Y. (balanced) ¹	1,989,221.95		1,989,221.95	56	873,257.63		873,257.63	100	80	397,544.39		397,544.39	Do.
Transmission System (balanced) ¹	187,142.55		187,142.55	56	82,342.72		82,342.72	100	80	37,428.51		37,428.51	Do.
Total	2,176,364.30		2,176,364.30		957,600.35		957,600.35			435,272.90		435,272.90	

AMERICAN BAUXITE CO.													
Mines, Bauxite, Ark (balanced) ¹	185,157.34		185,157.34	56	81,169.25		81,169.25	100	80	57,001.41		57,001.41	Do
Ore dock, Bonaparte, Ark (unbalanced) ¹	198,201.97	77,383.37	275,585.32	50	138,713.46	54,168.56	192,911.82	50	80	138,713.46		192,911.82	No change; account lack of information
Ocean fleet (2 barges--Hertmitage and Dykes (unbalanced) ¹	1,018,129.66	328,122.44	1,346,252.10	50	1,346,252.10		1,346,252.10	100	80	1,346,252.10		1,346,252.10	Do
Ocean fleet (2 steamers--Mackenzie and Gibbons)	303,129.50	122,707.20	503,129.50	50	503,129.50		503,129.50	100	80	503,129.50		503,129.50	Do
Additional allowance on		600,461.00	600,461.00	50	222,523.21		222,523.21	100	80				No justifiable basis for computation
Calumining plant, Alcoa, Tenn. ¹	95,387.82	22,968.98	118,356.80	27	71,540.87	17,243.74	88,782.61	25	80	71,540.87	17,243.74	88,782.61	No change; account lack of information
Total	1,877,601.96	1,241,963.08	3,622,684.56		2,964,258.37	71,410.10	2,437,668.47			2,097,237.40	71,410.10	2,168,707.50	
TALLASSEE POWER CO.													
Yadkin Narrows power plant (balanced) ¹	999,853.02	40,494.98	1,040,348.00	56	439,935.33	17,817.79	457,753.12	100	80	199,970.60	8,029.06	208,000.66	125% production; exceeds war capacity
Eastern General (housing development, Badin, N. C.) (balanced) ¹	1,184,205.28		1,184,205.28	56	521,050.32		521,050.32	100	80	236,841.06		236,841.06	Do
Carbon plant, Badin, N. C. (balanced) ¹	492,714.37	68,958.26	561,672.63	56	293,567.52	30,341.63	323,909.15	100	80	32,548.87	13,791.67	46,340.52	Do
Aluminum plant, Badin, N. C. (balanced) ¹	623,580.97	159,282.67	782,822.74	56	274,375.23	70,084.58	344,459.81	100	80	124,710.01	31,826.53	156,536.54	Do
Yadkin Falls power plant (balanced) ¹	1,253,945.46	484,372.62	1,738,318.08	56	751,736.00	213,123.95	964,859.95	100	80	250,786.69	96,874.52	347,673.61	Do
High Rock power site (balanced) ¹	572,258.40	26,474.01	598,732.41	56	271,753.70	11,648.56	283,402.26	100	80	114,451.68	5,294.80	119,746.48	Do
Cherokee development (balanced) ¹	4,493,667.21	1,182,606.78	5,677,273.99	56	1,977,213.57	520,786.98	2,498,000.55	100	80	988,733.44	236,721.30	1,225,454.80	Do
Western general division, Tapoco, N. C. (balanced) ¹	46,221.12	15,318.75	61,539.87	56	20,337.29	6,753.11	27,090.40	100	80	9,244.22	3,089.75	12,333.97	Do
Melton development, Tapoco, N. C. (balanced) ¹	232.78		232.78	56	102.42		102.42	100	80	46.56		46.56	Do
Fontana development, Tapoco, N. C. (balanced) ¹	524.25		524.25	56	230.67		230.67	100	80	104.85		104.85	Do
Eastern General, Badin, N. C. (balanced) ¹	111,254.18	6,083.65	117,337.83	56	48,951.84	2,677.69	51,629.53	100	80	22,250.84	1,117.13	23,367.97	Do
Eastern general, Badin, N. C., (balanced) ¹	108,116.11		108,116.11	56	47,571.09		47,571.09	100	80	21,623.22		21,623.22	Do
Total	9,859,607.25	1,953,926.24	11,813,533.49		4,336,964.98	812,156.45	3,524,808.53			1,971,350.44	390,783.24	2,362,133.68	

¹ Completed in time for war use.

² Not completed in time for war use.

Not obtainable.

Amortization—Continued

Name of plant	Expenditures upon which amortization is allowed				Amortization allowed by unit				Committee engineer's estimates				Remarks
	1917-18	1919	Total	Value in use	1917-18	1919	Total	Value in use	Approximate proper allowances				
									Ap- proxi- mate ratio be- tween post- war and war cost	Amorti- zation allowed, 1917-18	Amorti- zation allowed, 1919	Total amorti- zation allowed	
THE UNITED STATES ALUMINUM CO.													
Rolling mill, Niagara Falls, N. Y. (balanced) ¹	60,036.18		60,036.18	P. ct. 56	26,416.80		26,416.80	P. ct. 100	P. ct. 80	12,007.24		12,007.24	1923 production exceeds war capacity.
Foil and tube mill, Arnold, Pa. (balanced) ¹	181,851.02	32,554.00	214,405.02	56	80,014.44	14,323.76	94,338.20	100	80	36,370.20	6,510.80	42,881.00	Do.
Rolling mill, New Kensington, Pa. (balanced) ¹	249,356.36	19,423.07	268,779.43	56	109,716.80	8,546.15	118,262.95	100	80	49,871.27	3,884.61	53,755.88	Do.
Coal mine, Canoufs Beach, Pa. (balanced)	199,114.92		119,114.92	56	87,610.56		87,610.56	100	80	39,822.98		39,822.98	Do.
Cable mill, Massena, N. Y. (balanced) ¹	101,673.31	13,050.00	114,723.31	56									Do.
Rolling mill, Edgewater, N. J. (balanced) ²	109,566.19		109,566.19	56	48,209.12		48,209.12	100	80	21,913.24		21,913.24	Do.
Total	901,597.98	102,890.63	1,004,488.61		397,231.12	45,271.88	441,975.86			180,319.59	20,378.12	200,897.71	

¹ Completed in time for war use.² Not completed in time for war use.

EXHIBIT G

FOR THE CONFIDENTIAL USE OF COMMITTEE AND COUNSEL

To: Mr. L. C. Manson, counsel, Senate Committee Investigating the Bureau of Internal Revenue.

Office Memorandum No. 12.

Subject: Amortization.

Taxpayer: Aluminum Co. of America and subsidiaries.

Figures involved:

Allowance claimed on original returns (no action by unit)	\$6, 852, 697. 36
Revised claim by taxpayer	18, 124, 339. 28
Unit's allowance	15, 151, 840. 92
Final claim by taxpayer	18, 268, 435. 82
Final allowance by unit	15, 589, 614. 39
Estimated proper allowance, 1917-1918, \$8, 573, 976. 22;	
1919, \$573, 100. 01	9, 151, 076. 23
Difference in tax (approximately)	2, 150, 000. 00

SYNOPSIS OF CASE

From an examination of the records in the case it appears:

1. The "value in use" of taxpayer's "balanced plants" is determined by the ratio of the completed war plant capacity to the production for the years 1921, 1922, and 1923. We maintain that the "value in use" to the taxpayer is measured by the ratio of this war capacity to the maximum production actually maintained for a reasonable period, in this case not over one year.

2. The production for the years 1922 and 1923 have been estimated. In the case of Bauxite, we know that the estimate for 1923 is far below actual production. In the case of the production of aluminum, which is closely dependent on that of bauxite, a careful study convinces us that in 1923 production of aluminum is also greatly underestimated.

3. A gross error has been made in the computation for "Value in Use," amounting to a difference of 20 per cent in the amortization allowance on the "balanced plants," or to \$2,234,874.12.

4. The allowance for amortization on the ocean fleet has been changed from a fairly sound and reasonable basis, founded on costs incurred in 1917 and 1918 plus damages for cancellation, prospective profits, and salvage value to contractor, to a determination which is based on a mere guess. This guess allows the taxpayer an additional allowance of \$222,523.21.

SPECIAL NOTE

There are probably many other points on which this case should be criticized, but we unfortunately lack the proper information, for the reason that data asked for has not been supplied by the Aluminum Co.

On December 5, 1924, a letter was addressed to the president of the Aluminum Co. of America, asking for copies of the annual reports of the company to its stockholders, for war and post-war years. The following is a reply to our letter:

ALUMINUM CO. OF AMERICA,
New York, N. Y., December 15, 1924.

Mr. EARL J. DAVIS,
Counsel, Senate Committee for
Investigation Bureau of Internal Revenue,
United States Senate, Washington, D. C.

DEAR SIR: We acknowledge receipt of yours of December 5 asking for our annual reports.

The Aluminum Co. of America, having only a few stockholders, does not publish its annual reports. If you will let us know what particular information your committee desires for its uses in the investigation it is conducting on the income tax law, we will be glad to see what can be done toward furnishing it.

Yours very truly,

ARTHUR V. DAVIS, *President.*

It is noted that the above letter does not state that these annual reports do not exist but simply that they are not published. However, on December 29, 1924, the following letter was addressed to the president of the Aluminum Co. of America:

DECEMBER 29, 1924.

Mr. ARTHUR V. DAVIS,
President, Aluminum Co. of America,
New York, N. Y.

DEAR SIR: In regard to your letter of the 15th instant, addressed to Mr. Earl J. Davis, in which you kindly offer to furnish us with information in regard to your company necessary for our work, will you please furnish us with the following for each year from 1913 to 1923, both inclusive:

- (a) Total production of bauxite (company and all subsidiaries).
- (b) Total production of aluminum (company and all subsidiaries).
- (c) Total capital expenditures (for plant and equipment).
- (d) Total capital expenditures (real estate).

We trust this information is readily available and we would appreciate it greatly if you could furnish same promptly.

Very respectfully,

L. C. MANSON,
Counsel, Senate Committee for
Investigating Bureau of Internal Revenue.

No answer to this letter has as yet been forthcoming. The answers to these questions were necessary for a complete analysis of this case. It is true that we have been able to get production figures for the entire country for bauxite and aluminum which have enabled us to predict this company's production. We have been unable, however, to get the necessary facts concerning the post-war construction program and policy of the taxpayer. It is probable that in this case, as in the U. S. Steel case, the taxpayer may have given many evidences of a policy of expansion, both by his capital expenditures and by the construction in the post-war period, of facilities similar to those on which amortization has been allowed.

HISTORY OF BUSINESS

Up to the year 1888 the cost of refining aluminum was such as to prohibit its general commercial use. In that year a cheaper method of production was discovered by Charles M. Hall. In 1889 the Aluminum Co. of America (known as the Pittsburgh Reduction Co. until 1907) was incorporated for the purpose of producing aluminum under the Hall process. Many improvements have been made in recent years in the method of manufacturing aluminum and to-day it is one of the largest industries in this country.

The Aluminum Co. of America is now composed of various subsidiary companies, which companies manufacture a large majority of the aluminum used in this country. A list of the subsidiary companies is shown in Exhibit A attached to this report, which list includes only the companies which enter into the amortization allowances made under the parent company's claim. With the exception of the Aluminum Seal Co. (subsidiary), amortization has been allowed in various amounts to all of the companies included in Exhibit A.

DESCRIPTION OF CASE

This taxpayer has submitted three claims for amortization as follows:

Original claim filed 1919.....	\$6, 852, 697. 36
First supplemental claim filed Dec., 1921.....	18, 124, 339. 28
Final claim filed Apr., 1923.....	18, 268, 435. 82

The original claim was based on a flat percentage of 25 per cent of the total cost of the facilities which the taxpayer contended were subject to amortization. This claim was not considered at any length by the unit as the basis upon which it was set-up by the taxpayer was not in keeping with the rules and regulations of the unit. The taxpayer was so advised and as a result filed a claim for \$18-124,339.28. This claim was filed in accordance with instructions from the Unit, and was investigated and reported on by the Income Tax Unit's engineers who recommended an allowance of \$15,151,890.92. As a result the taxpayer took exception to the amount of amortization recommended for allowance and filed these exceptions with the Income Tax Unit. Following this, conferences were

held between the taxpayer and representatives of the Income Tax Unit and these differences of opinion were adjusted. The engineers reported on these exceptions and allowed \$15,445,517.85. Later, the taxpayer claimed that the basis of computation of the amortization should be changed in view of the revision of the regulations and furnished data on which this revision of amortization was based. In this final claim, dated April, 1923, the taxpayer claimed \$18,268,435.82 and in the final report of the Income Tax Unit's engineers on this claim the taxpayer was allowed \$15,589,614.39 or 85.3 per cent of the amount claimed.

The difference in the basis upon which the taxpayer submitted its second claim and that upon which the third and final claim was submitted is that, in the first instance, there was no differentiation made between the facilities which were completed and put into operation in time to manufacture products for war time use and those not completed and put into use in time to manufacture war time commodities. In the final claim the taxpayer did make such differentiation between the two classes of facilities.

DISCUSSION OF CASE

Preliminary to entering into a discussion of this case it is necessary to read into the record pages 68 and 69 of the engineer's first report on taxpayer's claim, entitled "Conclusion from analysis." The complete analysis is given in Exhibit B attached. This analysis covers the "Value in use" determination for "balanced plants."

"CONCLUSIONS FROM ANALYSIS

"In considering the value in use of the taxpayer's balanced facilities on the basis of the three postwar years, it will be necessary to take into consideration the average of the actual and the estimated annual production of aluminum for the years 1921, 1922, and 1923. This annual average amounts to 87,000,000 pounds of aluminum.

"On page 60 of this report it will be noted that the bureau's engineers estimated that the taxpayer's capacity production was 146,000,000 pounds of aluminum per annum. Thus, with no allowance being made for stock on hand, there would be established a ratio of 87 : 146 or 59½ per cent.

"The taxpayer on page 39, volume 1, of the schedule of amortized property, claims the following production of aluminum for the three postwar years:

	Pounds
Sales for the three postwar years.....	300, 000, 000
Amount proposed to be used from stock.....	40, 000, 000
Total amount to be produced.....	260, 000, 000
Average total annual production.....	87, 000, 000

"The taxpayer's claim for capacity production being 156,000,000 pounds of aluminum per annum establishes a ratio of 87 : 156 or 55.7 per cent. The taxpayer, however, claims 56 per cent as value in use and 44 per cent for amortization.

"If no stock had been drawn upon, the taxpayer would have had to produce, according to its own figures, 300,000,000 pounds of aluminum in the three postwar years or an average of 100,000,000 pounds per annum. Had this been the case it would have established a ratio of 100 : 156, or 64 per cent value in use upon the balanced facilities.

"The bureau's engineers do not consider that it gives the correct indication of what the taxpayer's normal output would amount to, by reducing output at the expense of stock on hand, as it has done in 1921 and proposes to do in the years 1922 and 1923. The bureau's engineers do, however, recognize that the taxpayer's average annual normal output will be lessened for some time to come by throwing upon the market salvage of large quantities of aluminum which was manufactured during the war time. They are willing to take this fact into consideration as well as recommending a reasonable allowance for the reduction of the taxpayer's aluminum stock.

"It is recommended that a reduction of 10,000,000 pounds of aluminum from the taxpayer's stock be taken into consideration as well as an additional 5,000,000 for the taxpayer's reduced output caused by salvage products and foreign competition, this reduction allowance to be spread over the three postwar-year periods.

"For value in use of the taxpayer's balanced facilities there will be established the following ratio:

Total estimate of normal output for three postwar years in pounds of aluminum.....	261, 000, 000
Reduced output allowance.....	15, 000, 000
Annual estimate of three postwar-year output.....	246, 000, 000
Average annual three postwar-year output.....	82, 000, 000

Ratio of annual output to production capacity $\frac{82}{146} = 56.16$ per cent.

"The bureau's engineers recommend that for the balanced facilities the taxpayer be allowed 56 per cent of the estimated cost upon these facilities as "Value in use" and 44 per cent as amortization."

To clarify the above we give the following definition of "balanced" and "unbalanced" plants. A "balanced" plant is one which is operating at its full capacity when the entire facilities of the Aluminum Co.'s organization as a whole are producing their maximum output. An "unbalanced" plant is one which is not operating at its full capacity when the organization as a whole is producing its maximum output.

The total amortization allowance on "balanced" plants is \$11,174,370.62. The total amortization allowance on "unbalanced" plants is \$4,415,243.77.

The first point noted in the above method is that the Unit recommends the use of an average production figure obtained from the production in the years 1921, 1922, and 1923. The ratio of this average to the completed war plant capacity gives the "Value in use." We maintain in this case, as in the United States Steel case, that the taxpayer must have a plant of sufficient capacity to meet peak demands for production which occur for a reasonable period. In this case we think that a period of one year is a very liberal allowance. It is obvious that the taxpayer, with a plant insufficient to meet rude peak demands, will suffer a loss of business and profit, and conversely, it can not be considered to have sustained a loss because he had too great a capacity in a few years of general business depression.

The second point noted is that the production for the years 1922 and 1923 has been estimated by the taxpayer and that the actual production for 1921 was used. The following are the taxpayer's figures:

	Sales	Taken from stock	Production
1921.....	60, 000, 000		<i>Pounds</i> 60, 000, 000
1922.....	120, 000, 000	20, 000, 000	100, 000, 000
1923.....	120, 000, 000	20, 000, 000	100, 000, 000
Total.....	300, 000, 000	40, 000, 000	260, 000, 000
Average.....	100, 000, 000		87, 000, 000

By use of a chart constructed from pre-war production figures, the engineers attempt to set up the production of this company for 1921, 1922 and 1923 purporting to show what the production of this company would have been if the war had not occurred. These figures are as follows (see page 62a, Exhibit B):

1921.....	92, 200, 000
1922.....	98, 200, 000
1923.....	103, 000, 000
Total.....	293, 500, 000
Average.....	97, 800, 000

Inasmuch as the engineers have used the taxpayer's figure for normal annual postwar production of 87,000,000 rather than the above figure of 97,800,000, we assume that they have realized the unsoundness of their trying to predict what would have happened if the war had not occurred. The only other assumption possible being that they have made a mistake.

Inasmuch as the final engineer's report on this claim was not submitted until June 26, 1923, it would appear that the Unit has been negligent in not requiring

the taxpayer to furnish actual production data for the year 1922 and the first half of 1923. In order to show what an effect such data would probably have had on taxpayer's allowance we have made a computation from reliable sources as to aluminum and bauxite production for the years 1922 and 1923. These computations check the taxpayer's statement (see Exhibit C) to the effect that 5 long tons of bauxite produces 1 ton of aluminum. This is shown graphically for bauxite in Exhibit D attached and for aluminum in Exhibit E attached. The result of the acceptance of the 5 to 1 ratio stated by the taxpayer gives the following production figures:

	Bauxite	Aluminum
	Tons	Pounds
1921	114,031	54,532,000
1922	252,000	112,600,000
1923	425,000	190,000,000
Total		357,132,000
Average		119,000,000

From the above it is seen that, accepting the unit's determination of completed war capacity equal to 146,000,000 pounds, even on a three-year average the "value in use" would be $\frac{119,000,000}{146,000,000} = 81.5$ per cent, instead of 56 per cent as determined by the unit. However, as we do not admit the correctness of the above averaging method, we maintain that as the 1923 production must have been much in excess of the completed ware capacity of 146,000,000 pounds, the "value in use" to the taxpayer of the "balanced" plant facilities was 100 per cent.

The tabulations contained in the Exhibit F attached show the final amortization allowances made by the unit to all the subsidiaries of the Aluminum Co. of America, as well as our approximate computations for arriving at what we would consider a just allowance from the evidence received from the written record. The result of the above computations shows as follows:

The unit's final allowance	\$15,589,614.39
Our approximate figure	9,151,076.23
Difference in allowance	6,438,538.16

The third point noted is that a gross error has been made in the computations of "value in use" as applied by the unit. On page 68 of the engineer's first report they state that they do not consider that the reduction of output at the expense of stock on hand, in the computation of the average postwar output, gives a correct indication as to what the taxpayer's normal output would amount to. They therefore disallow the 40,000,000-pound stock reduction which the taxpayer claimed. They do, however, allow a 10,000,000-pound stock reduction and a 5,000,000-pound reduction in output due to the placing of "salvage" aluminum on the market. In their actual computations they have used for the normal postwar output the 87,000,000-pound figure which was used by the taxpayer in its computations. It will be noted that this figure of 87,000,000 pounds was deduced from a computation involving a 40,000,000-pound stock reduction. In using this figure (87,000,000 pounds) the unit has actually reduced stock to the extent of 40,000,000 pounds plus 15,000,000 pounds, or 55,000,000 pounds. This error, granting for the moment that their basis of computation is correct, involves an increase in amortization allowed from 35 to 44 per cent, or approximately 20 per cent of the actual amortization allowed. This amounts to \$2,234,874.12 in actual allowable amortization in favor of the taxpayer.

The fourth point to be noted is that the method of computing the amortization allowance on the ocean fleet of the American Bauxite Co., a subsidiary of the Aluminum Co., of America, has been changed from a fairly sound and reasonable basis in the first engineer's report to a method based on mere conjecture in the final report. In computing the allowable amortization of the "ocean fleet," consisting of two steel steamers and two steel barges and operated by the American Bauxite Co. (a subsidiary), the first engineer's report allowed 100 per cent amortization for 1918 expenditures plus 15 per cent for certain anticipated profits, plus 15 per cent for loss to the taxpayer by reason of cancellation of the contract with the shipbuilders, or 132.25 per cent in all. No amortization was allowed on 1919 expenditures. The taxpayer took exception to this allowance and after conferences

with representatives of the unit, the engineers submitted a final report completely changing the basis of computation. In this report the engineers allowed 100 per cent amortization of 1918 expenditures and 50 per cent amortization of expenditures incurred during 1919 up to September 30, the end of the amortization period. This 50 per cent was purely an arbitrary figure and to our mind a wild guess, as there is absolutely no data found in the record which tends to show that 50 per cent is nearer the correct figure than 40 or 60 per cent would have been. In other words, while there may have been some good reasoning to uphold the first engineer's report and while the basis upon which amortization was recommended was fairly sound, the only reason for changing the basis of computation in the final report appears to be a desire on the part of the unit to affect a compromise with the taxpayer at the expense of the Government to the extent of approximately \$222,000.

CONCLUSION

From the above we conclude again, as in the United States Steel case, that the averaging and estimating 1921, 1922, and 1923 production should be condemned. We further submit that a gross error has been made in computing the taxpayer's amortization allowance and that the case should be fully opened up as provided under section 250d, revenue act of 1921.

Respectfully submitted.

RALEIGH C. THOMAS,
Investigating Engineer.

Approved:
L. H. PARKER,
Chief Engineer.

EXHIBIT H

ALUMINUM CO. OF AMERICA,
Pittsburgh, Pa., January 23, 1925.

Mr. L. C. MANSON, *Counsel,*
Senate Committee for Investigating Bureau of Internal Revenue,
United States Senate, Washington, D. C.

DEAR SIR: Replying to your letter of December 29, 1924, the bauxite production, in long tons, in the United States, of the Aluminum Co. of America and its subsidiaries, in the years asked for, is as follows:

	Tons		Tons
1913.....	188, 014	1919.....	350, 432
1914.....	198, 359	1920.....	489, 219
1915.....	278, 144	1921.....	124, 387
1916.....	391, 441	1922.....	283, 095
1917.....	514, 137	1923.....	494, 085
1918.....	528, 703		

The aluminum production, in pounds, in the United States, for the Aluminum Co. of America and its subsidiaries, in the years asked for, is as follows:

	Pounds		Pounds
1913.....	47, 279, 477	1919.....	128, 461, 052
1914.....	57, 973, 360	1920.....	137, 930, 298
1915.....	90, 504, 221	1921.....	54, 531, 996
1916.....	115, 106, 939	1922.....	73, 632, 867
1917.....	129, 834, 073	1923.....	128, 658, 222
1918.....	124, 724, 825		

It is not possible without an inordinate amount of work to itemize the capital plant expenditures. The total amount expended by the Aluminum Co. of America and its subsidiaries, domestic and foreign, for capital expenditures, during the years referred to, is as follows:

1913.....	\$622, 292. 64	1919.....	\$12, 851, 584. 09
1914.....	6, 974, 339. 11	1920.....	19, 887, 600. 51
1915.....	12, 579, 574. 36	1921.....	2, 219, 519. 78
1916.....	15, 247, 786. 45	1922.....	2, 713, 543. 24
1917.....	17, 455, 986. 84	1923.....	4, 371, 338. 34
1918.....	16, 771, 288. 68		

Trusting that the foregoing will give you the information you desire, we are,
Very truly yours,

G. R. GIBBONS, *Secretary.*

TABLE I. Value in use as determined by income tax engineers

	Aluminum in pounds
1921 production (partly estimated by Aluminum Co.)	60,000,000
1922 production (estimated by engineer)	98,200,000
1923 production (estimated by engineer)	103,000,000
Total	261,200,000
Average	87,000,000
Allowance for scrap (per year)	1,667,000
Allowance for surplus stock year	3,333,000
	5,000,000
Average yearly production	82,000,000

End of war capacity (bureau's figure), 146,000,000 pounds.

Value in use = 82,000,000 ÷ 146,000,000 = 56 per cent.

TABLE II. Value in use as computed according to formula used by Income Tax Unit engineers, but using actual production as now claimed by Aluminum Co. of America for the years 1919, 1920, 1921, 1922, and 1923

	Aluminum in pounds
1919 production	128,461,052
1920 production	137,930,298
1921 production	54,531,996
1922 production	73,632,867
1923 production	128,658,222
Total	523,214,435
Average	104,642,887

Value in use = 104,642,887 ÷ 146,000,000 = 71.7 per cent.

TABLE III. Value in use as computed according to formula used by Income Tax Unit engineers, but using the actual production as now claimed by Aluminum Co. of America for the years, 1919, 1920, and 1923

	Aluminum in pounds
1919 production	128,461,052
1920 production	137,930,298
1923 production	128,658,222
Total	395,049,572
Average	131,683,191

Value in use equals 131,683,191 divided by 146,000,000 equals 90.2 per cent.

TABLE IV. Value in use as computed by Income Tax Unit engineers, but using actual production as now claimed by the Aluminum Co. of America for the year 1920

	Aluminum in pounds
1920 production	137,930,298

Value in use equals 137,930,298 divided by 146,000,000 equals 94.5 per cent.

TABLE I-A

(Revised to allow for difference in necessary capacity and actual production)

	Pounds
Average yearly production as shown in Table I	82,000,000
Required capacity (production × ratio) = 127	104,140,000
End of war capacity (taxpayer's figure)	156,000,000

Value in use equals required capacity divided by war capacity equals 67 per cent.

TABLE II-A

(Revised to allow for difference in necessary capacity and actual production)

	Pounds
(1) Average yearly production as shown in Table 2	104,640,000
(2) Required capacity (production × ratio) = 127	132,900,000
(3) End of war capacity (taxpayer's figure)	156,000,000
(4) Value in use, 85 per cent.	

TABLE III-A

	Pounds
(1) Average yearly production as shown in Table 3	131,680,000
(2) Required capacity (production × ratio) = 127	167,230,000
(3) End of war capacity (taxpayer's figure)	156,000,000
(4) Value in use, 100 per cent.	

TABLE IV-A

	Pounds
(1) Average yearly production as shown in Table 4	137,930,000
(2) Required capacity (production × ratio) = 127	175,170,000
(3) End of war capacity (taxpayer's figure)	156,000,000
(4) Value in use, 100 per cent.	

EXHIBIT J

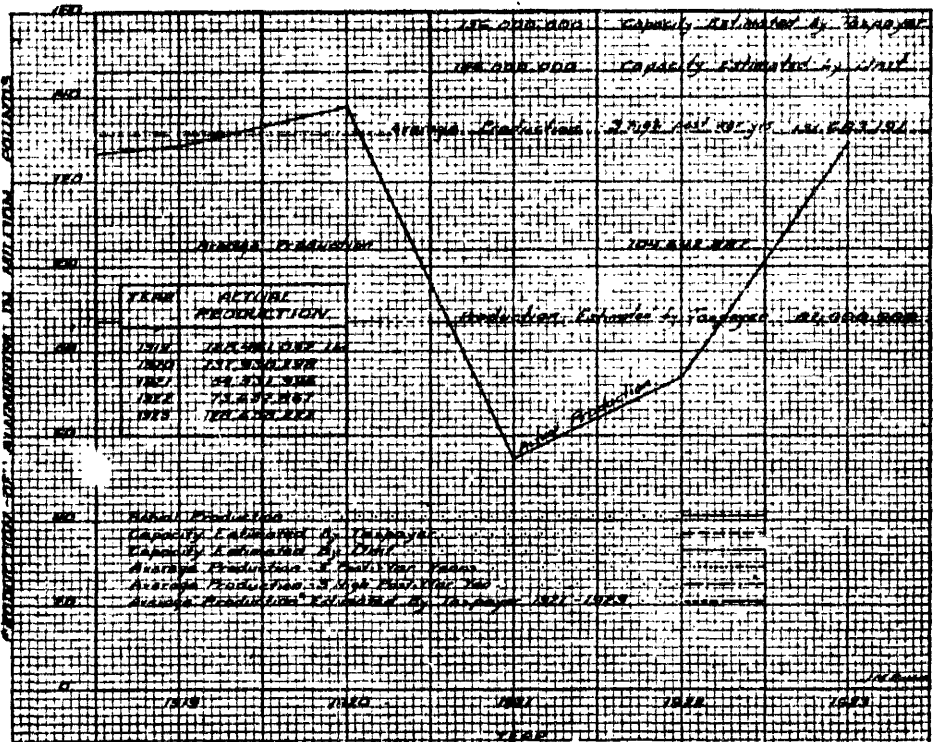


EXHIBIT K

Monthly production of pig aluminum in pounds, smelting plant, Alcoa, Tenn.

Month	1915	1916	1917	1918	1919	1920
January.....	791,600	1,314,835	2,367,110	1,710,524	1,581,242	1,448,201
February.....	779,369	1,295,395	2,509,910	1,573,220	1,487,430	1,699,566
March.....	891,262	1,362,431	1,644,769	1,764,413	1,533,004	1,867,667
April.....	856,886	1,331,705	2,367,372	1,701,175	1,679,348	1,996,933
May.....	897,805	1,572,356	2,593,220	1,683,567	1,570,761	2,141,939
June.....	901,308	1,698,678	2,326,149	1,671,447	1,527,371	2,123,458
July.....	893,319	1,902,562	2,056,956	1,625,627	1,818,878	2,087,664
August.....	903,351	2,051,750	2,104,351	1,181,201	1,830,544	1,638,556
September.....	967,059	2,070,836	1,767,487	808,680	1,447,706	1,823,770
October.....	1,316,929	2,085,389	1,911,882	848,979	1,327,539	1,674,754
November.....	1,247,000	2,082,249	1,840,941	1,178,291	1,388,111	1,557,986
December.....	1,327,865	2,141,236	1,660,006	1,574,467	1,441,534	1,417,120
Total.....	11,773,752	20,909,422	24,850,153	17,318,591	18,634,368	21,477,623
Maximum monthly production by 12.....	1,327,865	2,141,236	2,593,220	1,764,413	1,830,544	2,141,939
A) proximate capacity.....	15,934,380	25,094,832	31,118,640	21,172,956	21,966,528	25,703,268
Ratio capacity production (per cent).....	135.34	122.89	125.22	122.26	117.88	119.67

(Whereupon, at 12.30 o'clock p. m., the committee adjourned until to-morrow, Friday, February 6, 1925, at 10.30 o'clock a. m.)