

STENOGRAPHERS' MINUTES

BEFORE THE

Interstate Commerce Commission

Valuation

DOCKET NO. 364 et seq

Valuation of the Carolina, Clinchfield and Ohio Ry. Co., et al.

vs.

At Washington, D. C.

Date Oct. 28, 1926.

COMMUNICATIONS REGARDING THIS TRANSCRIPT SHOULD BE ADDRESSED TO WASHINGTON OFFICE

SMITH & HULSE, Official Reporter
1742 K ST., N. W., WASHINGTON, D. C.

BEFORE THE INTERSTATE COMMERCE COMMISSION

 IN THE MATTER OF THE VALUATION OF THE :
 CAROLINA, CLINCHFIELD AND OHIO RAILWAY :
 COMPANY, ET AL. : Valuation :
 : Docket 384 :

 IN THE MATTER OF THE VALUATION OF THE :
 CAROLINA, CLINCHFIELD AND OHIO RAILWAY :
 COMPANY OF SOUTH CAROLINA : Valuation :
 : Docket 377 :

 IN THE MATTER OF THE VALUATION OF THE :
 BLACK MOUNTAIN RAILWAY COMPANY : Valuation :
 : Docket 381 :

Room 1115, I. C. C. Building,

Washington, D. C.

Thursday, October 28, 1926.

The above-entitled matters came on for oral argument before the Commission (Division 1) at 10 O'Clock a.m.

PRESENT: Commissioners Meyer, Aitchison, and Lewis.

APPEARANCES: Mr. Edward C. Bailly, 24 Broad Street, New York City; and Mr. O. K. Morgan, Johnson City, Tennessee, appearing in behalf of protestants.

Mr. Oliver E. Sweet, and Mr. Grover L. Swink, appearing in behalf of the Bureau of Valuation.

P R O C E E D I N G

Commissioner Meyer. The argument this morning is in valuation docket numbers 364, 377, and 381. Mr. Bailly, you are noted for four hours and thirty minutes, and the Bureau has asked for two hours and thirty minutes. I do not think we have had the pleasure of listening to you in a valuation argument before, but from hearing you argue other cases I know you are a man of few words. If you can confine yourself to the things that are peculiar to the Clinchfield, I am sure you will be able to get along with much less time than four hours and thirty minutes. If you can, we will appreciate that very much.

Mr. Bailly. I hope you will not be disappointed.

Commissioner Aitchison. That is one-seventh of the working time taken up for Creation.

Commissioner Meyer. In other words, as you can well imagine, Mr. Bailly, we have had some of these identical questions discussed in many cases, and, as far as you can, if you will be good enough to point out the things that you believe are peculiarly individual to the Clinchfield, that will help us most.

ARGUMENT OF MR. EDWARD C. BAILLY,

In behalf of Protestants.

Mr. Bailly. I intend to devote the major portion of my time in argument to a discussion of questions of facts relating to certain accounts, and then there are certain

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other questions of procedure and principle that/would like to advert to as briefly as I may. I shall take as much of the time allotted to me as is necessary and will not reserve any in particular for reply to the Bureau. I may wish to say a few words in reply if I have any time left.

We are dealing here with three tentative valuations, those in dockets 364, 377, and 391. These tentative valuations cover the properties of four different carriers. There is first the Carolina, Clinchfield and Ohio Railway, which is a Virginia corporation, and whose properties extend from the Kentucky-Virginia State line to the North Carolina-South Carolina state line, a distance of approximately 250 miles.

Secondly, there is the Clinchfield Northern Railway of Kentucky, a Kentucky corporation whose properties extend from the Virginia-Kentucky state line northward to Elkhorn City, Kentucky, which is a distance of 2.79 miles. This latter property is leased to the Carolina, Clinchfield and Ohio Railway, the Virginia corporation, under a 99-year lease, and was operated on valuation date by that company, and the values of that property are included under valuation docket 364.

Thirdly, there is the Carolina, Clinchfield and Ohio Railway of South Carolina, a South Carolina corporation, whose properties extend from the North Carolina-South Carolina state line to Spartanburg, South Carolina, a distance of approximately

18 miles. This latter property, because of local statutes in South Carolina, was separately owned and technically operated as a separate property, but its officers and employees were the same as those of the Virginia corporation, so that these three properties, those of the Carolina, Clinchfield and Ohio, the Clinchfield Northern Railway of Kentucky, and the Carolina Clinchfield and Ohio of South Carolina were in fact one system of railway, and really operated as such.

Then, in addition, there is the Black Mountain Railway Company, which is valued in docket 331. That is a line located entirely in the State of North Carolina, and extends from a station known as Kona, on the Carolina, Clinchfield and Ohio Railway, up towards Mount Mitchell, a distance of approximately 23 miles. This line was affiliated with the Carolina, Clinchfield and Ohio Railway, but separately owned and separately operated. It is really not a part of the Clinchfield system, and was never so considered. It is entirely different in character and construction and kind of traffic from the Carolina, Clinchfield and Ohio. It was really built to get out lumber in that mountain region. It has severe grades and is very crooked, and is a light line.

Because of the fact that those properties were covered by separate tentative valuations each carrier has made a separate protest, excepting the Clinchfield Northern Railway of Kentucky, and these protests were heard together, and only one

record of testimony in support of the protest or in support of the Bureau's findings was made.

In order that you may have a clear picture of what the Clinchfield system is like, I would like to say a few words about its history and the kind of railroad that it is.

The original conception of a railroad line through the mountain passes where Clinchfield now runs, dates back to 1836 or 1837. The project was for a route from Charleston, South Carolina, to Cincinnati, Ohio, on the Ohio River. One of its principal advocates and promoters was Senator Robert Y. Hayne of South Carolina, more famous in his connection with debates with Daniel Webster. Some of the original engineering surveys for this line were made by John C. Fremont, later renowned as an explorer and soldier. Only a few miles of this proposed line were actually built, and as a whole, the project was a failure.

The project was revived under the name of the Charleston, Cincinnati, and Chicago Railroad, which is familiarly known as the "Three C's." The promoter of this project was General John Wilder, of Indiana, who had been a Brigadier in the Union Army during the Civil War. This project had more substantial financial backing than its predecessor, largely from English investors. A considerable mileage was graded, or partially graded; track was laid on approximately 200 miles in the Carolinas, which is now a part of the Southern Railway system;

track was also laid on approximately 25 miles in Tennessee, 18 of which are now a part of the Clinchfield system. The "Three C's", however, was not completed as planned, because of the failure of Baring Brothers, an English banking firm, in the early nineties. That project came to a standstill in the early nineties.

Following that there were miscellaneous promoters who became interested in the project and proceeded with more or less success, so that by 1905 there was a track in existence and in operation extending from Johnson City, Tennessee southwardly to Spruce Pine, North Carolina, a distance of 63 miles, and in Virginia there was a short stretch of track extending from Dante, which is up toward the Kentucky line, southwardly to Fink, a distance of 7 miles.

The Carolina, Clinchfield and Ohio Railway which we are dealing with, was organized in January, 1905 under the name of the South and Western Railroad Company, and its name was changed to the Carolina, Clinchfield and Ohio in 1908.

This corporation acquired the properties and the franchises of six different corporations in the states where the line is now located, including the 70 miles of railroad which I have mentioned from Johnson City to Spruce Pine and from Dante to Fink. It proceeded to construct new lines closing the gap of 80 miles between Johnson City and Fink, Virginia, on the north, and to extend the line southwardly from Spruce Pine,

North Carolina to Spartanburg, South Carolina, a distance of approximately of 95 miles.

In connection with this southward extension, the Carolina, Clinchfield and Ohio of South Carolina, which I have described, was organized and acquired the title to the 18 miles of line in South Carolina. This corporation has always been controlled by the Virginia corporation through ownership of securities. At the same time the existing 70 miles in Virginia, Tennessee, and North Carolina was largely revised and reconstructed so as to bring it up to the standard of the new work, so that, in effect, the Carolina, Clinchfield and Ohio really constructed a new line of railroad all the way from Dante, Virginia to Spartanburg, South Carolina.

Commissioner Aitchison. When was that?

Mr. Bailly. That was from 1905 to the end of 1909, Mr. Commissioner.

The separate parts of the line were opened for traffic in the years 1908 and 1909, and this line as a whole was opened in December, 1909.

Commissioner Aitchison. How was that constructed, by contract or company force account?

Mr. Bailly. It was constructed partly by a corporation which was organized by the financial interests which owned the Carolina, Clinchfield and Ohio Railway. That is the Cumberland Corporation. The Cumberland Corporation also owned the stock

of a construction company called the Meadows Company, which was the general contractor on all this work. The Meadows Company did the pioneering work. It went in and established lines of communication and did various pioneering work, and also did itself quite a substantial amount of construction. It later subcontracted large portions of the work.

Several years after 1909 construction was begun again to further extend the line northwardly into Kentucky to a connection with the Chesapeake and Ohio at Elkhorn City, which is a distance of approximately 36 miles to Dante, the former northern terminus.

In the course of this construction the Clinchfield Northern Railway of Kentucky, which I have mentioned, was organized and acquired the 2.79 miles in the State of Kentucky. This corporation has also always been controlled by the Virginia corporation through ownership of securities, and upon completion of the construction it leased the 2.79 miles to the Virginia corporation, which has always operated it.

Now, a word or two about the physical characteristics of the line. About 50 miles on the northern end of the line lies in territory bearing a very high grade of bituminous coal. One of the principal purposes of the promoters of the Clinchfield was to afford a direct outlet to the South for these coals, and another purpose was to open a through route from the Carolinas to the Ohio River, which had been in the minds of all

the various promoters.

The country to be traversed in carrying out these purposes is in the heart of the Appalachian region, probably the most rugged and inaccessible territory for railroad construction of the Rocky Mountains. All of the line from Elkhorn City, Kentucky on the north to Marion, North Carolina, on the south, a distance of approximately 218 miles, actually lies in this extremely broken and rugged mountain region, while the 58 miles from Marion, North Carolina, to Spartanburg, South Carolina, lies in the adjacent foothills, which are also sufficiently broken to require extremely heavy grading and bridging.

Since a very heavy movement of southbound coal tonnage was anticipated, it was necessary to provide through this rugged mountainous country a line of easy grades affording cheap and economical operation. This necessarily required a considerable amount of supported grade line running athwart drainage, with numerous tunnels, deep cuts, high embankments and many bridges, all constructed at considerably more than ordinary expense because of the inaccessibility and remoteness of the region from labor markets.

It is worthy of note in this connection that that line has 55 tunnels, aggregating 9 $\frac{1}{2}$ miles in length, and involving practically one million cubic yards of tunnel excavation. This is probably a larger number of tunnels, with a greater aggregate length and yardage than is possessed by any carrier east of

the Rocky Mountains. There are also 170 bridges and viaducts with an aggregate length of four miles.

As indicative of the quantities of material which had to be moved in the construction of this line, it is an interesting fact that there were more than 60 steam shovels engaged in the work, which is a greater number than General Goethals had on the Panama Canal.

In building this line the highest standard then in use by railroads was adopted for roadbed, for track, and for bridges. Eighty-five pound rail, white oak and chestnut ties, rock ballast on main track, and Cooper's E-60 loading for bridges, were used, which were in harmony with the best prevailing practice. In special instances an even higher standard was taken as in the 1-1/2 mile long tunnel through Sandy Ridge, near the north end of the line, where it was desirable to reduce maintenance work to a minimum. In that tunnel locust ties, special tie plates, and 105-pound rail were used in the track structure.

Incidentally, it was necessary to line this and many other tunnels with concrete because of the nature of the rock.

Since economical operation also involves handling of long, heavy trains, especially designed equipment was provided from the very beginning. The Clinchfield was among the first railroads in this country to adopt mallet locomotives for regular freight service. On valuation date 21 of its 63 locomotives

were Mallets. The rolling stock also had to be specially designed to resist the stresses incident to handling in long trains. In consequence the Hopper and gondola cars were of all steel, and the box, stock and flat cars were of steel underframe construction. In addition, the amount of equipment provided was unusually large for a line of this length. This was due to the fact that it was anticipated that in general shipments originating on the line would be consigned to destinations some distance off the line requiring longer than the usual time for the return of the empties. It will accordingly be seen that in these valuations we are dealing, so far as the Clinchfield system is concerned, with a rather unusual type of railroad, considering the nature of the country through which it passes, its extremely light grades, and the operation of exceptionally long, heavy trains. These trains run from 80 to 90 cars, with a gross weight averaging about 6,000 tons.

Commissioner Lewis. Is it comparable in construction to the Virginian, the Norfolk and Western, and the Chesapeake and Ohio, all of which traverse, from east to west rather than from north to south, much of the same territory?

Mr. Bailly. Mr. Commissioner, we generally regarded it -- and I think it is quite generally regarded in the railroad world -- as being more nearly comparable with the Virginian than any other carrier in that neighborhood. The Virginian

was built about the same time. The Deepwater part of the Virginian traverses a country very much the same. It is not quite as inaccessible, not quite as remote from labor and material markets as the Clinchfield, but otherwise the two are quite similar.

That this kind of a line and the character of operation resulted in the economies which were sought is shown by the fact, reported in the tentative valuation in docket 384, that the aggregate railway operating expenses from January 1, 1907 to the date of valuation were 51.6 per cent of the railway operating revenues for the same period, a lower ratio than that of any other carrier in this general region excepting only the Virginian.

Now, a word about the Black Mountain. The Black Mountain Railway lies wholly in the State of North Carolina, as I have stated. It was built in the years 1912 and 1913, principally, largely for the purpose of getting out timber in the vicinity of Mount Mitchell. It is a mountain road, following the drainage, with considerable curvature and steep grades over one summit which lies near the middle of the line.

This line was originally projected by a promoter living at Johnson City, Tennessee, who built the first eight miles from Kona to Micaville, after which it was taken over by interests affiliated with the Clinchfield and completed. On valuation date its capital stock was owned by outside interests, although

its bonds and debentures were owned by the Clinchfield. It is a feeder line for the Clinchfield, but has never been considered as a part of the Clinchfield system, always being operated by its own forces and its earnings always being separately reported.

The value stated in the tentative valuation reports for the various properties under consideration amounted to the following sums:

For the Clinchfield system proper, that is, the Carolina, Clinchfield and Ohio, the Clinchfield Northern Railway of Kentucky, and the Carolina, Clinchfield and Ohio of South Carolina, the total owned property is reported as amounting to \$37,823,155; the total used property \$38,229,587. For the Black Mountain, the total owned is \$374,055, and the total used \$388,622.

Each of these carriers, in the time required by law, had filed its protest against the rules, methods and principles employed by the Commission in making these respective tentative valuations and against the findings of value therein, and has specified various errors, omissions, and mistakes relied upon as the grounds for protest. These are all set forth in the protests, and I shall not endeavor to repeat them in detail. Many of these grounds of protest have been argued in other valuation cases and passed upon and decided by the Commission. I shall endeavor only to discuss such of these

as have been covered in our briefs, but I wish it understood, of course, that any omission of discussion, either in oral argument or in the brief, is not to be deemed as an abandonment or waiver of any of our grounds of protest.

The various errors, omissions and mistakes which have been pointed out in the protest have to do, for the most part, with the engineering, land, and accounting reports which underlie the tentative valuations, and I am going to take up in detail the various accounts to which they relate, where the amounts involved are sufficient to warrant discussion here.

Before doing that, however, there is one point that I would like to emphasize. In the case of all these carriers under valuation in these three dockets, we feel that much the best evidence of construction costs during the ten-year period prior to June 30, 1914, which is the period which the Commission considers in fixing unit prices, is afforded by the actual costs developed in the construction of these lines. These lines were, for the most part, built in that ten-year period, and the records of their costs under actual construction conditions have for a long time either been in the possession of the Bureau of Valuation or known to it. The representatives of the Bureau have at various times been given access to every record of this kind in the possession of the carriers.

We find, nevertheless, that the prices which have been applied by the Bureau in the estimate of cost of reproduction new are

below these actual construction costs. It would appear, from what was developed at the hearing, that this reluctance on the part of the Bureau to use the carriers cost data may have been due to the fact that the Bureau did not consider the cost data of the Meadows Company, which has been mentioned, and which was the general contractor for the work, reliable, for various reasons. If that is the reason why it was not given more weight, we feel sure that it is due to lack of complete understanding of the facts.

I would like to say a few words about the Meadows Company and its function in building this railroad. The Meadows Company, as I have already stated, was the general contractor for building the whole line from Dante south. It did practically all of the pioneering in this construction work. It also performed a considerable part of the construction work itself, and later sublet the remainder to other contractors. The records of what the work cost the Meadows Company, whether performed by its own forces or by some other contractors, are all available, and it is these records which we claim are the best evidence of construction costs in this territory for this kind of a railroad during the pricing period. These costs represent the actual outlay of the Meadows Company, and do not include any profit paid by the railroad company.

Commissioner Meyer. May we infer from that you have complete data regarding the original outlay for the property, and is there any incompleteness in the statement of original cost

in the tentative report?

Mr. Bailly. Yes, there is. It is stated in most cases, Mr. Commissioner, that they have been unable to find the original cost. That, I presume, is due in part to ^{the} fact of / prior construction and existence of the 70 miles, consisting of the 63 miles from Johnson City south and the 7 miles in Virginia, which were constructed by predecessors, and for which there are not complete data.

Commissioner Meyer. But apart from that, are the data that you think are available contained in the tentative report under the head of original cost?

Mr. Bailly. I will have to refer to Mr. Morgan to answer that.

Commissioner Lewis. Here it is right here. It says:

"The original cost to date of the road and equipment, including land owned by the Clinchfield and used for common carrier purposes has not been definitely ascertained."

Then it goes on to say:

"For the following such property constructed by its predecessors in ownership, no accounting or construction records of the outlays for its original construction have been found:"

Them, that covers the 64 miles.

Mr. Bailly. The 70 miles total.

Commissioner Lewis. It is given as 64.25. That takes up the Meadows Company and makes comments along the lines you

have mentioned.

Mr. Bailly. I do not recall exactly, Mr. Commissioner, whether the tentative valuation report states what it cost the Meadows Company to build all the lines that it constructed, but we have all the Meadows Company data and they have all been available to the Bureau at any time they wished to use them, and they have a large part of it in their own records.

Commissioner Meyer. I was wondering whether, for all the property outside of the 60 odd or 70 miles, the original cost data had been included in the tentative report.

Mr. Bailly. I do not think so.

Commissioner Meyer. If such data were available, I was wondering why they were not there.

Mr. Bailly. I do not think so. Why it is not there I do not know.

Commissioner Lewis. The report indicates that part of the consideration was in stock and bonds, and so forth.

Mr. Bailly. The report may contain the amounts paid by the railroad for the lines built by the Meadows Company, but I doubt if it contains the cost to the Meadows Company itself, and that is what we claim is the best evidence — the cost to the Meadows Company, the contractor.

Commissioner Atchison. Is that more or less than the railroad paid the Meadows Company?

Mr. Bailly. I think it was less, Mr. Commissioner. By that

I mean that the railroad paid in securities. Those securities were larger in amount than the actual construction costs.

Commissioner Meyer. The par value of the securities?

Mr. Bailly. The par value of the securities, yes, sir.

The Bureau has criticized the Meadows Company data on various grounds. They say, for example, that it was organized especially for the performance of this work, and it was obviously not an experienced contracting company, and would therefore not adopt the economies that are practiced that were practiced by old and experienced contractors. We think this is a very superficial view of the matter. The fact is that the Meadows Company was operated by men who had a great deal of experience in the contracting field, and the high costs that were developed by the Meadows Company were not in any way due to inexperience or to failure to practice the economies usually practiced by contractors.

The Meadows Company was not, as has also been intimated by the Bureau, a device used by the railroad presumably for the purpose of concealing profits on the construction end of the work, but, on the contrary, it was organized pursuant to a definite plan for keeping down the costs. Because of the inaccessibility and unusual difficulty of a large part of this work, it was thought that better contract prices could be obtained after the necessary equipment had been installed and the work started, and actual experience proved this view to

be correct.

Commissioner Lewis. This report shows that the records of the Meadows Company record cash expenditures for construction amounting to \$31,208,000, all of which was advanced by the Cumberland corporation. "The latter received in payment thereof \$41,964,000 of capital securities delivered by the Clinchfield, to the Meadows Company."

I am quoting from pages 40 and 41 of the tentative report.

Mr. Bailly. The real reason why some of the costs developed by the Meadows Company were higher than prices paid to later contractors was that it did all the pioneering work. It was the first on the ground. It organized the forces, put in the plant, repaired existing roads, opened new roads, and itself performed approximately 90,000 cubic yards of tunnel excavation and 8,000,000 cubic yards of grading work, with a proportionate amount of masonry and other work. The extensive pioneering and preparation of lines of supply, such as roads, camps, storehouses, and the like, made easier the work of the subcontractors who came later, and consequently made it possible to obtain more favorable bids from them. In view of these circumstances the costs developed by the Meadows Company for the parts of the work which it did were not out of line, as intimated by the Bureau, and are fully as competent evidence of prices in this period as are those paid to subcontractors for subsequent portions of the work. They merely

indicate that on different parts of a big construction project different costs will be developed owing to the different difficulties that are encountered at different stages of the work.

We feel that with these facts known and understood, it will readily be seen that the Meadows Company cost data must be used and weighed in any fair consideration of the actual cost of construction of the Clinchfield.

Either for the reasons above stated, or other reasons not disclosed, the Bureau has entirely ignored the Meadows Company's cost in its estimates of cost of reproduction new. It has, however, seen fit to use, at the hearing, the Meadows Company's final estimates, which did not show actual prices at all, but only arbitrary prices established by the railroad company's engineers as a basis of comparison with the actual costs.

Commissioner Meyer. Were those final estimates made by the Meadows Company before the work of construction was done?

Mr. Bailly. I will have to refer you to Mr. Morgan to answer that.

Mr. Morgan. I did not hear that entire question.

Mr. Bailly. It was as to when they were prepared.

Mr. Morgan. The final estimates of the Meadows Company were made upon the close of the Meadows Company's operations, their actual grading and tunnel work, by the engineers that

were in the field.

Commissioner Meyer. I was wondering why they were called estimates, then, since Mr. Bailly spoke of the final estimates. I thought those were calculations made before the work was begun. If those estimates were made at the conclusion of the work --

Mr. Morgan. At the conclusion of the work.

Commissioner Meyer. One naturally wonders why those were estimates, and why they were not an actual statement of facts?

Mr. Morgan. It was the practice, just as it is with all railroads where they have contractors employed, to make an estimate every month of what had been done, and give credit for the previous estimate, and then the last one is for the final estimate, which takes in the entire work.

Commissioner Meyer. The final estimate, then, in fact, ^{is} a record of work accomplished.

Mr. Morgan. Yes.

Mr. Bailly. It is a record, as I understand it, Mr. Commissioner, of the quantities of work accomplished, but in this particular case the prices and costs of that work were not the actual prices and costs, but they were simply arbitrary prices that the railroad company's engineers had established as a basis for comparison with the actual costs developed.

Commissioner Aitchison. I do not understand that. Why that jugglery?

Mr. Bailly. It was not any jugglery, Mr. Commissioner

It appears right on the face of the data which were used by the Bureau, in the form of a note, that these prices were simply established for purposes of comparison.

Commissioner Aitchison. Why was that done? Why did the railroad do it?

Mr. Bailly. I think to measure, as it went along, whether the work was costing what the railroad thought was a fair price.

Commissioner Lewis. I have just been making some estimates here. It seems that for the 196.796 miles of road the construction shown by the Meadows Company's records — if those are the records — of \$21,000,000, would figure out something like \$107,000 a mile. Is that correct?

Mr. Bailly. I think that is correct.

Commissioner Lewis. It was turned over for \$41,964,000 of securities, or practically \$200,000 a mile.

Mr. Bailly. There is considerable in the record as to the accounting, and the investment in road and equipment. I do not know whether I will have time to go into that at all, but there are reasons, which have been shown in the record, why that amount of security was paid to the Meadows Company.

These arbitrary prices I have mentioned, which were established by the railroad company's engineers on these final estimates, were not in any sense contract prices, and they were so stated on the face of the data which the Bureau used

and compiled along with data from other carriers which did show actual contract prices. These arbitrary prices were all lower than the actual costs developed, but they have been used in data produced by the Bureau in supporting its prices just as though ^{they} were actual contract prices. I will advert to that a little more in detail when I come to the discussion of accounts three, grading and five, tunnels.

Also a word in advance of discussion of particular accounts, about the kind of proof that has been presented by the carriers and by the Bureau, respectively.

In reading the record there is a striking contrast between the two. Here we are dealing with engineering estimates and estimates of land values, both of which are largely matters of judgment and opinion. The ordinary way to test the soundness of such values and estimates would be to have the estimators and appraisers presented to testify and be cross-examined so that their methods of judgment could be thoroughly tested. No such testing process has been possible in these proceedings so far as the Bureau's estimates are concerned. The Bureau's conclusions, for the most part, seem to be based upon undisclosed data, arrived at by undisclosed methods, and formed by undisclosed persons who have not been produced as witnesses or subjected to cross-examination.

Commissioner Meyer. As for the undisclosed method, Mr. Bailly, I do not quite understand that, because the methods

employed were rather fully described in the appendix to the Texas Midland case.

Mr. Bailly. That was the only way in which reference has been made to the methods employed, by reference to the appendix to the Texas Midland case. I think it has been developed that in a number of particulars the methods now employed by the Bureau, or the methods actually employed by the Bureau in valuing properties of these carriers, differ from the methods outlined in the Texas Midland case.

Commissioner Aitchison. You will try to point those out, will you?

Mr. Bailly. I do not know whether I can do that or not, Mr. Commissioner. I hope it will come up in the discussion as I go along. I might, for example, specify working capital.

Commissioner Aitchison. There is an appendix to this report, doubtless, on working capital, which may be taken as an exception to the Texas Midland case.

Commissioner Meyer. In what I said regarding the methods just now, I intended to apply only to the methods of appraising lands.

Mr. Bailly. I did not so much refer to the general methods of making the reproduction estimate, Mr. Commissioner, as I did to the particular methods employed by the Bureau in arriving at particular prices.

Commissioner Aitchison. Of course, if our general instructions

and general methods have not been followed, we are interested, and regard anything you say as pertinent.

Mr. Bailly. I am perfectly frank to say, Mr. Commissioner, that I think your general methods laid down in the Texas Midland case have been followed by the Bureau.

It seems to me that no argument is necessary to establish the fact that estimates and appraisals by the employees of the Bureau of Valuation are at least as subject to error as those of any other engineers and appraisers. In fact, there are reasons why they are more liable to err, since they have necessarily relied upon data collected from many sources by many persons, rather than upon their own personal knowledge of the properties or other facts upon which their judgment must necessarily be based.

On the other hand, the evidence submitted by these carriers in support of their protest in these three dockets, is entirely from persons who had the best information concerning the various subjects to which they testified. The engineering testimony was largely presented by Mr. Morgan, who helped to build the line and who had almost daily contact with it ever since. He was personally familiar with every foot of the property, with all the conditions to be encountered in construction work, and with all the difficulties that were actually encountered in the construction of this particular property. It would not be possible to find any one so well

qualified to testify regarding particular properties as Mr. Morgan, and the carrier's various other witnesses were similarly qualified.

To come down to the engineers reports, the final valuations reported in the tentative valuations are based upon underlying engineering, land, and accounting reports, and a very large part of the testimony presented at the hearing had to do with the engineering reports, the estimates of the cost of reproduction new, and cost of reproduction less depreciation of the roadway and structures, and general accounts.

Cost of reproduction new, and cost of reproduction less depreciation, as shown in the engineering reports for the Clinchfield system, amounted to the following sums: As reported originally, the total cost of reproduction new for the Clinchfield system, including the entire property from Elkhorn City to Spartanburg, South Carolina, was \$39,399,581, and the cost of reproduction less depreciation was \$35,162,343.

During the hearing the Bureau made certain recommendations for changes in the engineering report in some accounts. This resulted in increasing the figure for cost of reproduction new from \$39,399,581 to \$35,459,450, and also in increasing the figure for cost of reproduction less depreciation from \$35,162,343 to \$35,703,279.

The carrier's claims for cost of reproduction new for the system as a whole amount to \$4,371,640

In the case of the Black Mountain Railway —
 Commissioner Lewis. What did you figure for cost of re-
 production less depreciation?

Mr. Bailly. We have not set up any figure for cost of re-
 production less depreciation.

Commissioner Lewis. Of course, that \$45,000,000 is in-
 clusive of all three properties — or just two?

Mr. Bailly. All the line from Elkhorn City to Spartan-
 burg. I am going to mention the Black Mountain separately.
 If you wish separate figures for separate parts of the line,
 I have them here.

Commissioner Lewis. I would like to know how you break it
 up. Take, for example, first, the Clinchfield. What is the
 value you have for that?

Mr. Bailly. I think you can see it most clearly, Mr.
 Commissioner, in the tables that are given at the end of vol-
 ume two in our opening brief, which contains the abstract of
 evidence. You will find, beginning on page 259, a heading
 entitled "Summary of Claims", and there on pages 260 and 261,
 are shown all the accounts as reported in the tentative valua-
 tion, the amount of the carrier's claim as to each account,
 and the increases claimed, under the five headings of road,
 equipment, general expenditures, land, and miscellaneous.

On the following page, 262, you will find changes recom-

by the Bureau in the tentative valuation, increasing the amount for accounts one to seventy-seven, to the figure that I have just given you.

Commissioner Lewis. This is for the entire road.

Mr. Bailly. No. That is for the Carolina, Clinchfield and Ohio, including the Clinchfield Northern Railway of Kentucky. In other words, that is for the line from Elkhorn City, Kentucky to the North Carolina-South Carolina line.

Commissioner Lewis. That is a total of \$40,000,000, and your figure is raised to \$54,000,000.

Mr. Bailly. That is right.

Commissioner Lewis. That is the amount claimed by the carrier, using 1914 prices. Of course, that means also the amount as of date of valuation.

Mr. Bailly. Yes.

Commissioner Lewis. What was the date of valuation?

Mr. Bailly. June 30, 1917 for all except the Black Mountain, which was June 30, 1916.

Then you will find, on the succeeding pages, similar summaries for property in South Carolina, which is the Carolina, Clinchfield and Ohio of South Carolina, and for the Black Mountain separately. You can there see just exactly in what accounts the differences lie.

The issues raised by the protests and testimony and briefs, which I desire to cover in this argument, fall naturally

under two headings. There are, first, the issues as to the propriety of prices applied by the Bureau in the reproduction estimates. First under this come the following accounts: Account 3, grading; account 5, tunnels; account 8, ties; account 9, rails; account 11, ballast ; account 12, track laying and surfacing.

There are other accounts where the propriety of the prices applied is also in issue, but the amounts involved are not sufficient to warrant their discussion at this time. They are fully covered in our briefs.

Commissioner Lewis. Before you get away from those differences as to reproduction costs, on what theory is it that you do not set up an estimate of reproduction less depreciation?

Mr. Bailly. The differences are so fundamental between the carriers and the Bureau as to depreciation, for example, that it is almost impossible, or almost unnecessary to set up any separate figure for cost of reproduction less depreciation. The carrier does not agree with the methods and theories of the Bureau regarding depreciation, and I will discuss that later. I think you will see why we did not set up any separate figure for cost of reproduction less depreciation.

There is a second heading, as to issues as to the correctness of the methods and theories followed by the Bureau in the reproduction estimates, and under this I shall, if I have time, discuss the subjects of contingencies, depreciation,

cost of development, or going value, trackage and other contract rights, land, and some general accounts, such as interest during construction, and costs of obtaining money.

To take up, first, the accounts in which there are issues as to the prices applied, the first of these is account 3, grading. In this account the amounts allowed by the tentative valuations, the carriers claims, and the differences in the three dockets, are as follows:

In docket 364, covering the line from Elkhorn City to the North Carolina-South Carolina line, the engineering report will figure \$11,470,898, while the carrier claims \$12,574,648, which is an increase or difference of \$1,103,750.

In the case of the part of the line in South Carolina the difference is only \$59,170, which makes a total increase claimed by the carrier for grading for the Clinchfield system as a whole of \$1,162,920.

In the case of the Black Mountain the difference is small, only about \$20,000. These differences are due entirely to the higher unit prices which the carriers claim should be applied on the estimates of cost of reproduction new. In considering this account it should first be noted that the same unit prices were not applied by the Bureau throughout, but, on the contrary, different unit prices were applied for different portions of these lines. The carriers' protests were accordingly made, and their testimony presented, to meet

this situation.

The weighted average prices per cubic yard, including haul, which were applied by the Bureau and which are claimed by the carriers, respectively, for the different portions of the lines, are as follows:

For the portion of the line in Kentucky, that is, the Clinchfield Northern Railway of Kentucky, the tentative valuation used a weighted average price of 48.4^{cents}/per cubic yard, while the carriers claim it should be 50.91 cents.

For the major portion of the line, that is, all the line lying in the states of Virginia, Tennessee and North Carolina, the Bureau applied a weighted average unit price of 50.63 cents, and the carrier claims 57.59 cents. In South Carolina the Bureau applied 31.45 cents, and the carrier claims 34.45 cents; and on the Black Mountain it applied 40½ cents, and the carrier claims 48.79 cents.

In determining what unit prices are applicable for work of this character it must be borne in mind that these are supported grade lines penetrating the most rugged and inaccessible part of the mountains, and running largely across the drainage.

Commissioner Aitchison. These prices which you gave were average prices for all kinds of classification?

Mr. Bailly. The weighted average prices, Mr. Commissioner.

Commissioner Aitchison. Was there any dispute as to the

Mr. Bailly. No. There is no dispute as to the classification or as to the quantities. The only dispute is as to the prices.

The details of the unit prices claimed you will find on pages 10 and 11 of the carriers' opening brief, and at the top of page 12, you will find these weighted averages which I have mentioned in the form of a table.

In addition, practically all the circumstances which ordinarily enable a carrier to obtain favorable prices for construction work were absent in the original construction of these particular railroads, and conditions on valuation date would not have been essentially different. The country is rugged and inaccessible; the highways are poor; the points of attack via the lines of other carriers are few and far between, and the sources of labor, supplies, and materials are remote. Any contractor doing work in this territory has to import, house, and care for the labor, and bring in supplies, materials and equipment, at more than ordinary expense. All these conditions materially affect the unit prices.

The actual construction of these railroads took place only a few years prior to valuation date, and work was in progress on the various parts of the same from 1905 to 1915, practically all within the period from which the Bureau's pricing data have been taken. These carriers contend that the best evidence obtainable as to the unit prices to be allowed in the estimator

is their own actual costs incurred within this pricing period.

Commissioner Aitchison. That would depend upon whether the classification applied was the same.

Mr. Bailly. There is no dispute as to the classification.

Commissioner Aitchison. You do not quite get me. The best evidence as to what it would be on reproduction is what the carrier did pay.

Mr. Bailly. Yes.

Commissioner Aitchison. That depends on whether they were paying on the same kind of a classification.

Mr. Bailly. That question has never been raised before. I do not think there is any question about it, that the classification were the same in actual construction, or practically the same as they are in the reproduction estimate.

Commissioner Aitchison. That may be a sufficient answer, but we have known of many cases in which, in order to help contractors out, great violence has been done to classification in the final estimate.

Mr. Bailly. I do not think that was so here.

Mr. Morgan. I can state, Mr. Commissioner, that the Bureau had the classifications of the carriers in each cut, in the field, as they went over it, and the classifications were adopted that the carriers had used pretty generally. I do not recall any difference.

Commissioner Aitchison. Mr. Bailly's remark that when the

carrier came to make final settlement on the final estimate, it had done some arbitrary things, impelled my question. I did not know whether those arbitrary things consisted of the forcing of classifications.

Mr. Morgan. There was no forcing of classifications.

Commissioner Aitchison. In the final estimates.

Mr. Morgan. No, sir.

Mr. Bailly. And there has never been any question raised about it, Mr. Commissioner, at the hearings or otherwise, that I have ever heard of, by either side.

In support of the unit prices which the carriers claim, they presented evidence of these actual costs incurred within the pricing period. This evidence was compiled and presented by the carriers' valuation engineer, Mr. Morgan. He was exceptionally well qualified to do this, having been employed on the actual construction work in various engineering capacities throughout the entire period of construction. He therefore knew, from actual personal observation, practically every foot of the lines in question, and was familiar, by actual experience, with every condition to be encountered in railroad construction work in this territory. Because of this experience and familiarity with the records, and the general knowledge of all the pertinent facts, he was able to compile and present an accurate statement of the costs incurred.

In support of the unit prices claimed for the grading work in Virginia, Tennessee, and North Carolina, Mr. Morgan, after a careful study of the carriers' records of costs, compiled and introduced carriers' exhibit number one. This exhibit covers a total of 18,781,560 cubic yards of grading, which is 86.9 per cent of all the valuation yardage. There are 33 different jobs included in this exhibit, and as to each were shown the location of the work, the quantities of common, loose, and solid rock excavation, the total excavation, cost of the grading, exclusive of haul, that is, the bare grading cost, the cost including haul, and the cost of the haul, and the cost of other work incidental to grading. There was other information shown on this exhibit, such as the auditor's charge to grading and the source of the information, the date of the work, and other explanatory matter.

The total cost of grading developed in this exhibit, exclusive of haul and all other extra items, was found to be \$10,379,059, or a weighted average of 55.03 cents per cubic yard. Adding in the haul, but not the other extra items, this became 56.53 cents per cubic yard, and adding in the other items incidental to grading, this became 57.91 cents per cubic yard, and finally, adding the cost of temporary tracks, contract adjustments, and other miscellaneous grading costs, the total grading cost produced a weighted average price of 59.75

cents per cubic yard. It was Mr. Morgan's judgment, after a long and careful study of these costs, that the proper unit prices to be applied for the work in Virginia, Tennessee and North Carolina were 32 cents for common, 46 cents for loose rock, and 87 cents for solid rock, as compared with the Bureau's prices of 28, 42, and 79 cents respectively.

It is worthy of note at this point that the prices used by the Bureau in the case of the Virginian Railway, which has been referred to, and which we consider the most nearly comparable of any other railroad in the region, were 29, 42, and 82 cents, respectively.

Because of the difficulty of handling and moving certain wet material in North Carolina, separate prices were claimed for this material of 40 cents for common, ^{cents} 52 for loose rock, and 90 cents for solid rock.

A similar study of the costs of the work in Kentucky produced a weighted average price of 53.1 cent per cubic yard, and for this portion of the line it was Mr. Morgan's judgment that the unit prices should be 26, 41, and 76 cents respectively, as compared with the Bureau's prices of 24, 39, and 73 cents.

A fact worthy of note in this connection is that the Bureau's unit prices for this section in Kentucky are less than the actual contract prices paid to one contractor on this very work, under a contract let in 1912, which prices were

generally regarded, at the time the contract was let, as being exceptionally low. This contractor's unit prices were 25, 39, and 75 cents, respectively.

Applying the unit prices claimed by the carrier to the valuation yardages for the section in Kentucky, Virginia, Tennessee, and North Carolina, produces the total cost claimed by the carrier, which is an increase of \$1,103,750 over the amount allowed in the engineering report.

Commissioner Meyer. You mean by that, Mr. Bailly, that on page 12 of the brief, volume one, to which you have just referred, the application of the prices in the middle column, the carriers' claims, to the quantities, would produce the prices given in the last column.

Mr. Bailly. No, sir. If you will refer to page 10 of the brief, Mr. Commissioner, instead of page 12, the application of the various unit prices there shown, claimed by the carrier, was distinguished from those used by the Bureau, results in this figure of \$1,103,750.41. In other words, applying the prices which Mr. Morgan thought should be applied to the different classifications for the quantities shown in the reproduction estimate, the detail being given on page 10 of the brief.

Commissioner Meyer. I assume that you admit, or assume in your own calculations in your table on page 12, that the estimate of the cost of reproduction new is below your actual

outlay.

Mr. Bailly. Yes, sir.

Commissioner Meyer. You admit that in your discussion, do you not?

Mr. Bailly. Yes, sir. Those weighted averages on page 12 are simply put in that form to make easy of comparison the effect of the prices used by the Bureau as compared with the carriers' claims, and with the actual costs developed in the carriers' testimony, that being considered a better test of what the comparison is than to take, for example, separately the price claimed for loose rock, solid rock, or common. The weighted average is considered the best means of comparison.

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Now, on the basis of this amount claimed, the weighted average price for Virginia, Tennessee, and North Carolina is 57.59 cents per cubic yard as compared to the actual cost of 59.75 cents per cubic yard and the Bureau's price of 50.65 cents per cubic yard. In other words, the price claimed by the carrier for the portion of the line in Virginia, Tennessee and North Carolina is 7 cents more than the Bureau's price, and it is 2.16 cents less than the costs testified to.

Similar studies were made of the situation in South Carolina and on the Black Mountain Railway. On the basis of these studies and unit prices claimed, the weighted average price in South Carolina claimed by the carrier is 34.45 cents per cubic yard as compared to the actual cost, 35.52 cents per cubic yard, and of the Bureau's price 31.45 cents. In other words, the price claimed by the carrier is exactly 3 cents more than the Bureau's price, and it is 1.07 cents less than the costs testified to.

Similarly, on the Black Mountain, the price claimed by the carrier is 8.29 cents per cubic yard than the Bureau's price, and it is 9.25 cents less than the actual cost testified to.

The principal criticism of the carrier's position and evidence under account 3, which was made in the Bureau's brief, is directed to casting as much doubt as possible upon carrier's cost data. It is admitted that carrier's own actual costs incurred within the pricing period would be the best

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evidence obtainable as to proper unit prices to be used, were it not for these doubts.

In the first place, it is stated by inference that the carrier's costs include operating charges or other improper items of expenditure. There is absolutely no basis in the record or in fact for any such inference. The grading costs in question covered new construction work entirely, and did not cover any additions and betterments work. Nothing was charged to grading in connection with this work except what was and is proper under the Commission's classification of accounts.

It is then stated that another and paramount reason why carrier's actual costs are not indicative of proper unit prices for use in a reproduction estimate is that the work was admittedly done at peak or excessive prices. There is nothing in the record or in protestant's brief to justify this assertion, but the testimony does show and there was claimed in our brief that because of inaccessibility and remoteness from sources of labor, supplies, and the like, construction prices are necessarily higher in this territory than elsewhere, and this applies just as much to-day or on valuation date as it did during the original construction.

Next, an attempt is made to minimize the generally difficult character of the work by asserting that the same kind of conditions present themselves in varying degree on

any new railroad work in this territory, and by stating that the lines of the carriers have not been proven to be any more inaccessible than a major portion of the 166 projects assembled by the Bureau in its grading exhibit, which I will refer to later.

We certainly take issue with these statements, and if the record in these cases prove anything at all, it fully establishes the fact that the lines of these carriers present more difficulties for construction work than any other line in this territory. There is nothing that approaches them in difficulty of access, remoteness from markets, lack of native labor, poor roads, broken and rough terrain, and other difficulties. Other lines, upon investigation, will be found to have some work as to which conditions are similar, but no line can show them in the same proportion.

The major portion of the 166 projects in the Bureau's grading exhibit, do not qualify at all as being comparable, either as to character, size, or cost, and in most of them, anywhere from five to twenty per cent of the grading costs were absorbed by the carrier, and are not shown in the summaries at all. The only jobs in exhibit number 46 which can qualify are the ten selected by Mr. Morgan and embodied in the carrier's exhibit 5, which I shall refer to more at length in a moment.

The Bureau has also criticized carrier's exhibit number 1

4 for not including the Kentucky and South Carolina yardage and costs. This entirely overlooks the fact that the Bureau itself has applied different unit prices in the different valuation dockets and to different parts of the line in valuation docket number 364.

Commissioner Aitchison. Was that not proper?

Mr. Bailly. It was proper, Mr. Commissioner, to do that, and it was also proper for the carrier, in meeting that situation, to present testimony divided in the same way. The carrier's protest and testimony were directed to the unit prices as applied by the Bureau and its exhibit 1 relates only to the cost of the work in Virginia, Tennessee, and North Carolina. The work in Kentucky and in South Carolina was covered separately, following the Bureau's own separate pricing of these portions of the work.

The Bureau also asserts that Meadows Company jobs 2, 25, and 29 possessed abnormalities which condemn their use in arriving at unit prices. Our answer is that all these three jobs show actual costs incurred. We have already explained that the Meadows Company's costs reflect the pioneering work which it did, and for that reason are higher per unit than later costs. They are just as properly included in this exhibit as any other costs of this work, and merely show that large construction jobs always have higher costs on some parts of the work than in others. Even if these

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three jobs be eliminated entirely from carrier's exhibit number 1, the remaining 29 jobs still show actual average costs of 57.95 cents per cubic yard, which is in excess of the carrier's claim.

The Bureau comments on the fact that the carrier's claim of 57.59 per cubic yard, weighted average, is less than the average cost of 59.75 cents per cubic yard shown in exhibit number 1. This is correct. In fact, in all four sets of unit prices for grading, the carriers have claimed less than the actual costs shown. This was because it was believed that in reproduction now there would be some economies that could be effected; whether or not this is true, of course, is purely speculative, but that is the assumption that was made. But, in all four sets of prices, the carriers have allowed generously for a possible saving that could be effected, and have added nothing whatever for the upward trend of costs, which they considered existed.

We therefore submit that the prices claimed are the minimum which should be applied in a reproduction now estimate.

What has the Bureau produced in support of the unit prices used in these engineering estimates for grading? In the first place, it has not produced the man or men who fixed the unit prices, and there has been no opportunity for the protestants to test the soundness of their reasons or judgment in

establishing these unit prices. The only evidence that can be found in the record in support of them is contained in the testimony of Assistant Cost Engineer Elgen of the Bureau of Valuation and in the Bureau's exhibit number 46, which was prepared and introduced by Mr. Elgen. Mr. Elgen did not claim to have fixed these prices. He only reviewed them, and basing his judgment on the averages developed in exhibit 64, stated that in his opinion they were ample.

Exhibit number 46 was a formidable document. It consisted of 509 pages of data relating to 168 different projects on 28 different railroads in what is termed "Appalachian Territory". That territory is roughly bounded by lines drawn from Washington, D. C., to Pittsburgh, Pennsylvania, thence along the Ohio River to Cincinnati, thence to Chattanooga, Tennessee, Atlanta, Georgia, Charlotte, North Carolina, and back to Washington. The period of time covered extends from 1899 to 1916. The exhibit contains copies of final estimate quantities, unit prices and amounts, and extracts from contracts describing carrier concessions of free transportation and reduced rates to contractors.

There is also incomplete data as to extra payments of various kinds. The data as to yardage and average prices only, exclusive of extra payments, is compiled in the summaries. No effort was made to find the effect of these extra

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payments on the prices paid, but instead, Mr. Elgen testified that an arbitrary allowance of 5 per cent was added to cover such items. This 5 per cent, as far as we could find out, was the judgment of undisclosed representatives of the Bureau of Valuation as to what was the proper allowance for such items, but no evidence was offered to prove that 5 per cent was proper.

The average unit prices so arrived at in this exhibit 46 were then compared by Mr. Elgen with the highest of the four sets of unit prices for grading in the dockets under consideration, namely, that the unit prices for that portion of the Carolina, Clinchfield & Ohio Railway which lies in Virginia, Tennessee and North Carolina. The averages derived from the exhibit for excavation, exclusive of haul, were 24.8 cents for common; 38.5 cents for loose rock, and 75.3^{cents} for solid rock. Including haul, the averages were slightly higher. These were compared with the unit prices used on this particular section of the Carolina, Clinchfield & Ohio, namely, 28, 42, and 79 cents respectively, and the conclusion was then drawn that since the unit prices allowed the C.C. & O. on this particular section are higher than the averages obtained from exhibit 46, they are therefore liberal and sufficient.

We do not consider that kind of a comparison very impres-

sive. There are several facts that cannot be ignored which have an important bearing upon the correct conclusion and use of such data. In the first place, a comparison is made only with this highest set of unit prices used in valuing the Clinchfield system. The lower unit prices, used for the parts of the line in Kentucky and South Carolina, and used for the Black Mountain work in North Carolina are ignored entirely. Nothing is stated about them. The percentages of the various kinds of material has an important bearing in making a valid comparison. The true test can only be applied by a comparison of the weighted average prices per cubic yard. The weighted average price derived from exhibit 46 was 50.2 cents per cubic yard. If the 5 per cent testified to by Mr. Elgen be added to this for extras, then it would become 52.7 cents per cubic yard. To this should be compared all weighted average prices for the different parts of the lines under valuation in these dockets and not merely the highest or 50.63 cents for the portion of the Clinchfield system in Virginia, Tennessee and North Carolina. In other words, we should compare with the 52.7 cents per cubic yard, the weighted average for Kentucky, which was 48.4 cents, and the weighted average for South Carolina which was 31.45 cents and the weighted average for the Black Mountain work in North Carolina, which was 40.5 cents per cubic yard, every one of which is considerably less than the

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weighted average derived from exhibit 46.

Commissioner Aitchison. Now, this is the first time, as I recall, that we have had presented to us a comparison of unclassified yardages, in any of these cases. Is there any significance to that?

Mr. Bailly. No, except that we think that the weighted average, if that is what you mean by unclassified price, is the true test, because that takes into account not only the unit price for the various kinds of excavation, but the quantities involved.

Commissioner Aitchison. It does not seem to mean much to me, unless you can mentally apply at the same time, the various proportions of the different classes of excavation which you have.

Mr. Bailly. Well, of course, a careful consideration of the problem requires you to take into account all elements that enter into it. There is no doubt of that. But, as far as any one figure can do it, a comparison of the weighted average prices makes a better comparison than a comparison only of unit prices for classified work.

Exhibit 46 shows quantities and shows the respective unit prices as well as the unclassified price, and we have before us the quantities and kinds of the various excavation on the Clinchfield.

There are a number of other things in the Bureau's grading exhibit that are subject to criticism, such, for example, as using as though they were actual contract prices, data for some eight million yards of Meadows Company work, which data bears on its face the following note:

"Note: In this and the following Meadows Company final estimates, the unit prices are not contract prices, but are, instead, the prices established by the railroad companies' engineers as a basis of comparison with actual costs."

The Bureau's position in regard to Meadows Company prices, and costs, is not consistent. It objects to the use of actual cost on the ground that the company was not sufficiently experienced in contracting to do the work efficiently, and yet, it accepts mere estimates of the railroads' engineers as to what would be proper contract prices as entitled to equal weight with actual contract prices, and includes them in the averages.

But the most important criticism relates to the use that has been made by the Bureau of this tremendous mass of information. What good can it be to the Bureau of Valuation to be in possession of the most voluminous, complete data in the world on the cost of railroad construction, unless it is logically analyzed and intelligently used? A mere consultation of such a mass of statistics, applying to all kinds and

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sorts of jobs and conditions, does not necessarily or even probably lead to correct conclusions. Mere consolidation of such data into average unit price or prices is more apt to lead to false than to correct conclusions. The effect of such an averaging process is to level the peaks and fill up the valleys in the cost data. High prices in difficult territory are merged with low prices in relatively easy territory. Each loses its own distinctive character, and the average in this case is applied at the point where the high price should be applied.

Now, there is an intelligent and proper way to use this data. It can be analyzed and the jobs that are fairly comparable with the Clinchfield work can be selected. Such a process will give a fair measure of proper unit prices to be applied here. This has been done by the carrier, and was testified to by Mr. Morgan. His conclusions are embodied in the carrier's exhibit number 53, a copy of which is annexed to the carrier's opening brief as appendix B. You can see for yourselves by looking at appendix B just what the results are.

The ten projects included in this exhibit are the only ones in the Bureau's exhibit 46 which Mr. Morgan considered fairly comparable with the portion of the Carolina, Clinchfield & Ohio in Virginia, Tennessee, and North Carolina.

While these ten projects are not absolutely identical with the Clinchfield by any means, their location, size, and general similarity of conditions are such that they may be fairly used as a basis for determining proper unit prices.

The following striking points regarding this exhibit should be noted:

All of the projects included are of considerable size, but the total yardage on the Clinchfield exceeds any job shown, by millions of yards. The Clinchfield's percentage of loose rock and solid rock is high, but not the highest in the group. The weighted average price of 50.6 cents per cubic yard allowed by the Bureau is lower than the average price for any job on the exhibit, and it is very much lower in the case of eight out of ten of the same. The average price, including haul, but without allowance for extras, is more than the carrier's claim in six of the ten cases, and in two of the remaining four, it is only slightly less. Of the other two, one was an unclassified price, and the other was a job where the percentage of solid rock was much the lowest of any in the group.

With proper allowance for carrier's service and extras, we claim that nine of these projects fully support the carrier's claim. Two of the jobs on exhibit 63 should be particularly noted. They are first, the Sandy Valley and Elkhorn,

which were constructed in 1911-1912; second, the Connellsville extension of the Western Maryland Railroad which was constructed in 1909 and 1911.

The Sandy Valley and Elkhorn project is within twenty miles of the carrier's line, and in very similar territory. The price in the years 1911 and 1912 was 76.7 cents per cubic yard, unclassified, only 42 per cent of this was found by the valuation inventory to be solid rock.

The Connellsville extension of the Western Maryland cost 61.1 cents per cubic yard, unclassified, in the years 1910 and 1911. It was proven in this record by the engineer who had worked on both jobs, to be very similar to the Clinchfield.

It seems apparent that those are proper jobs to consider in pricing the Clinchfield, and full consideration of the same leads to the conclusion that the Clinchfield has been materially underpriced by the Bureau.

We think it is obvious that the Bureau's consideration of the grading prices to be allowed the Clinchfield, has been totally inadequate. Railroads cannot be built, nor could they be reproduced at average prices. The unit prices used in the reproduction estimate should take into account the same factors that would have to be taken into account if the work were actually done. That process requires careful analysis of the data in the Bureau's possession, and not a bird's-

eye view.

Any careful analysis will show that the only fairly comparable projects in the Bureau's exhibit 46 are the ten assembled in carrier's exhibit number 63. The yardage for the ten jobs included in this exhibit 63 is practically 50 per cent of all yardage in exhibit 46, excluding the Clinchfield's own yardage.

The only fair conclusion that can be drawn from a consideration of all the evidence introduced at the hearing under this account is that the carriers have fully sustained their contention that they should be allowed the unit prices claimed for grading, and that the proper use of the grading data introduced by the Bureau itself in exhibit 46, leads to the same conclusion.

Commissioner Lewis. When you speak about the Clinchfield, are you including all of it from Spartanburg up to Elkhorn City?

Mr. Bailly. Yes sir.

Commissioner Lewis. How many miles is that?

Mr. Bailly. It is about 278 or 279 miles.

Commissioner Lewis. In other words, beyond this 250 miles there are only 23 miles?

Mr. Bailly. Yes. That is the Black Mountain, 23 miles, a separate branch line.

Commissioner Lewis. Well, I thought the 255 miles only

ran from Elkhorn City down to where the South Carolina C.C. & O. began.

Mr. Bailly. If you will look at your map, the 255 miles runs only from the state line between Virginia and Kentucky to the state line between North Carolina and South Carolina. In addition, there is practically 5 miles in Kentucky and 18 miles in North Carolina, making about 277 or 278 miles altogether.

Commissioner Lewis. Practically all of that 255 miles is in heavy construction territory?

Mr. Bailly. All except the line south from Marion is in the very heaviest kind of territory.

Commissioner Lewis. That is 23 miles?

Mr. Bailly. That is about 50 miles on the south end. That is not quite as heavy territory as the remainder of the line, but still very difficult.

Commissioner Lewis. And you think the construction conditions there and the construction itself was comparable in all respects, or very generally to the Virginian?

Mr. Bailly. To that part of the Virginian that lines in the mountains. Not to the part that extends through the coastal plain. We have nothing on our line comparable to that part of the Virginian, but our line is comparable, I think, to what is called the deep water section of the Virginian as distinguished from the tide water section.

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Commissioner Lewis. The tentative valuation of the Virginian was \$108,000 a mile, whereas the tentative valuation of the Carolina, Clinchfield & Ohio is \$140,000 a mile. I was just making that comparison of properties which you said some time ago, you thought were comparable.

Mr. Bailly. Well you see Mr. Commissioner, that might very well be so, because there is a very large mileage of the Virginian that is not in the mountains.

Commissioner Lewis. Yes, and you have got ~~from~~ 56 or 75 miles that are not in the mountains, also.

Mr. Bailly. Well they are not in the mountains themselves, but they are in the very rugged territory adjacent to the mountains. The mountains descend rather sharply near Marion, so that you go down into less difficult country, but it is not comparable at all with the coastal plain section of the Virginian in any way.

Commissioner Lewis. Now, there is one other distinction I want to get in my mind as to the physical comparability or lack of it of these two roads. Does the Carolina, Clinchfield & Ohio rather ride the mountains, whereas the Virginian goes down through these passes and valleys through the mountains?

Mr. Bailly. No. I think they are both largely supported grade lines. They are both seeking the lowest grades obtainable at reasonable construction cost through the mountains. That is evidenced by the large number of tunnels on both lines.

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Commissioner Meyer. As I understand, what Commissioner Lewis is trying to get at is whether in case of the Clinchfield, in getting that line you cross a lot of ranges, and in the Virginian you run parallel with the ranges and in the valleys.

Mr. Bailly. Well, I think the existence of the tunnels shows that both of them cut through the ranges wherever it is necessary, to keep the proper grade line. The Clinchfield has 75 tunnels, as I recall, and the Virginian has 36 or 38. In other words, the drainage was not followed to the detriment of the grade line.

Commissioner Meyer. Do you recall the total length of the tunnels in the case of the Virginian? You have stated it for the Clinchfield.

Mr. Morgan. It is on Mr. Elgen's exhibit; about 4 miles and about 9 1/2 for the Clinchfield.

Mr. Bailly. Also the number is lower than the Clinchfield; 36 on the Virginian and 55 on the Clinchfield.

Commissioner Aitchison. Of course, that has a bearing on the account we are discussing, as evidence of the general rugged character of the country, but the tunnels are all taken care of in a separate account which has not yet been discussed.

Mr. Bailly. Yes. I am coming to that in a moment.

Commissioner Lewis. I recall another road, the name of

which I cannot remember just for the moment, which was built down in the mountains of Virginia, and it ran along the side of the mountains, cut the buttresses, you might say, of the mountains, necessitating heavy construction of retaining walls, and it road the mountains, rather than crossed them. I just wondered what the situation was as regards the Clinchfield.

Mr. Bailly. I think you are probably referring to the Norfolk & Western south of Roanoke. They have much of that kind of work crossing the mountains near Christiansburg. There is a lot of that kind of construction on all these lines down in that territory, ---- the Virginian, the Clinchfield, and Norfolk & Western, but, in order to get across they do tunnel through the mountains in every instance.

Commissioner Lewis. Are those mountains down there any more difficult for construction than the mountains we encounter in Pennsylvania, in Maryland, and in West Virginia, that have been crossed by the Pennsylvania, the Baltimore & Ohio and the Chesapeake & Ohio?

Mr. Bailly. Well, I think they are considerably more broken in character.

Commissioner Aitchison. Mount Mitchell is the highest peak east of the Rockies.

Mr. Morgan. Mount Mitchell is the highest mountain and everything tends to taper away from that.

31 19 Mr. Bailly. The Clinchfield passes within about 25 miles of the highest mountain east of the Rocky Mountains.

Commissioner Lewis. In short, you are putting up a picture here of the most difficult railroad and the most expensive railroad construction in the Alleghenies. It is true, there is a road down in Pittsburgh that runs something like \$700,000 a mile, but that is in the city of Pittsburgh, ---- the Union Railroad, as I recall it.

Mr. Morgan. We claim that there is nothing for the same mileage, east of the Mississippi River, that compares with our railroad in difficulty of construction, and rugged territory generally.

Commissioner Lewis. Now, coming right over the ridge, does the Louisville & Nashville have any properties that are comparable in construction to this construction?

Mr. Bailly. They have a branch line known as the Lexington & Eastern line, which presents a good many of the same characteristics, but they do not have any mileage equal to the Clinchfield that is through the same kind of country.

Mr. Morgan. They have one cross country cut-off called the Winchester-Irving line, which was a very difficult piece of construction, and over a very, very rough country, but that is about 30 miles long.

Mr. Bailly. We have here over 200 miles of line through this very difficult territory.

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Commissioner Lewis. My questions have been prompted by the fact that you do seem to have presented here a picture of such extraordinary construction.

Mr. Bailly. That is what I intend to present, Mr. Commissioner. I do not think there is anything in the region comparable to it at all, except the Virginian west of Roanoke, and even that does not present all the same difficulties that the Clinchfield does.

Commissioner Lewis. Now there is one other factor. Did this unusual construction and operation call for extraordinary equipment?

Mr. Bailly. Yes sir, and I have already mentioned that in the opening, that the equipment was especially designed, not so much because of the kind of line we have, but because of the kind of trains that they had to operate in order to effect the economies. In other words, they were going to haul a large tonnage of coal from the coal fields in southwest Virginia. That required economical operation. The equipment was designed for that purpose; locomotives with extremely high tractive power and strong cars to withstand handling in long trains.

Commissioner Lewis. Does it partake of any of the special characteristics of the construction of the Virginian, as to extraordinary equipment for the handling of coal? I think they have equipment that handles 100 tons to the car, do they not?

Mr. Bailly. They have some cars, I believe, that have a capacity of 120 tons. No, we have no cars of that capacity. Those cars are only designed for a special service. The delivery of coal is more usually required in smaller quantities, and these large cars on the Virginian are provided because of their export coal, which they can take right to the port and dump into the holds of the vessels. We have but very little of that kind of traffic.

Commissioner Meyer. Many years ago we had a coal case here. It might have been called the Andes Ridge Coal case, in which the Clinchfield was the chief actor, and in that record there was a great deal said about the cost of construction and so on. The report was written by the late Commissioner Prouty. I wondered whether somewhere in this record somebody has made use of what was put into that record. It would be interesting to compare.

Mr. Bailly. I do not think anybody has. I personally did not become connected with the Clinchfield until after that case. I was not familiar with the record, and this record has been developed largely on our own initiative, without the consultation of any other cases, but that might very well contain interesting information.

Commissioner Meyer. I think you will find in the report of the Commission a statement regarding the physical characteristics of the line, as developed in that proceeding.

Mr. Bailly. Of course, that case occurred shortly after the line was originally opened.

Commissioner Aitchison. It might be helpful to have that report considered in the record.

Mr. Bailly. The data in that case undoubtedly was produced fresh after construction.

Commissioner Meyer. Undoubtedly. You would not have any objection to having reference made to that?

Mr. Bailly. None whatever, no sir.

Now, that ends the discussion of the grading. The issue is one of price, as you will see.

In addition to the claims for grading proper, the Carolina, Clinchfield & Ohio and the Carolina, Clinchfield & Ohio of South Carolina have made certain claims for work on other carriers' lands, work on so-called abandoned property, and work on county roads. The exclusion of these items from the reproduction estimates is largely the result of the application by the Bureau of certain rules and methods laid down by the Commission for valuation work. I am not going into a discussion of those items. They are fully shown in the record mentioned and in our briefs. Whether those particular items involved in those dockets should be excluded, is largely a question of fact, and of construction of the Bureau's rules and the methods laid down by the Commission. What I do want to do is to invite the Commis-

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sion's attention to the facts shown in the record and summarized in the protestants' brief, and request that the question of whether those items have been properly excluded by the Bureau be especially considered. Those claims amount to \$345,000, in round figures, in Docket 364 and \$760,000 in Docket 377.

This brings us to account 5, tunnels.

The issue under account 5 is entirely as to the unit price allowed in the engineering report in Docket 364, as all the tunnels are on the Carolina, Clinchfield & Ohio. The unit price used in the engineering report was \$3.25 per cubic yard for tunnel excavation, which the carrier claims should be \$3.50 per cubic yard.

Commissioner Aitchison: Do you have that reduced to a foot basis?

Mr. Bailly: No sir.

Commissioner Aitchison: I have been familiar with tunnel prices quoted on a lineal foot basis.

Mr. Bailly: No. We have not reduced it, and it was not originally paid for on our line on any basis except by the cubic yard. I believe also on the Virginian it has been estimated in the same way.

Mr. Morgan: Our difficulty is the variation in the section. If we tried to apply prices on a lineal foot basis, we encounter that difficulty that we have four different

sections in size; whether a tunnel is in bad ground and has to have timber lining and also concrete lining, or whether it does not require any lining at all.

Mr. Bailly. The tunnel account is extremely important to this carrier. As already noted, it has 55 tunnels, and the aggregate length is 50,304 linear feet, or 9.53 miles.

Commissioner Aitchison. The different between you is 8 per cent.

Mr. Bailly. And involving an excavation of 919,314 cubic yards.

Here, again, the carrier has claimed that the actual cost of construction of its tunnels in the ten year period immediately preceding pricing date is the best evidence of what unit prices should be applied in the reproduction estimate. Following what was done in regard to grading, Mr. Morgan also made a careful study of the carrier's records of tunnel costs and embodied the results in exhibit number 3, which covers 86.5 per cent of all the valuation yardage for this account. It was found that the average cost, including breakage, extra bills and adjustments, amounted to \$3.474 per cubic yard. In view of the fact that these costs were incurred when labor was cheaper than it was in 1914, \$3.50 per cubic yard was claimed.

The records of a part of the original construction yardage could not be found in the carrier's file when exhibit

number 3 was originally prepared, but with the aid of data relating to the same which was found in Bureau's exhibit number 46, this omission was corrected in revised exhibit, exhibit number 57 and the original cost for the entire valuation yardage including breakage, extra bills and adjustments, was found to have been \$3.63 per cubic yard, instead of \$3.474 found in exhibit 3.

The Bureau's witness on this account was again Assistant Cost Engineer Elgen, who reviewed, but ^{did} not fix the tentative valuation unit price of \$3.25 per cubic yard, and concluded on the basis of the additional Bureau exhibit number 47, which was based on the fundamental data in Bureau exhibit 46, that the unit price used was a fair allowance.

The Bureau's exhibit 47, regarding tunnel costs, was described by Mr. Elgen as showing all tunnels on which the Bureau had cost data in the period from 1899 to 1915 on the Western Maryland, Chesapeake & Ohio, Norfolk & Western, the Virginian, the Clinchfield, and Louisville & Nashville railroads.

Mr. Elgen found from this exhibit that the average price per cubic yard of tunnel excavation for these various carriers was as follows:

Western Maryland, \$3.33 per cubic yard.

Chesapeake & Ohio, \$3.13 per cubic yard.

Norfolk & Wester, \$2.98 per cubic yard.

Virginian, \$3.64 per cubic yard.

Carolina, Clinchfield & Ohio, \$3.145 per cubic yard.

Louisville & Nashville, \$3.20 per cubic yard, or an average for all, exclusive of the Virginian, of \$3.16.

The Virginian, Mr. Elgen thought could properly be excluded in any consideration of normal prices, because he thought that one of the tunnel contracts on the Virginian was entirely out of line.

Commissioner Aitchison. Is that the one that ran up over \$10 a yard?

Mr. Bailly. No sir. I think it was \$4.25 a yard, paid to McArthur Brothers.

By cross-examination of Mr. Elgen and rebuttal testimony of its own witnesses, one of them Mr. Hattan, who had worked on the Western Maryland tunnels, the carrier brought out the following errors and omissions in the Bureau's exhibit:

First, as noted above, the exhibit was described as containing all cost data in the possession of the Bureau on the Western Maryland tunnels. As a matter of fact, data which was in the possession of the Bureau on the Big Savage, single track tunnel on the Western Maryland, was entirely omitted, this being the longest and the most expensive single track tunnel on the Western Maryland, and right in the midst of the tunnels, data for which was used. Including

the data for this tunnel the average unit price on the Western Maryland became \$3.85 per cubic yard instead of \$3.33 as found by Mr. Elgen.

Second: The exhibit contained data for 36 so-called single track tunnels on the Virginian Railway. One tunnel included among those 36 was, in fact, a double track tunnel, on which the heading had originally been driven by the Chesapeake & Ohio Railroad, and later taken over by the Virginian. The price of \$2.20 per cubic yard for this job included in exhibit 47 was really for bench work only, and because of the extremely unusual conditions, should not have been included in the exhibit at all. These facts were brought out by reason of a personal knowledge of this tunnel on the part of carrier's witness, and could not have been ascertained at all from the basic data in the Bureau's exhibit.

Excluding this tunnel from the exhibit, the average unit cost on the Virginian became \$3.71 per cubic yard instead of \$3.64, as found by Mr. Elgen.

Third: The unit prices used in the exhibit for the Carolina, Clinchfield & Ohio tunnels are not actual contract prices at all, but were simply estimated prices, established by the railroad company's engineers, as a basis for comparison with actual costs.

Commissioner Aitchison. Now, did those railroad company engineers, out of their heads, or acting in some arbitrary

or capricious way, --- what were these figures which they have established? I have not been able to get that into my mind.

Mr. Bailly. I think Mr. Morgan can explain that to you.

Commissioner Meyer. If you could explain what the process was, or what was the purpose of it.

Mr. Bailly. Here is one of the engineers in person.

Commissioner Meyer. Here is the one who did it?

Commissioner Aitchison. He does not look like an arbitrary man.

Mr. Morgan. No. I did not do it. When the contract was let to the Meadows Company, engineers were on every residency on which any work was done. The chief engineer at that time, Mr. M. J. Caples, sent out instructions to those engineers that in sending in monthly estimates of the work performed by the Meadows Company, to apply certain prices, and after those prices got into the office, he usually caused a comparison to be made between the actual costs that were being incurred and those prices, and of course, at that time the Meadows Company were only able to make a very few comparisons, because they had just started the work. All the initial expenses of starting the work were on their cost sheets.

Commissioner Meyer. As I understand you then, Mr. Caples, as chief engineer, thought of a figure that he thought he would like to have realized on the work and as a test of what

the work actually cost, he made a comparison between the actual cost and this assumed figure?

Mr. Morgan. Well, as to the figure which he used, I do not know what his mental processes were, but he fixed the figure and instructed the resident engineers what figures to use on these monthly estimates, and the same figures were used month after month and finally, to the final estimate, made up for the Meadows Company.

Commissioner Meyer. Now, what was his purpose in assuming a certain figure different from the figure that was actually incurred in the work?

Mr. Morgan. Well the only answer I can give to that is that his figure was anticipatory, and perhaps to influence the contractors. When I went there Mr. Caples had only been on the job about a month and he was aiming to get the work started and planned, and then sub-contracted later, as he did too.

Commissioner Aitchison. He was the company's engineer, was he?

Mr. Morgan. He was the railroad company's engineer, yes sir.

Commissioner Meyer. Is that the Mr. Caples who is still with one of the companies?

Mr. Morgan. He is now on the Seaboard.

Commissioner Aitchison. The contract with the Meadows Company was on what basis? What is a fixed amount per mile,

or on a yardage basis with agreed prices?

Mr. Morgan. It was on a cost basis. They were to be paid the cost of the work. They took a contract to do everything except furnish the right of way. The railroad was to furnish the right of way, but the Meadows Company was to furnish the railroad with money to buy the right of way, and they were to be paid cost.

Commissioner Aitchison. Cost plus?

Mr. Morgan. Cost plus?

Commissioner Aitchison. Yes.

Mr. Morgan. Well, the contracts are on file here. I read one of them the other night, and it said that they were to be paid, --- certain amounts were given, but they were not for unit items, such as yards or anything like that.

Commissioner Meyer. Were they percentages or aggregate costs?

Mr. Morgan. No. They were not percentages. They were running amounts of money.

Commissioner Lewis. Here is what the record says: "The Meadows Company received in payment thereof \$41,964,000 of capital securities delivered by the Clinchfield."

Mr. Morgan. Yes. They were to turn the road over, as a complete entity for operation.

Commissioner Lewis. They were to turn over what they figured was to cost, and to realize their profit through the enhancement in value of the Clinchfield securities? Is that

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correct?

Mr. Morgan. Presumably so, but my information about that is simply what I have heard since.

Commissioner Lewis. Let me ask you one other question. While Mr. Caples did make estimates, it seems he was all the time having reported to him the actual costs.

Mr. Bailly. Yes sir.

Commissioner Lewis. The tentative report says: "The records of the Meadows Company recorded unusual expenditures for construction, amounting to \$21,209,000."

Mr. Bailly. Those were out of pocket costs, yes.

Commissioner Lewis. Can we accept that figure for the 196 miles as being a very close approximation of the original cost of that construction?

Mr. Bailly. Yes sir. Fairly close.

Commissioner Aitchison. I do not see how Mr. Caples happened to get the costs of the Meadows Company. If the road was to be turned over for a fixed amount in securities, and these people were dealing at arm's length, how come that the Meadows Company submitted their costs to Mr. Caples?

Mr. Bailly. The answer to that is that they were not dealing at arm's length. The Carolina, Clinchfield & Ohio Railway during its period of construction was owned entirely by the Cumberland Corporation, which was organized to finance it and other projects. The Meadows Company was also owned

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entirely by the Cumberland Corporation. They were affiliated companies, belonging to the same people. The Meadows Company was just a device employed by the railroad for the purposes I have already described.

Commissioner Lewis. They were probably to get their payment in a certain percentage of bonds and stocks agreed to?

Mr. Bailly. They were. They are set out, as I recall, absolutely in the contracts between the Meadows Company and the carriers which are in evidence in this case.

Commissioner Lewis. The sum total of it seems to be that they got practically 100 per cent in securities, over the actual cost of construction.

Mr. Bailly. They got more securities. I do not know just what the percentage was.

Commissioner Lewis. The difference is the difference between \$21,000,000 and \$41,000,000.

Mr. Bailly. But, those securities went to the Cumberland Corporation which owned them all. It owned both companies, and they were disposed of by the Cumberland Corporation, but these cost figures which we are talking about are the actual cost outlay of the Meadows Company. They have not anything to do with that amount of payment in securities.

Mr. Morgan. They are a part of the \$21,000,000.

Commissioner Lewis. If that is the fact, if \$21,000,000,

in round figured, was the actual cost, then the cost of the 197 miles was approximately \$107,000 per mile.

Commissioner Aitchison. That is without equipment, I take it.

Mr. Bailly. That did not include equipment. It did not include any overhead expense of various kinds. That is the actual construction cost.

Commissioner Aitchison. And it did not include the right of way.

Mr. Bailly. I do not think it includes the right of way either.

Commissioner Lewis. As against that they placed a value of something like \$140,000 a mile.

Mr. Sweet. Our information, Mr. Commissioner, is that the right of way was included in the \$21,000,000.

Mr. Bailly. I cannot say, off-hand, whether it does or not.

Commissioner Aitchison. The \$21,000,000 would not include a certain portion of the general expenses.

Mr. Morgan. The \$21,000,000 is only a portion of the line. It is not the entire line.

Commissioner Lewis. It has 197 miles of the 255 miles which go down to the South Carolina state line and then beyond there is 26 miles.

Mr. Bailly. That kind of a view of the problem, Mr.

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Commissioner, has to be guarded a bit, because in addition to the facts that have already been mentioned, that does not cover all costs of construction of the 70 miles which were taken over. These lines were graded, and they were only revised in connection with this other construction.

Commissioner Lewis. Then the other point was, it seemed to me that if he was keeping account of actual costs, that the actual costs must have included a great many of these overheads, as far as engineering and administration, at all events, were concerned. I wonder if that is true or not.

Mr. Bailly. They are in the costs of the Meadows Company, no doubt, but the actual grading costs and the actual tunnel costs can be segregated, and have been. I just want to make that clear, that we are not responsible in any way for the use by the Bureau of these data. They have done that entirely on their own initiative. The other data was available, and they could have had it, but for some unknown reason, they have selected these estimates and included them along with actual contracts on other railroads, and that fact was clearly shown on the face of the data itself, as I have read the note to you, which was on it.

Commissioner Lewis. It seems then that we have available to us the original cost data that is probably open to some question or some analysis on 197 miles of the 280 miles. Is that correct?

Mr. Bailly. Well, I cannot give you the figure by miles, but I have already given you the figure as to the grading and the tunnels on the proportion of data that we have, of the total reproduction quantities, and it is about 85 per cent ---- 86.9 per cent, I think, of the total reproduction quantities. As to tunnels, with the additional data we got out of the Bureau's exhibit, it is complete.

This fact that they did use these arbitrary estimated prices on Meadows Company data very largely accounts for the different in the unit prices arrived at by Mr. Elgen for Clinchfield work and unit prices arrived at by Mr. Morgan for Clinchfield tunnel work, Mr. Elgen's figure being \$3.145 per cubic yard and Mr. Morgan's \$3.63 per cubic yard.

Now, if we make the various corrections to the Bureau's exhibit 47 which I have already called attention to, the average unit prices for all tunnel yardage included, exclusive of the Virginian, becomes \$3.36 per cubic yard instead of \$3.16 per cubic yard arrived at by Mr. Elgen. If you include the Virginian, it becomes \$3.44 per cubic yard.

In addition, exhibit 47 omitted two tunnels on the Sandy Valley and Elkhorn which is located in the same general territory as the northern end of the Clinchfield line. In fact, it is within 20 miles of the Clinchfield's line. Those tunnels cost \$3.81 per cubic yard. The record then, including the Bureau's own exhibit, affords more than ample support for

the carrier's claim of a unit price of \$5.50 per cubic yard.

First, there are Virginian costs, \$3.71 per cubic yard. There are no logical grounds whatever for excluding the Virginian data in the consideration of the matter. The Virginian tunnel work, as a matter of fact, is more nearly comparable with the tunnel work on the Clinchfield than is any other project in the Bureau's exhibit. These roads were built at the same time, in similar territory, and the Clinchfield's experience shows that the Virginian costs were not out of line when all the surrounding circumstances are taken into account.

Of the six railroads included in the Bureau's exhibit 47, the Virginian is the only one on which either the number of tunnels or the total cubic yards of tunnel excavation anywhere near approaches that of the Clinchfield, and even then it is only 60 per cent as much as the Clinchfield.

Second, there are Western Maryland costs of \$3.85 per cubic yard. Mr. Hattan, who is now the engineer of the Clinchfield, had actual experience on both the Western Maryland and the Clinchfield tunnels. He was actually connected with the original construction of 44 tunnels, ranging in length from 150 feet to 1 1/2 miles. His total tunnel experience related to 61 different tunnels. He testified that the conditions on the Western Maryland and Clinchfield were very similar, and there is not a word in the record to con-

tradict him. It was his opinion that the difficulties encountered on the Western Maryland, including the difficulties encountered in the Big Savage tunnel, which was omitted by the Bureau, did not make the work, as a whole, any more difficult than it was on the Clinchfield.

Commissioner Aitchison. What is this Big Savage tunnel?

Mr. Bailly. The Big Savage was quite a long tunnel, in which they had some unusual difficulties of construction which lead to higher unit costs.

Commissioner Aitchison. How did it compare in length with the tunnels on the Clinchfield?

Mr. Bailly. Well, it is not as long as our longest tunnel.

Mr. Morgan. It is about 4,000 feet long. We have one tunnel 4,000 feet and another one 8,000 feet.

Commissioner Aitchison. How does it compare with the average?

Mr. Morgan. Do you mean the average length of our tunnels?

Commissioner Aitchison. It is greater, I suppose?

Mr. Morgan. Yes. That would be above the average.

Mr. Bailly. It would be above the average on tunnels on either line, but there are other tunnels on the Western Maryland, included in this data, which are not as long, our claim being that all tunnels should be included, since they had the data, and that there were difficulties in the work on the

Clinchfield tunnels comparable with the difficulties in the work on the Big Savage tunnel.

Mr. Morgan. Mr. Hatten was the engineer on both, and he testified that he considered the difficulties in the 8,000 foot tunnel fully as great as the abnormal difficulties in the Big Savage tunnel. Therefore they ought to put both of them into the exhibit. He testified what those difficulties were. He was the engineer on both of them.

Commissioner Aitchison. If we are going to make a separate class of these long tunnels, obviously the unit prices on the shorter tunnels is less.

Mr. Bailly. We have not made a separate class. We have included them all. We are simply claiming that the difficulties encountered in our tunnels were just as great as they were on other lines. There was not any particular reason for excluding any single tunnel, and Mr. Elgen testified that he did not exclude the Big Savage tunnel intentionally. It was overlooked and omitted unintentionally.

Commissioner Lewis. I think I ought to make a correction in some of the figures I have used. My attention has been directed to the fact that the Meadows Company constructed only 152.41 miles of the 196 miles, and for that it received \$21,209,705.46, which would be approximately \$139,000 per mile, but the figures given, however, for the 196 miles of road include the entire property and the equipment. I do not

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know to what extent the Meadows Company participated in that.

Mr. Bailly. I would simply say that these figures would have to be used with considerable care, unless you know just what is included in them. There were parts of the line that were not built by the Meadows Company.

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Commissioner Lewis. They only constructed 152 miles.

Mr. Bailly. Part of the line was built by another company called the Norlina Company. Part of the line was built by predecessor companies as to which the costs are not available. Those lines, however, were rectified in the building of the Clinchfield between the years 1905 and 1915, and some portion of the costs are included in those costs, but not all of the costs.

Third, with reference to tunnels, there is a tunnel on the Chesapeake & Ohio which is job number 18 in Bureau's exhibit 47, and was built in the year 1902 at a price of \$3.50 per cubic yard. This tunnel is on the Big Sandy division of the Chesapeake & Ohio which connects with the Clinchfield at Elkhorn City, Kentucky and is only a short distance north of the Clinchfield's own line. It is in similar territory where similar conditions would be encountered in construction work. In fact, it is very improbable that it could have been done at \$3.50 per cubic yard in 1914, since there were undoubtedly increases in costs in the period between 1902 and 1914 for work of this character.

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Fourth, there is the Beaver Creek and Wayland tunnel, job number 19 of the Bureau's exhibit number 47, which was constructed in the year 1913 at a cost of \$3.56 per cubic yard. The location of this tunnel is also in the territory just north of Elkhorn City, near Pikeville, Kentucky. The conditions are comparable, and the work was done in the pricing period.

There are four tunnels on the Louisville & Nashville which are jobs numbered 61, 62, 63 and 64 in the Bureau's exhibit number 47, constructed in 1912 at a cost of \$3.89 per cubic yard. These tunnels are on the Lexington and Eastern branch of the Louisville & Nashville Railroad, which is only a short distance west of the carrier's line. They are in similar mountain territory, and the conditions encountered would be very much the same.

There is the Sandy Valley and Elkhorn tunnel, job number 96 of the Bureau's exhibit 47, but was not included in its exhibit number 47. This tunnel was constructed in the years 1911 and 1912 at a cost of \$3.81 per cubic yard. This tunnel is in close proximity to the Clinchfield's line and in exactly the same kind of territory.

All of the fore-going work, except the Western Maryland, is in territory close to that in which the Clinchfield is located, with substantially similar characteristics and surrounding conditions. In addition, there is the average for

all of the jobs included in the Bureau's exhibit, with the errors and omissions corrected, which make a unit price of \$3.44 per cubic yard. Taking into account the upward price trend during the period covered by the exhibit, which would justify some increase in the unit prices of the various jobs, this in itself fully supports carrier's claim.

The carrier stands firmly upon its contention that no other two railroads in the Appalachian territory have so many similarities of difficult conditions and costs as the Virginian and the Clinchfield. These similarities are pointed to in the record in many places, and are known to everyone apparently, except perhaps the Bureau. In fact, we do not believe the Bureau would be blind to them either, were it not for the necessity which it is under, of supporting the lower prices used on the Clinchfield. The physical similarity of these two properties is closely matched by the actual costs of their tunnel work. The Virginian data in Bureau's exhibit 47 as corrected, shows its cost to have been \$3.71 per cubic yard. The carrier's costs were \$3.63. Despite these facts, the Bureau allowed the Virginian \$3.50 per cubic yard in its tentative valuation, but only allowed \$3.25 per cubic yard on the Clinchfield.

The carrier's claim under this account was originally based upon its own cost data. The data introduced by the Bureau, far from weakening the claim in any respect, has

strengthened it in every particular. The additional data in the Bureau's exhibit concerning the carrier's own construction work shows that the claim was, in fact, underestimated, rather than overestimated. The data for fairly comparable projects on other carriers, as shown by Bureau's exhibit 47, fully supports carrier's claim, and should be given special consideration in the price set for this account.

Mr. Chairman. This will be a convenient place to stop.

Comissioner Meyer. Very well. We will stop until 2 o'clock.

(Whereupon at 12:30 o'clock P. M., recess was taken until 2 o'clock P. M.)

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October 28
Valuation
docket 364

A F T E R R E C E S S.

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The arguments were resumed at the expiration of the recess,
at 2 O'Clock p.m.

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ARGUMENT OF MR. EDWARD C. BAILLY, (Continued)

In behalf of Protestants.

Mr. Bailly. This morning I had finished my discussion on
accounts three and five, and now comes account eight, ties.

The issue in this account concerns the prices allowed and
the failure of the Bureau in the docket 364 to take into ac-
count the fact that there were on valuation date in the Sandy
Ridge tunnel on the Clinchfield 5,000 locust ties. The car-
riers' proof, as in the other accounts we have discussed, was
from fully experienced witnesses who gave careful considera-
tion to the effect on tie prices of reproduction conditions.
These witnesses were fairly familiar with conditions of tie
supply in this territory from the beginning of construction
to the date of the hearing. Mr. Starrett, the carriers' pur-
chasing agent, in particular, had personally purchased or
supervised the purchase of practically all ties purchased by
these carriers throughout the entire period of their exist-
ence. He had experienced the actual construction conditions
as well as maintenance conditions.

He based his study of what would be a proper price to use
in a reproduction estimate upon a reproduction program as

only
docket
no. 3

of valuation date, and priced as of pricing date.

The reproduction program would require the use of 1,082,000 ties to be obtained in the construction period assigned for the different parts of these lines in the different dockets.

It was Mr. Starrett's conclusion that only 53 per cent of these ties could be obtained locally at reasonable prices and that it would be necessary to ship in approximately 47 per cent from the territory served by connecting lines

His study of the cost showed a weighted average price, without freight of 58.5 cents per tie, and with freight of 62.8 cents per tie. His opinion, based on this study, was that a fair average price to apply would be not less than 60 cents for Kentucky, Virginia, Tennessee, and North Carolina, and 65 cents for South Carolina. The Bureau originally had 55 cents in the original engineering report, but at the hearing its recommendation was that this should be reduced to 50 cents. The prices claimed by the carriers for bridge and switch ties were also based upon actual experience at pricing date in the construction of the 36 miles of railroad known as the Elkhorn extension in Virginia and Kentucky. The Bureau's proof regarding the tie prices was from Mr. Walker, a witness entirely lacking in practical experience either in the production or purchase of ties. He had never purchased or engaged in the production of ties anywhere, and he had no personal knowledge

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whatever of the carriers under valuation or of the conditions of the territory in which they are located. He did not personally fix the high price originally allowed in the engineering reports, but with exactly the same information before him as that originally used in fixing the price, he proceeded to recommend changes reducing the price. His conclusions were based partly on the carriers returns to valuation order 14 and partly on his interpretation of notes as to the availability of ties and timber in this region, which were made by the assistant field engineer of the Bureau at the time the inventory was taken.

We contend that the carriers' returns to valuation order 14 are not a sound basis for determining a proper tie price in the reproduction estimate. These returns cover only a small quantity of ties which were bought entirely for maintenance work during a period of five years, and do not cover any ties that were bought for original construction.

The aggregate quantity of material covered by these returns would only produce about one-third of the quantity required for a reproduction program.

Furthermore, the price reported in these returns did not include anything for inspection, handling, or local haul.

As indicating that the carriers valuation order 14 returns were not complete, it should be noted that neither the 5,000 locust ties in the Sandy Ridge tunnel, which cost 25 cents

each, or the ties for the seven miles of track on the north end of the Elkhorn extension, which had to be shipped in from points off the line at a cost of 65 cents per tie, are shown thereon.

Commissioner Aitchison. Why were not the returns to valuation order 14 complete?

Mr. Bailly. I cannot answer that definitely, Mr. Commissioner, but the returns were made at a time when the carriers were under considerable stress due to the war in Europe, and this particular carrier had suffered what might be called a disaster of the first magnitude in a flood on its line which had washed out large sections of line on the Blue Ridge Mountains and absolutely stopped its operations.

Commissioner Aitchison. Valuation order 14 is not a matter of operation as much as it is of accounting, is it?

Mr. Bailly. Everything was in confusion, and it was not made up with the meticulous care that it should have been.

Commissioner Aitchison. What I am getting at is this. In almost every case the carrier comes in here and says "Our returns to valuation orders 3 or 14 were not right." They are called for for the purpose of complying with a statutory requirement that the carrier cooperate with this Commission in the appraisal. Does it lie in the mouth of the carrier in every case to come up here and say that none of the returns are right?

Mr. Bailly. Perhaps it does not, but the fact, Mr. Commissioner,^{is} that sometimes requests of the Commission are not clearly understood. This is particularly true when these returns are turned over to clerks in various departments to be complied with. They do not always understand exactly what the information is to be used for, or why it is asked, and the information is put in there without the understanding that ought to be used in getting it up.

Commissioner Aitchison. And then somebody who is responsible, and who is not a clerk, puts his name down at the bottom of it and holds up his right hand before an officer authorized to administer oaths and swears to it and returns it formally to this Commission, in compliance with the statute passed by the Congress.

Mr. Bailly. I do not know who signed these returns.

Commissioner Aitchison. There are required to be signed by a responsible officer of the company.

Mr. Bailly. But the fact is, as to ties, that the valuation order returns of this carrier were not complete and did not cover all the costs that would be encountered.

The carriers claim 60 cents per tie, and the carriers' claim of 80 cents per tie is based on what competent witnesses considered necessary to obtain the quantities of ties required for reproduction in the time allowed for reproduction. Price has a very important effect upon tie production, and a price

of 50 cents per tie, as now recommended by the Bureau, historically did not and would not at valuation date have induced the production of ties in sufficient quantities for the reproduction of these properties.

In original construction this carrier had to organize its own timber department to produce ties and bridge timber. The Bureau's witness, when forming his opinion as to the availability of ties and timber in this territory, relied wholly on the notes of the assistant field engineer. These merely indicated, in a general way, and in very general language, the presence or absence of timber for construction purposes. They did not purport to state the quantities that could be obtained in any given time. The carrier claims that trees standing in the woods are not ties, and the fact that they are standing there does not give any indication as to what ties made from them would cost. The mere fact that timber is available locally along the line of a railroad does not justify the conclusion that ties can be obtained there at any time, in any quantities, at the same price at which they can be obtained in relatively small quantities for maintenance purposes.

Commissioner Lewis. Is there any place in the South where they can get ties to build a railroad if it is not in that particular section?

Mr. Bailly. That is one section where you can get ties,

Mr. Commissioner. If the production of ties is properly organized, to induce the production of ties by local people as a by-product of their farms and other properties, you have to give a proper price.

Commissioner Lewis. Is it not to be presumed that in the construction of a property 275 miles long, representing \$40,000,000, there would be a proper organization to get those ties out?

Mr. Bailly. They could be produced, but they could not be produced at this price. That is the answer. They can be produced in that territory, and I am not claiming or in any way indicating that there is not ample timber to produce the ties. What I want to bring home to you is that the price that will induce the farmer in his spare time to make a few ties and bring them to a contiguous railroad will not induce him to give up all his other work and business and go out and make quantities necessary for reproduction program.

Commissioner Lewis. That is not the basis on which the reproduction of this road is worked through, a farmer producing a few ties in his spare time.

Mr. Bailly. But that is the basis of the price reported in valuation order 14 returns by this carrier.

Commissioner Aitchison. Probably it is too much.

Mr. Bailly. The small quantities of ties come to the line at bargain prices because they are a by-product.

Commissioner Aitchison. I never had the good fortune to go over the Clinchfield road, and I can only surmise what the character of the country is, but from your description of the number of tunnels and the way your line is built, the gullies you cross, and all that, I should be much surprised if there were many farms in that mountainous country.

Mr. Bailly. There are a good many.

Commissioner Aitchison. Especially where it is timbered.

Mr. Bailly. There are a great many small farms all along the line.

Commissioner Aitchison. What do they raise, moonshine?

Mr. Morgan. Mostly.

Mr. Bailly. Largely moonshine and what we call "side hill mules", with longer legs on one side than on the other, so that they can plow the rows of corn.

Commissioner Aitchison. But, seriously, would you expect to find in these mountains farmers who would be cutting ties as a by-product?

Mr. Bailly. We do. That is the actual experience of this carrier, that the farmers along the line, when they have not anything else to do, and the price is sufficient to make them want to work, will produce a few ties and bring them to the line. Those are all at lower prices than the carrier could produce the ties itself.

Commissioner Aitchison. I should not think the farming

they could do in the mountains as I have them described this morning, would keep a man very busy, and he would have plenty of time.

Mr. Bailly. The question of how many ties he makes depends largely upon the price the carrier is willing to pay for them. The carrier can largely control that in a maintenance program. They can buy the ties at the prices that they want, when they are available. They do not have to force the production, in other words.

Commissioner Aitchison. One other thing is to be borne in mind, I take it, and that is that with respect to returns to valuation order 14, as respects ties, it is largely a labor item, because obviously the timber did not cost very much up in the mountains. In 1917 there was quite a shortage -- a momentary shortage -- of labor, due to war conditions. So, might we not reasonably expect to find the costs in small lots, of a product which depends upon local labor, and young men labor, largely, too, to be high during the period of the war?

Mr. Bailly. Yes, but my recollection is, Mr. Commissioner, that these returns were made in 1915.

Commissioner Aitchison. They should be made current.

Mr. Bailly. So that the prices covered by these returns do not reflect that condition.

Commissioner Aitchison. That might be.

Commissioner Lewis. What is the basis for the Commission's

figures, its tie figures?

Mr. Bailly. That is not disclosed in the record, Mr. Commissioner. We have not had anybody here to tell us what the basis of it is.

Commissioner Aitchison. The analysis of methods tells pretty well.

Mr. Bailly. I do know, of course, from reading the Texas Midland case, that prices were obtained from the carriers in the returns to those valuation orders, covering, as I believe, a five-year period prior to 1914, as to ties.

Commissioner Lewis. Would conditions down there be such that the cost of ties would be greater for the reconstruction of the Clinchfield, we will say, in 1917, or whatever year it is, than in the reconstruction of other roads in the South or the East?

Mr. Bailly. It would be greater to the extent that you had to ship them in.

Commissioner Aitchison. Would you not have to ship more in on the Virginian, for example?

Mr. Bailly. I could not answer that. I do not know just what their local conditions are. Whether the price the Bureau recommends, of 50 cents, is based solely upon our valuation order return, or on a birdseye view of all the data from that territory, I cannot answer, either, but we think it is too low.

Commissioner Aitchison. The issue about these locust ties is comparatively simple, is it not? The Bureau says that they absorbed the extra cost of locust ties in the general price, and you say they could not.

Mr. Bailly. That is it exactly.

Coming to account 9, rail, there are two issues under this account: First, as to the unit price applied; and second, as to the classification of certain rail as second hand or relay rail. In all three dockets the Bureau has used a unit price of \$33.70 per ton. The carrier claims \$34.20 per ton in dockets 364 and 377 -- that is, the Clinchfield system -- and \$34.50 per ton on the Black Mountain. The differences between the prices claimed and those used by the Bureau result largely from different points of view as to the proper method of making an estimate of cost of reproduction new. The Bureau's main purpose seems to be to find the cheapest price possible for a given quantity of material without regard to practical considerations that would have to be taken into account if the property were actually reproduced. In other words, their price is based on the delivery of all the rail through a single junction point, and that one selected because it would give a lower delivered price, and then to company haul the material to the places where it would have to be used.

The carriers' valuation engineer made a study of the repro-

duction new based on the respective quantities of open hearth and Bessemer rail that are required to reproduce the property as it existed, and distributed as they actually existed in the line and were inventoried. This study is shown in the carriers' exhibit number 4.

Actual construction conditions would require that this rail should move to the work through the nearest junction point to its ultimate location, and to assume that it can move through the cheapest junction point on the line, as the Bureau does, entirely leaves out of account the uncompleted gaps that would exist in actual construction.

Commissioner Aitchison. Is that the same question which was presented to us in the Great Northern case?

Mr. Bailly. I cannot answer that, Mr. Commissioner, as I am not familiar with that case.

Commissioner Aitchison. Very well. Perhaps Mr. Swink can.

Mr. Swink. I believe it is, yes, sir.

Commissioner Aitchison. The same question, as to construction piece meal?

Mr. Swink. Yes. In other words, the Bureau contends that each section is complete at the time it is working on a section under construction.

Commissioner Aitchison. That general question is pretty well presented in the Great Northern and several other cases.

Mr. Bailly. That may be. I am just going to point out that that question is in this case. I am not going to argue it at any great length.

The prices claimed by the carrier were also supported by the studies of actual cost of rail in original construction. These were found to be \$34.135 on the Carolina, Clinchfield and Ohio; \$34.537 on the Carolina, Clinchfield and Ohio of South Carolina; and \$34.93 on the Black Mountain. These fully support the prices claimed. The only testimony presented by the Bureau under this account was a review and approval of the Bureau's prices by the witness Amadon. He had nothing to do with the fixing of the price used, but merely reviewed and approved it.

It appeared from Mr. Amadon's testimony that in fixing the price for the Black Mountain railway it was assumed that the required rail would be delivered at Johnson City, Tennessee and company hauled to the location on the Black Mountain. Since the Carolina, Clinchfield and Ohio and the Black Mountain are separate properties, there seems to be no justification for the Bureau's basing the price allowed the Black Mountain on delivery at a point on the Clinchfield, and making no allowance for the cost of haul from that point.

Commissioner Lewis. There is an allowance for company haul. It is not a free haul.

Mr. Bailly. Yes, but it is a different company, a different

carrier. The Clinchfield, as I understand it, would be required by law to make the same charge to the Black Mountain for hauling its rail as it would to any other customer.

The differences between the carrier and the Bureau as to relay rail are fundamental. The Bureau insists that the position taken by the Commission in the Texas Midland case governs here. The carriers contend that the Commission was in error in the Texas Midland case, but, in any event, that the rule laid down should not apply to the relay rail on the Carolina, Clinchfield and Ohio and the Carolina, Clinchfield and Ohio of South Carolina. This was not purchased as second hand rail, but was simply found in a different location from its original location on valuation date. As to these two carriers the question is whether it is proper in the reproduction new estimate to price this rail as second hand simply because it had been moved from its original location. Why should such rail be priced as second hand any more than a locomotive would be priced as second hand which had been changed from the original service to which it was devoted and put in some other service?

Commissioner Aitchison. You do that with an automobile that you buy. If you run it around the block it is second hand.

Mr. Bailly. But this is a reproduction new estimate we are talking about, and we view it as requiring that all the

materials shall be reproduced new.

Commissioner Meyer. New in the same sense it was new when the road was first constructed?

Mr. Bailly. Yes.

Commissioner Aitchison. I caught myself talking about my new house this morning. To the best of my recollection it was built 40 years ago, but I have only had it a few weeks.

Mr. Bailly. Here is a question of principle. I think the issue is clear, and there is probably nothing more than I can say that will add to the clearness of your understanding of it. I merely want to point out that it does exist in this case.

The next account upon which I would like to say a few words is account 11, ballast.

The issues under this account concern, first, the unit price for the various kinds of ballast; second, the average haul necessary to distribute the same; and finally, the cost of that haul.

The biggest item of difference in the account is the unit price for stone ballast, as to which the Bureau allowed 56 cents in docket 364, and the carrier claims 83 cents. In docket 377 the carrier claims 79 cents. The prices claimed by the carrier were again based on studies made by Mr. Morgan of the actual costs compiled in the period from 1908 to 1911, previous to the passage of the valuation act, and when

the rate of wages was 12½ cents per hour and less for common labor, as compared with 15 cents in 1914.

The average hauls necessary to distribute ballast were based upon an entirely new study of what would be the most economical distribution possible for a reproduction program, and the rate used in determining the cost of haul was based upon Mr. Morgan's judgment after considering both the rate used by the Bureau and the rate recommended by the Presidents' Conference Committee, and other data.

Mr. Morgan's price for cost of haul is somewhere in between that used by the Bureau and that recommended by the Presidents' Conference Committee. The studies developed a cost for stone ballast on the Clinchfield of 60.6 cents per cubic yard, and 3 cents for dumping, making a total of 63.6 cents. Sixty-three cents has been claimed.

On the Carolina, Clinchfield and Ohio of South Carolina the study developed a cost of 79 cents per cubic yard, which was claimed.

For slag ballast the Bureau allowed 28 cents per cubic yard and the carrier claimed 38 cents. The record is quite full and comprehensive as to the cost of ballast of this character, and the carrier contends that it fully supports its claim.

The carrier's return on this item, under valuation order 14, only covered the royalty that was paid for the slag, and did not cover the other costs involved, and not even the Bureau

used those figures in arriving at its price.

The statement in the Bureau's brief that the price of 28 cents per cubic yard for slag compares favorably with slag prices in pricing railroads throughout the eastern section, we think, disregards slag prices in the South.

As the result of the carrier's testimony under this account the Bureau has recommended a change from 56 cents to 75 cents per cubic yard for certain ballast in North Carolina. This was a particular type of ballast, called "gneiss", which came from a crusher in that state known as the Catawba crusher. The Bureau has also recommended certain changes in haul in Tennessee and Virginia. These changes which have been recommended result in an increased allowance of \$22,825 in docket 364, and \$3,980 in docket 377.

We think that the carrier's claim in docket 364 should be allowed in full, and not merely to the extent recommended by the Bureau. It is based on actual crusher cost during the pricing period. The average hauls used are the shortest that will accomplish the work, and the cost of haul used was conservative. The necessary supporting data were all introduced by a highly competent witness, and the Bureau has really made no adequate answer to the same.

The next account is account 13, track laying and surfacing. Here again the sufficiency of the unit price used is the only issue. These carriers have based their claims on a newly laid

track in the same condition as that assumed by the Bureau, and have made no claim under this particular account for the additional intensive surfacing work that would be necessary to bring such a newly laid track to the condition in which the carriers' track actually existed on valuation date. This does not mean that we agree with the Bureau's theory that a new, unseasoned track, is all that should be allowed for in the valuation. We differ entirely from them, in that view, and contend that all the elements of expense which would be necessary to produce tracks like the tracks of the carrier as they were in existence on valuation date, should be allowed for somewhere in the reproduction estimate, but not necessarily under account 12. Those elements of value should be allowed for either under cost of development, or as an offset to depreciation, or by taking the same into account in fixing the final value.

Commissioner Meyer. This has nothing to do with this particular case, but bearing upon that question of seasoning, Mr. Bailly, you will be interested to know that one of the great trunk lines in this country, which has as magnificent trains as any other, was here with an application for authority to take one of those great trains over some 60 or 70 miles of raw track built within a year. They forgot all about seasoning.

Commissioner Aitchison. The Commissioner is not quite right.

It was not quite that long, and there were three of the great carriers of the country that wanted to do it.

Mr. Bailly. Were they going to take it over at the same rates of speed as on the seasoned track?

Commissioner Meyer. Not quite. There was a difference of 10 miles, I think. We denied the application.

Mr. Bailly. You made them be consistent.

In dockets 364 and 377 the Bureau has used a unit price of \$1190 per mile for 85 pound main line track and \$780 per mile for 85 pound yard and siding track. The carriers claim the unit price for the 85 pound main track should be \$1250 per mile, and the price for the yard and siding tracks should be \$900 per mile, respectively. All the prices claimed are based on studies of the actual track laying costs upon five different sections of the carriers line in the period from 1907 to 1914, with necessary adjustments due to changes in labor costs to place all the work on the basis of the 1914 labor rate. It was found that the weighted average cost per mile for track laying alone was \$1358 for the 85 pound main line track, and \$948 for the 85 pound siding and yard track, and \$822 for 60 pound siding and yard track, or in excess of the amounts claimed in these dockets.

The increases claimed in the prices used for placing ballast and framing bridge ties were supported by similar studies of actual costs.

As special reasons why liberal allowances should be made for

track laying in the case of these carriers, the crookedness of the line, the number of tunnels, bridges and viaducts, and the high fills and deep cuts should be noted.

Commissioner Aitchison. Do they make a deduction for the length of the tunnels in applying the unit price for track laying and surfacing, or how was that handled?

Mr. Bailly. I do not know exactly how they handled it.

Mr. Morgan. In our case they increased the price a bit through the tunnel. I think it was \$1650 per mile for the tunnels.

Commissioner Aitchison. For the space occupied by the tunnels?

Mr. Morgan. Yes.

Mr. Bailly. I was going to say that I understood they had made some special allowance because of the difficulties in the tunnels.

Commissioner Aitchison. How about bridges and trestles? Does their unit apply there?

Mr. Morgan. Yes.

Mr. Bailly. They made no special allowance for it, and Mr. Saunders, who testified for the Bureau, testified that it would be easier to lay track over bridges than anywhere else, and would cost less. We do not admit that, I may say, Mr. Commissioner.

Commissioner Aitchison. What is the claim, that it is all

just the same?

Mr. Bailly. Our contention is that it costs more to lay the track over bridges because of the cramped space in which to work, and the great care with which the men have to work in order to stay on the bridge. It slows up the work, necessarily, and costs more, since track laying is a labor item. That is fully explained in Mr. Morgan's testimony under this account.

It was proven in the record that 42 per cent of the line was curved and that there are 20 miles of curves of six degrees or over; 55 tunnels, as I have already mentioned; and 170 bridges, tremendously high fills and deep cuts with steep sides, all of which slow up the work of track laying, and, of course, increase its cost, and should be taken into account in fixing unit prices.

For the Black Mountain, the Bureau used a unit price of \$700 per mile for 60 pound main line track, and the carrier claims \$900. On the Carolina, Clinchfield and Ohio the Bureau used \$700 per mile for 60 pound sidings. That is, exactly the same figure was used on the Carolina, Clinchfield and Ohio for sidings that was used for main line track on the Black Mountain. On the Carolina, Clinchfield and Ohio the Bureau recommends that main line tracks should have a higher unit price than side track. The main line of the Black Mountain is exceedingly crooked, as I have already stated, with some curves

over 30 degrees, and a number over 20 degrees. It could not possibly be laid as cheaply as sidings of the same weight on the Carolina, Clinchfield and Ohio.

In the case of a siding, the main line is already in place. The ties and rails and other materials are delivered and dumped right where you want to use them. In the case of main line, the rail, ties, and all other material have to be loaded onto push cars and pushed forward by hand as the track is laid, or otherwise moved to their final position. We contend that a claim of \$200 extra per mile for this extra labor involved in laying main line track is not excessive, and that the Bureau's use of the same unit price for 60 pound main line track on the Black Mountain and for 60 pound siding track on the Clinchfield is entirely inconsistent.

The only witness which the Bureau presented as to this account was its assistant supervising engineer, Mr. Saunders. He did not fix the prices used by the Bureau, but merely reviewed them and approved them. Mr. Saunders' personal knowledge of the actual work of laying railroad track was admittedly small, and his knowledge of the lines of these particular carriers was obtained entirely from the Bureau's field notes. His testimony had largely to do with criticising the carriers' evidence. This has been fully discussed in our briefs and I shall not take the time to cover it again here.

That covers the accounts where the main issue relates to

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the unit prices to be applied in the reproduction estimates, and brings me to the various accounts and claims where the issue is as to the correctness of the theories or methods followed by the Bureau. The first of these which I wish to call your attention to is the subject of contingencies.

The carriers have protested the omission from the tentative valuation reports of any amount for contingencies. They claim amounts should have been included which equal 5 per cent of the inventoried items in the roadway and structure accounts, exclusive of land, in valuation docket 384, or an amount of \$1,371,468.

They also claim that an amount equal to 3 per cent of the same items should be included under dockets 377 and 381, making the claims in those two dockets \$44,203 and \$11,558, respectively.

The cost of reproduction new is, of course, nothing but an estimate. The Commission itself has adverted to that fact in the Texas Midland case, and in that case has explained at some length the reasons why it does not consider such an account necessary in estimating the cost of reproduction new for valuation purposes. Those reasons are fully known to you and require no restatement now.

With all due respect to the judgment of the Commission we contend that no satisfactory reasons have been advanced or can be advanced why an estimate by the Bureau of Valuation

should be treated differently from other engineering estimates.

Commissioner Aitchison. Is there any reason that the Clinchfield should be treated differently from other carriers?

Mr. Bailly. No, but they should all be given an allowance for contingencies in our opinion, Mr. Commissioner. The estimate is subject to the same liability of error, inadequacy and mistakes of judgment as other estimates made by equally experienced and competent engineers. Certainly no one knows better than the Commission that the Bureau of Valuation does make errors and has to correct them from time to time. In this record we have produced testimony in some detail as to 32 different items of inadequacy, omission, and probable error. A fair pricing of these 32 items, all drawn from the carriers actual experience, more than sustains the amount of 5 per cent claimed. Because of the importance of the subject we have set forth this testimony practically in full in the abstract of testimony, volume two of our brief, and respectfully request that it be read for a clear understanding of the basis of the claim.

Commissioner Lewis. What is the page?

Mr. Bailly. In volume two, beginning at page 66.

Commissioner Aitchison. I understand you make the concession that there is nothing with respect to the Clinchfield which differentiates it from the general mass of carriers

with respect to this item?

Mr. Bailly. I think perhaps that is a little too broadly stated, Mr. Commissioner.

Commissioner Aitchison. I would be glad to hear what the differentiation is, Mr. Bailly.

Mr. Bailly. I would rather not take the time to go into it. It is all shown in this testimony, and I think some of those items are undoubtedly peculiar to the Clinchfield.

Commissioner Aitchison All right.

Mr. Bailly. As there are 32 of them, it would require some little time for me to pick out those that are illustrative, but it is all set out in our abstract of testimony, of which you have a copy.

The Bureau has not offered any testimony whatever on this subject, and so far as the record is concerned it is based entirely on the testimony of the carrier.

We next come to the subject of depreciation. This is a subject on which you have had a great deal of argument.

Commissioner Meyer. Both to the effect that there is and that there is no depreciation.

Mr. Bailly. Quite correct, Mr. Commissioner, and I do not want to burden you or the record with any long discussion of it. The differences between the Bureau and the carrier are absolutely fundamental.

Commissioner Meyer. As are the differences among carriers.

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Mr. Bailly: But I would like to point out some of the results of the application of the Bureau's theories in this particular case.

In valuation docket 364, the Bureau has reported the cost of reproduction less depreciation, which shows a total depreciation of \$4,120,981 from the cost of reproduction new reported. This is 11 per cent depreciation for a property in operation eight years, or at the rate of 1.4 per cent per annum.

Taking separately the Clinchfield Northern Railway of Kentucky, its depreciation totals 5 per cent for a property in operation two years, or at the rate of $2\frac{1}{2}$ per cent per annum.

In valuation docket 377, the amount of the depreciation is 7.4 per cent for the property as a whole, or just about 1 per cent per annum.

In valuation docket 381 the depreciation totals 12.6 per cent, which is at the rate of over 4 per cent per annum.

Our contention is that the methods used by the Bureau in arriving at cost of reproduction less depreciation are based entirely on the finding of a theoretical depreciation as distinguished from actual physical deterioration, and that this is contrary to the principles laid down by the courts in numerous cases which are cited in our brief, and which I shall not take the time to discuss.

This is particularly true of the equipment accounts, where

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the depreciation appears to have been based on a loss of service life. This, of course, is purely an estimate. It requires the fixing of a theoretical life, to begin with, and then proceeds to find the amount of the depreciation by deducting a percentage of the cost which is represented by the expired life, the proportion which the expired life bears to the assumed total life. In this case it appeared that since the estimate was originally made, as to some of the equipment, all the remainder of the service life assumed had expired, and that the equipment was still in use and of almost as much value as it was when it had been appraised by the Bureau. That fact was met by simply changing the assumed service life. This, we think, shows very clearly that the depreciation of equipment is purely theoretical and not based on its condition.

The only testimony in the record as to the actual condition of the equipment or of any other property of the carrier is that it was in good condition and well maintained on the date of valuation.

Commissioner Aitchison. Does the Carolina, Clinchfield and Ohio set up any depreciation account on its equipment in its operating expenses?

Mr. Bailly. Yes.

Commissioner Aitchison. At what rate?

Mr. Bailly. The rate varies, Mr. Commissioner. In the

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early years a very small rate was used. I could not say what it was, exactly, for the different classes of equipment, but I know it was very low, as low as one per cent on some classes. Since Federal control/ ^{some of} the rates of depreciation, at least, which were established by the Railroad Administration have been continued, so that at the present time I am quite sure that rates as high as $4\frac{1}{2}$ per cent per annum are maintained on some classes of equipment.

Commissioner Aitchison. Was the Carolina, Clinchfield and Ohio the beneficiary of the guaranty during the period of 1930?

Mr. Bailly. Yes.

Commissioner Aitchison. Did it charge depreciation as part of its operating expenses during that period?

Mr. Bailly. Let me correct that. They did not take the guaranty. I was thinking of whether they had made a contract with the Railroad Administration. They did, but they did not accept the guaranty.

Commissioner Meyer. As a matter of information -- I do not remember -- did you make money during that six months' period?

Mr. Bailly. I think we did.

Commissioner Meyer. So, you never regretted it.

Mr. Bailly. We never regretted it at all.

The whole subject of depreciation is fully discussed in the briefs, with a citation of the authorities on which we rely.

It is to be found in somewhat separated portions of the brief, but I would refer you particularly to the discussion under equipment accounts, cost of reproduction less depreciation, on page 53 of the main brief; to the discussion under the heading of Depreciation on page 90; and in the reply brief to the discussion under the heading of Depreciation beginning on page 73. All of these put together are not very lengthy and will give you a very clear conception of what our claims are.

Commissioner Lewis. What is it, in a nutshell? ^{it} Is ^{that} proper maintenance offsets depreciation?

Mr. Bailly. It comes down almost to that, Mr. Commissioner.

Commissioner Lewis. The argument is not really much different, then, from that advanced by other carriers?

Mr. Bailly. Not at all. We claim that it is the actual condition existing on the date when the valuation is made which should be taken into account; and, of course, adequate maintenance has a very important bearing on that question.

We also claim, as do other carriers, that the track structure, as a whole, if properly maintained, does not depreciate so long as it is able to render the service for which it was intended, and that to depreciate various parts of that structure to the extent to which the Bureau depreciates it would make it absolutely unusable if its actual condition was what the Bureau gives as the percentage of theoretical condition.

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That brings me to another subject which I presume has been argued before you at considerable length on various occasions. That is the subject of cost of development of going value. I am not going to take your time to go into a long discussion of authorities as to whether the cost of development is a proper item to be considered in a reproduction new estimate. The authorities are cited in our briefs and in the Bureau's briefs, and you are probably just as familiar with them as I am.

Commissioner Aitchison. At least, we are just as anxious to follow them as anybody?

Mr. Bailly. Yes sir. You are perhaps more familiar with them than I am. I only want to say that the carriers contend that cost of development or going concern is an element of value that should be ascertained and reported.

Commissioner Aitchison. Our accounting report, if it is in this case like it is in others I have examined, contains all the data from which cost of reproduction can be argued, following the basis which used to be submitted to the state commissions by Mr. Hagenaw and others who followed the Wisconsin Commission rules so-called.

Commissioner Meyer. Wisconsin never knew of such rules, but go ahead.

Commissioner Aitchison. Is the accounting report, as full in that respect as they usually are?

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Mr. Bailly. I think the tentative valuation followed the usual form. It is just as full in respect to these three carriers as it is to the other carriers that have been valued.

Commissioner Aitchison. It might be that we have not given sufficient weight to that in determining final value, as far as development cost is concerned, following the formulae that are so often used with respect to deferred and unrequited losses and interest thereon and so forth. That does appear in the tentative valuation and will appear in the final valuation.

Mr. Bailly. There is an item in the final value there that we do not know how it was arrived at by the Commission. There is an item over and above the cost of reproduction less depreciation that the Commission has allowed. It does not itemize it. It does not tell us just what elements enter into the make-up of that item. It is left to conjecture, but in the Texas Midland case we are told what allowance has been made for joint value in these reports and it says quoting from page 69 of the Texas Midland report:

"In this connection it should be stated that in the instant case, going concern value has been given consideration in the cost of reproduction new and cost of reproduction less depreciation figures. In the cost of reproduction new and cost of reproduction less depreciation figures, values assigned to the property are not those of a dead plant, but of a going

concern, and to the extent indicated in the Des Moines Gas case, this element has been covered in the figures. Going concern value has been described as the value of an assembled and established plant, doing business. * * *

"In making up the inventory we applied prices to the different parts of the property in the light of the fact that it is a reality and doing business. Otherwise, the prices that would be applied would be scrap prices."

Now, if that truly indicates the kind of consideration which the Commission has given to the subject of development in this valuation, we do not think it complies with the authorities at all, and we do not see how, as a practical matter, that kind of consideration really could take into account the element known as cost of development or going value. There is not anything in the reports here that indicate the existence of any instructions to the employees of the Bureau of Valuation in determining the cost of reproduction new or the cost of reproduction less depreciation, they shall give consideration to the element of going concern. The unit prices which the employees of the Bureau used in determining cost of reproduction new are determined by differences of Bureau employees under different accounts. They are not the same people all the time. They act separately in the various matters assigned to them, and they

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determine independently, unit prices for each particular account. There was nothing whatever to show that they had before them any facts whatever on which to base any consideration or make any allowance for the element of going value.

Now, if that is a correct view of the situation, then what the Commission says in the Texas Midland case seems nothing more than that the values here found are not preface or second-hand values. They are values of new things.

Commissioner Meyer. There was a great deal said in that case about "bare bones value", comparing a dead plant with a live plant and that kind of thing.

Mr. Bailly. We do not see how merely applying the prices of new things as distinguished from scrap or second-hand things can possibly make a proper allowance for the element of going value.

On this subject I would like to call your attention particularly to the opinion of the Court of Appeals in the state of New York, which I have quoted at length in my reply brief. It will be found, beginning on page 66 of my reply brief, and it answers in detail the various statements that are contained in the quotation that I read to you a minute ago in the Texas Midland case.

Commissioner Meyer. Was that the case of a valuation for rate making purposes?

Mr. Bailly. It was. That was the case of People ex rel.

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Kings County Lighting Company against Wilcox, 210 New York 479, where the valuation of the properties of the Kings County Lighting Company by the Public Service Commission of the state of New York in a rate case was under review.

Commissioner Meyer. Well, I recall that case. In that case there were allowance, partly because of legislative recognition prior to the date of valuation.

Mr.-Bailly. I do not recall that.

Commissioner Meyer. Well that is very definite in the Mr. Bailly. As far as the opinion is concerned, there is no reference to that legislative recognition. It is set out here as a matter of right and law. Some of the remarks are very pertinent to the methods used by the Commission as stated in the Texas Midland case.

For example, it says in one place: "The Commission in this case says it was taken into account in valuing the plant in a going and not as a defunct or static concern."

Commissioner Meyer. But our Supreme Court has not yet said that.

Mr. Bailly. Well, they have come pretty close to it on some occasions. In other words, scrap values were not taken, but to say that sufficiently allows for going value is the same as to say that going value is not to be taken into account.

Commissioner Aitchison. I happen to recall very well

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our testimony in a case where Judge Prouty and the present Supreme Court Justice Butler were fighting this out. Our prices went so far as to put the kindle under the boiler of a locomotive ready to light the fire; --- our price on equipment.

* Mr. Bailly. That shows great forethought, Mr. Commissioner. Did you put the water in the boiler too?

Commissioner Aitchison. It was ready to fire, according to what was developed in this controversy between Mr. Justice Butler and Judge Prouty.

Mr. Bailly. Well I am not going to attempt to read you all the extracts from that opinion, but I think they are worth reading, and I recommend it to you as being very pertinent.

The Bureau, during the hearing, has attempted to exclude all carrier evidence on the subject of going value on the ground that it was not competent evidence under the decision of the Supreme Court in the Galveston Electric Company case. We do not look upon the Galveston Electric Company case as being as drastic as that. What was decided in the Galveston Electric Company case was that certain kinds of proof of going value were not competent, among others, proof of going value based on past losses. We have not endeavored in this case to produce anything of that kind. We have presented proof by various witnesses as to certain elements, not all of them, because we could not prove them, but as to certain

elements of the cost of development, viewed from the standpoint that cost development is actual cost incurred, and in setting a plant in operation and in attaching business to it.

Commissioner Aitchison. Do you recognize the conflict there is between that theory and those who take the plant as it has been developed,^a/capable, running business and attempting to adduce value from how well it gets business?

Mr. Bailly. Yes, we do. We do it entirely as an element of cost. Our view is that in making an estimate of cost of reproduction new, one element to be taken into account is the cost of starting the wheels in motion; of making the plant go, and of acquiring a certain amount of business during the early years of its existence. We have directed our testimony to those points. I have not attempted to discuss at length the kinds of testimony produced, beyond to say that we produced testimony by the carrier's chief engineer, Mr. Hattan, to show excess costs of maintenance as he terms them, during the early years in bringing up the track to a proper condition for operation, to the extent that it was operated on valuation date. We produced testimony from the carrier's superintendent, Mr. McIntyre who had many years of experience as carrier's chief clerk, pay-master, and afterwards superintendent, on the cost of getting together and bringing the operating forces to a state of efficiency which they were in

on valuation date. There are very real items of cost involved in doing that kind of thing. The only difficulty is in producing proof that satisfies that those are the actual costs of that operation.

We also produced testimony from Mr. Campion who, from the beginning of operations down past valuation date, was the carrier's chief traffic officer, and he testified as to the cost of acquiring business for this new carrier in the few early years of its operation. Those, too, were very actual and real costs.

Commissioner Aitchison. You did not try any synthetic build-up of how much it would cost on reproduction, did you?

Mr. Bailly. No sir, we did not make any studies on complicated formulae or theories that took into account early losses or anything of the kind. We merely produced opinion evidence, you might say, as to what some of the actual costs were in the early years of starting this machine in motion and attaching this business to it. On the basis of what these men testified, ---- Mr. Campion testified that in his opinion, a reasonable allowance for the cost of development of this system was \$3,000,000.

Commissioner Aitchison. I presume a large part of that was expended in inducing industries to come and locate along your line?

Mr. Bailly. Some of it, Mr. Commissioner, was expended in

that way, to induce industries to come and locate on the line.

Commissioner Aitchison. Would you assume that in reproduction, they would be obliterated and they would have to be induced to come again?

Mr. Bailly. No. I would not, but they are an element of the cost of this property as it existed on valuation date.

Commissioner Aitchison. That might be if we were considering original cost, but on reproduction your assumption would be that it would be necessary to go and get those industries to come again?

Mr. Bailly. Well, I think we should be allowed an element of value, whether we have to get them again or not.

Commissioner Aitchison. That is a different thing.

Mr. Bailly ---- for what has been created there by the expenditure of money.

Commissioner Aitchison. That may be, but I am talking about how much it would cost to reproduce this property of this company, assuming that it had no property there, and you assumed that it would cost as much to develop its business as it did cost originally.

Mr. Bailly. No. I did not assume that.

Commissioner Aitchison. What did you assume?

Mr. Bailly. I have said here that we were only able to show a few of the items of cost.

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Commissioner Aitchison. Well in respect to those items, it is your contention that on reproduction they would again be incurred?

Mr. Bailly. I won't say that, no sir, but I do contend that we should be allowed for the values produced by the expenditure of that money.

Commissioner Aitchison. That may be in connection with some other item, but we must not add eggs and apples together and expect to get a unit. When you talk about reproduction, which is an estimate, and costs which are actual historical facts in the past, there, it seems to me, we are dealing with different algebraic quantities.

Mr. Bailly. You are only talking about one element of going concern value.

Commissioner Aitchison. I want to analyze that. Perhaps I will have something more to say about the other later.

Mr. Bailly. There are other elements which have to be taken into account, to which that criticism does not apply.

As I pointed out in talking about account 12, we were only claiming, under account 12, for the same kind of a track as that assumed by the Bureau, but we do claim that there should somewhere be allowed in this estimate for the appreciation of the track which is brought about by maintenance, and those values, where we have them, ought to be allowed, and we have produced evidence to show what some of those costs were, and

the opinion of the men best qualified to testify about it as to what it would cost to bring that condition about.

The same is true of the acquirement and development of the operating force.

Commissioner Aitchison. Now just what did you cover by that? Did you organize the personnel department theoretically and have them examine the qualifications of applicants for positions and soliciting people to come into their employment, or what did that cover?

Mr. Bailly. Well, the testimony of Mr. McIntyre only went into one phase of the problem. It did not cover all of the costs that would be involved in organizing and training the operating force. It attacked the problem from the standpoint of finding out what different classes of employees cost the carrier in damage claims and things of that kind, during these periods of their employment. Mr. McIntyre showed by an exhibit that in the case of engineers and conductors and brakemen, new men who were employed by the Clinchfield, without any previous experience, during their first year of employment, cost a great deal more from this standpoint than they do in later years.

Commissioner Aitchison. You mean during the first year of experience on the Clinchfield?

Mr. Bailly. During the first year of experience on the Clinchfield. He also made a similar study of men who came

to the Clinchfield with previous training on other lines, and he found that they cost the company a less amount than the green men.

Commissioner Aitchison. You do not take green engineers who have never had any experience.

Mr. Bailly. No, but some of them become engineers on the Clinchfield for the first time. That is, they were employed as firemen first.

Commissioner Aitchison. That would not necessarily follow that that would be done on reproduction, in putting the property in service again, would it?

Mr. Bailly. Well it was one way we could see that we could develop the element of cost of getting and training the organization.

Commissioner Aitchison. But that experience that you spoke about the employees claiming, belongs to them and not to you.

Mr. Bailly. Well it cost the carrier money to get together the organization.

Commissioner Aitchison. Suppose you had the Clinchfield all organized and ready to start to-morrow, could you not go to the heads of the labor unions, if you wanted to, and get them to bring to you seasoned men? In fact, you would have to take them that way, would you not?

Mr. Bailly. You would have to take the engineers who

were seasoned. You would not have to take all of the other employees.

Commissioner Aitchison. You would have to take conductors who were seasoned?

Mr. Bailly. Our experience is that they cost more to develop on our line than do the men that are trained up on our line, and that is shown by Mr. McIntyre's studies. At any rate, we have attacked the problem from the standpoint of cost of starting the plant in operation and not from the standpoint of early losses or formulae, and we invite your attention to the abstracts of this testimony in the record, which we have made as full as possible.

Commissioner Aitchison. As those men are all privileged to quit to-morrow if they want to, and some of them have tried to do it sometimes, is not the item you spoke of somewhat akin to the good will of employees, rather than the good will of customers as we usually speak of it?

Mr. Bailly. No sir. I do not see that it is, Mr. Commissioner. You cannot visualize an entire organization as quitting at once, can you?

Commissioner Aitchison. Oh yes.

Mr. Bailly. There are temporary stoppages of work, but you do not find them leaving the community when they do that. They stay around expecting to get their jobs back when the reason for the stoppage is removed.

There are a number of other items that I wish I had time to go into, but I would like to save a little time for reply, and I will have to content myself with directing your attention to what they are and asking you to read the portions of the brief in which they are covered.

The first of these is trackage or contract rights, and I would like to ask you particularly to read what is said in the original brief on that subject at pages 96 and 98, and at page 80 of the reply brief.

I think Mr. Commissioner Meyer will find that I have been as brief in discussing that subject as he hoped I would be in this argument.

I would like also to direct your attention to the discussion of interest during construction and the related subject of cost of obtaining money, which appears on pages 61 to 65 of our main brief. Those are the principal items which I had hoped to cover in this oral argument. I will reserve a small amount of my time to reply to the Bureau.

Commissioner Meyer. Mr. Swink.

ARGUMENT OF MR. GROVER L. SWINK

In Behalf of the Bureau of Valuation.

Mr. Swink. May it please the Commission, the issues in these dockets result from the assertions in the protests that the Bureau's cost of reproduction estimates are too low by reason of the use of inadequate unit prices; omissions of

in property owned and used, and omissions of certain costs.

Under account 3, grading, the Bureau has applied an average unclassified unit price of 51.3 cents per cubic yard, including haul, in the reproduction estimate of the Clinchfield.

Commissioner Aitchison. Is that exactly true? Did you not use three different sets of prices, and vary them according to the valuation sections?

Mr. Swink. We did, Your Honor, but when we took the entire yardage and divided it into the total cost of reproduction new, we got what the engineer terms "unclassified unit prices".

Commissioner Aitchison. But that is deduced and not applied?

Mr. Swink. Yes sir.

The Clinchfield asks the Commission to apply a price of 57.59 cents. The only support presented for the contended increase is exhibit 1, which purports to show the historical or actual costs on 32 jobs on the carrier's line, representing approximately 86.9 per cent of the valuation yardage.

Original cost of railroad construction performed during the pricing period of the Bureau is always considered in reproduction by the Bureau, provided that original cost was a normal cost. However, that original cost cannot be applied

by itself when it was performed at peak prices or in part by a contractor on an actual cost basis.

The original cost data relied upon by the Clinchfield is not determinative of the cost of grading in reproduction at normal 1914 prices. For example, the Meadows Company was the general contractor for the major portion of the Clinchfield mileage. The Meadows Company was incorporated by the same group of individuals that incorporated the Clinchfield. It was organized for the specific purpose of building the Clinchfield. The Meadows Company was not a contracting firm of recognized standing. This record does not show that it ever performed one cubic yard of excavation either before or subsequent to the time it constructed the Clinchfield.

The carrier asserts the Meadows Company was organized for the specific purpose of keeping down the costs, but the record clearly indicates their work was decidedly more expensive than work performed by contractors on adjoining sections.

The Meadows Company began work in September, 1905 and performed approximately 8,000,000 yards of grading. This grading was performed on an actual cost basis, but we contend does not make it comparable with work done under competitive bids.

We also contend that grading prices for work done on the Clinchfield in 1905, 1906 and 1907, as shown in carrier's exhibit number 1, were higher than in any other similar per-

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ied between 1900 and 1914 both inclusive. The present record clearly indicates grading prices were at their peak during the construction of the Clinchfield.

Commissioner Aitchison. What was that date?

Mr. Swink. 1905, 1906 and 1907.

During this three year period more miles of new railroad were constructed in the United States than in any similar period since 1900. In 1906 more new mileage was constructed than in any one year since 1900. In 1907 more miles of new railroad were constructed in the South than in any one year since 1900.

During the construction of the Clinchfield in this period there was more railroad mileage constructed in the South than in any three year period since 1900. We contend the conditions cited created a greater demand for contractors to bid upon work, and had a material effect upon unit prices.

Carrier's exhibit number 1 also contains grading jobs which the Bureau contends are improper for consideration in a reproduction study.

Commissioner Meyer. Because of this increased demand for contractors, assuming that to be the fact, would not the prices be higher, and then, would not the original cost of this carrier be correspondingly higher than it would have been otherwise?

Mr. Swink. That is the contention of the Bureau.

Commissioner Meyer. And is it shown?

Mr. Swink. We believe we will be able to show it very shortly.

Commissioner Meyer. Is it shown, I mean, in the tentative report?

Mr. Swink. Yes sir.

Commissioner Aitchison. It is hardly shown in the tentative report, is it?

Mr. Swink. I think it is shown in the tentative report when it is predicated upon actual cost of the Meadows Company as compared with the normal 1914 prices used.

Commissioner Aitchison. I mean is the fact that there was so much railroad construction going on in the South, shown in the tentative report?

Mr. Swink. Oh, that would not be shown in the tentative valuation of the Clinchfield. It is shown in the record in this case by evidence presented by the Bureau.

As to work in exhibit 1 which we do not consider proper for use in a reproduction estimate, we refer to one job of grading performed at \$1.14 per cubic yard. We refer to another job of the Meadows Company at an average price of 91 cents per cubic yard. We also refer to grading for auditors' charge of 170 per cent in excess of the direct grading charges on the project.

In support of the unit prices in the tentative valuation

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and in the basic engineering report, the Bureau presented exhibit 46. This exhibit shows prices paid contractors for grading in the construction of 156 projects on 28 railroads, including the Clinchfield, located in the Appalachian Mountains, for work performed during the period 1899 to 1916. The exhibit contains all available new construction data in the territory, with the exception of revision work, re-alignment, changes of line, changes of grade and other improvements on the operating property.

The Clinchfield asserts in its brief that the Bureau has not used all costs on these projects, but only compared contract costs. These data were not collected and averaged for the purpose of ascertaining specific unit prices for application, nor were those average prices applied.

They were used merely as a basis for study by the Commission's engineers, as the Commission directed in the Texas Midland case.

Following that study, the Commission's engineers exercised their judgment in applying proper unit prices, having in mind the location of the property, the topography of the country traversed, drainage, geology, volume of grading per mile, and all other pertinent factors.

It is interesting to note that of 25 summaries in exhibit 46 for loose rock/^{the} prices paid were lower on 22 projects than the Bureau applied to the Clinchfield. Of 25 summaries

for common excavation, 17 were lower than the unit price applied on the Clinchfield. Of 25 for loose rock, 20 were lower.

Mr. Bailly told you the average prices reflected by exhibit 46 are unreliable and only 80 to 95 per cent of the full prices, because extra work was excluded. The data on extra bills, concessions, and contract adjustments were not summarized for the reason that the Bureau's records show considerable of this extra work would be measured by field parties, and included in the inventory.

In order to ascertain costs to carriers over and above the contract prices, the Bureau has made extensive studies. The Bureau found 5 per cent to be an adequate allowance for such work, and applied that percentage in the present case.

As indicative of the adequacy of this 5 per cent, we refer to Bureau's exhibit 76 which is marked for identification in this record. This exhibit is an analysis of extra work costs on the Clinchfield, made by the Bureau employees in 1913. It covers \$8,000,000 worth of grading. It reflects extra work of 5.3 per cent and of this amount only 2.7 per cent or \$221,000, was chargeable to the unit prices of the grading account. This 2.7 per cent includes \$57,000 of doubtful items and \$95,000 for losses of contractors and court awards.

Considerable comment has also been made by counsel upon

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the fact that important data were omitted from the Bureau's exhibits. We direct attention to the fact that these omitted data related only to those extra payments made contractors for extra work, and have no bearing upon contract unit prices.

Counsel has laid great stress in argument and brief upon the fact that in the 109,000,000 cubic yards of excavation in Bureau's exhibit 46, there are 18,000,000 cubic yards of excavation on the Clinchfield at prices established by the railroad's engineers, rather than contract prices. This statement is rather in error to the extent of 10,000,000 cubic yards, as the Meadows Company work embraced only 8,000,000 yards. We admit the inclusion of these data, in order to present all new construction work in the territory to the Commission. Each Meadows Company project in the Bureau's exhibit, bore the plain notation that the unit prices were not contract prices. No effort was made by the Bureau to conceal the facts. An explanation of the source of these data will readily justify their use. They were furnished by the carrier to an employee of the Bureau in 1918. For several years these data remained in the cost records of the Bureau without any effort being made by the carrier to produce other prices. During this period the carrier had no knowledge of the Bureau's possession of these data, and this record does not contain the assertion that it ever furnished

additional or corrected information.

The Bureau's witness testified he used these prices in his exhibit because the Bureau did not know what prices were paid. Until these hearings they were the only prices available for Meadows Company work. They stand to-day a mere summation of figures, without sufficient break-down to permit of intelligent analysis.

Mr. Elgen, the Bureau's engineer, further testified he used these figures in the belief they were based on the knowledge of the Clinchfield's engineers, and what the contract prices were. In fact, he checked the prices on miles 185 to 208, and found the Meadows figures, as made by the Clinchfield's engineers, gave practically the same price as the contract prices paid McCabe & Company.

In rebuttal the carrier presented exhibit 63, containing ten projects chosen from the Bureau's exhibit as comparable with the Clinchfield. The ten projects are ~~xxxx~~ the highest projects in the Bureau's exhibit. A review of the projects in this exhibit clearly indicates they are handpicked to support a preconceived unit price.

Commissioner Meyer. Were not the ten selected from a relatively small number? Ten out of sixteen, or something like that?

Mr. Swink. Not to my knowledge, Mr. Commissioner. Out of this entire volume, the ten were selected (indicating).

Considerable has been said this morning regarding the effect of inaccessibility and isolation, upon the unit prices. In the course of its rebuttal testimony, the Clinchfield contended the location of its property in a mountainous territory would have a tendency to affect unit prices. We contend this is not supported by the exhibits in the record. The carrier's reply brief asserts the Virginian jobs are the only jobs really comparable with the Bulk of this work. We will use those projects to prove our assertion on the basis of fact that isolation and inaccessibility do not affect unit prices. Langhorn & Company, Incorporated and McArthur Brothers had contracts on immediately adjoining sections of the Virginian. The final estimates indicate each contractor paid all transportation charges. The McArthur job was paralleled throughout by the main line of the Norfolk & Western Railway on the opposite bank of the New River and was approximately 3 miles away at Allegheny Summit.

The Langhorn presents extreme isolation. Except near the west end of the work, transportation was not convenient. The haulage for the east half was from 12 to 15 miles over hilly roads. However, this inaccessibility and isolation is not reflected in the contract prices, as Langhorn did the work 2 cents cheaper on common excavation, 5 cents on loose rock and 15 cents cheaper on solid rock than McArthur.

Commissioner Meyer. When you say that is not reflected in the contract prices, you mean that this expense of hauling did not sufficiently influence these prices to make them stand out?

Mr. Swink. That is our contention, that it does not have any direct influence upon the unit price.

Commissioner Meyer. But, whatever those costs were, were they included?

Mr. Swink. They were included in the unit price.

We might also cite that at the same time the Clinchfield was constructed, the Denver & Salt Lake Railroad was constructed, about 214 miles of line across the Rocky Mountains. This project was decidedly inaccessible, and one of extreme isolation, traversing country requiring a snow plow eleven months of the year. The yardage was 9,000,000 cubic yards, of which 2,000,000, or less than 20 per cent was common excavation. On this project the contract prices for common excavation and loose rock were 8 cents per cubic yard, and for solid rock 21 cents per cubic yard lower than McArthur, with all the accessibility in the world at his command.

Mr. Bailly. May I ask where that is in the record?

Mr. Swink. Mr. R. E. Elgen testified to that fact in the record for the Bureau.

Mr. Bailly. Can you give me the page?

Mr. Swink. Transcript page 1222.

A question has also been presented by Mr. Bailly as to the trend in grading prices. The Clinchfield contends there was a trend in grading prices between 1899 and 1913, and presented exhibit number 64 for the record. This exhibit purports to show that the grading contracts in the Bureau's exhibit, reflect increases of 37 per cent for common excavation, 31.4 per cent for loose rock and 21.7 per cent for solid rock.

Commissioner Meyer. Can those figures be right? 31 cents for loose rock and 21 cents for solid rock?

Mr. Swink. No, --- I am speaking of the difference, Your Honor, between the McArthur price and the price paid on the Denver & Salt Lake.

The Bureau contends in the first place that this trend was improperly prepared. No analysis was made of the basic data to insure the inclusion of only comparable projects. No segregation was made with respect to the quantities of material excavated per mile of road. No determination was made of the character of materials encountered in each class of excavation, prior to preparing the trend.

The exhibit also bears the notation "Hard pan excluded". This statement is not only incorrect, but misleading. For example, numerous Norfolk & Western projects were used in the trend, which projects were performed some years ago, and in the final estimates, hard pan was separately classified

and priced.

On the other hand, Virginian and other contracts were used, and in those contracts, hard pan was not given an individual classification or unit price, but included in the unit price for common excavation.

Mr. Elgen, the Bureau's witness, testified the cost branch was unable to find a trend in grading prices, with all the data in the United States after its disposal.

Carrier's witness Morgan testified repeatedly that the Bureau's data in exhibit 46 was improper to use in reproduction, yet he uses those data and none other in an attempt to develop a trend in grading prices. We submit the same trend could be developed for each and every year from the data in exhibit 46, that Mr. Morgan has developed for the period 1899 to 1915. The Bureau does not contend labor prices have not increased since 1900. It does contend, however, that the cost of labor does not directly affect contract prices, as shown in exhibit 46. Any proper set of contract data will disclose the fact that contract prices do not vary with the increasing cost of labor. In fact, in certain cases, contract prices are found to be lower, although labor prices have increased.

Mr. Bailly stated this morning that the tentative valuations in these cases applied four different sets of grading prices to the Clinchfield system. He further asserted these

prices were separately produced, and that the Bureau has produced no testimony in support of more than one set of prices. This objection is best met by comparing all of the carriers in the Clinchfield system and comparing the average prices applied to the system with those applied and proven on the Clinchfield system. Such a comparison reveals a maximum variation of 3 mills per cubic yard in the unit prices applied to solid rock and 2 mills per cubic yard for loose rock.

Coming now to account 5, tunnels, the tentative valuation of the Clinchfield and the Clinchfield Northern of Kentucky: They include approximately 1,000,000 cubic yards of tunnel excavation price at \$3.25 per cubic yard, including over-break. An increase of 25 cents per cubic yard, or \$3.50 is asked in the protest. The increase requested is based upon a study of carriers' actual cost, including bids for doing work received in 1905. These actual costs are incorporated in exhibit 3 at an average unit price of \$3.47 for excavation including over-break, extra bills, and contractors' adjustments.

Commissioner Meyer. When you say bids of 1905 are included, do you mean bids, or bids that were accepted?

Mr. Swink. That is the expression that was used by Mr. Morgan. I assume that he has used bids received as well as

73 bids accepted. That is the phrase which Mr. Morgan uses in the transcript, sir, at page 63.

Exhibit number 3 was subsequently corrected by exhibit number 67, and as corrected, shows \$3.53 per cubic yard.

The Bureau contends neither exhibits 3 nor 67 are a proper basis by themselves for use in reproduction. They simply reflect original costs of Clinchfield work performed at peak prices. They contain and are dominated by three Meadows jobs, involving 88,000 cubic yards of tunnel excavation at an average price of \$6.81 per cubic yard. This Meadows work represents actual cost of work without the element of competition. It is double the cost per yard paid any other contractor on this line. By including these abnormal costs on the Meadows jobs, the weighted average cost of tunnel excavation on the Clinchfield is comparable with other work in the territory.

Commissioner Meyer. As I understood Mr. Bailly he does not claim reproduction costs equal to the actual costs.

Mr. Swink. That is true, Your Honor.

Commissioner Meyer. Now, the difference must be due to the use of different figures to get at the average that you applied.

Mr. Swink. As I understand it, Your Honor, Mr. Bailly took original costs, found the weighted average, and reduced his claim a little bit under that.

Commissioner Meyer. His claim for reproduction?

Mr. Swink. Yes sir, per cubic yard for tunnel excavation.

Mr. Bailly. The costs as found in the exhibit are \$3.43 and the claim is \$3.50.

Mr. Swink. In support of its tunnel prices, the Bureau presented exhibit 47, being a summary of the final estimates on tunnels constructed during the period 1899 to 1913. It contains contract data on more than 100 tunnels, including those of the Clinchfield.

The exhibit also contains data on nine double track tunnels, although the Clinchfield tunnels are all single track, and, as explained by the Bureau's witness, those tunnels were incorporated merely for information, and the Bureau's engineers were influenced in no way by the lower prices applicable to double track tunnels.

Commissioner Aitchison. What do you say about this double track tunnel? Mr. Bailly says you have got no such tunnel.

Mr. Swink. I will be glad to tell you something about that right now.

The Bureau's exhibit discloses a weighted average price in tunnel excavation, including over-break, of \$2.15 per cubic yard, including the Virginian tunnels, and \$3 per cubic yard for tunnel excavation including over-break, exclusive of the Virginian. The Bureau has applied \$3.25 per cubic yard for tunnel excavation, including over-break,

to the yardage in protestants' tunnels. Mr. Bailly makes inquiry as to why the Virginian contracts should be excluded from these data. The answer is simple. There are 35 single track tunnels on the Virginian which averaged \$3.71 per cubic yard for tunnel excavation, including over-break. This unit price is largely dominated by jobs 14 and 77 of McArthur Brothers, at prices unheard of in the Appalachian Mountains, of \$4.25 per cubic yard.

Mr. Bailly. How about Meadows, of \$6 and something?

Mr. Swink. I might say that those are not in the Bureau's exhibit, Mr. Bailly. All Virginian contracts, exclusive of the McArthur work, averaged \$2.96 per cubic yard. The McArthur contracts were excluded by the Bureau's engineers for the reason they were never shown to have been let after competitive bidding. They were emergency contracts with a time limit. They were made to meet a change in the plans of the Virginian. The prices were based upon unusual conditions and were not used in pricing the Virginian itself by the Bureau.

Commissioner Meyer. Did the Virginian try to use it?

Mr. Swink. Not the full price, I understand. That is not in this record, but I understand that it is not. The prices applied to tunnel excavation in the tentative valuation on the Clinchfield were not based solely on the data in exhibit 47. These data were used merely as a study, and Bureau's

engineers exercised their judgment in reaching a proper unit price, after giving consideration to all the facts.

Now, Mr. Commissioner Aitchison, with respect to the Jenny Gap tunnel of the Virginian, which Mr. Bailly referred to this morning, this is a double track tunnel and was included, through oversight, with the single track tunnels used by the Bureau. By excluding the Jenny Gap tunnel, the Bureau's weighted average price for tunnel excavation, in exhibit 46, is increased from \$3.14 to \$3.15 per cubic yard ---- one cent per cubic yard. Considerable criticism is spread upon the record by witnesses for the carrier, that the Jenny Gap tunnel was a contract for bench work only, as the Chesapeake & Ohio had previously performed all the necessary punching of head. This assertion is not borne out by the data shown for eight double track tunnels in exhibit 46. These eight tunnels averaged 31.6 cubic yards of excavation per lineal foot, whereas the Jenny Gap averaged 32.2 cubic yards per lineal foot, which conclusively proves the contract price of \$2.20 ~~of~~ tunnel excavation on the Jenny Gap, including heading, as well as bench work.

Bureau's exhibit 47 shows \$3.33 as the average cost of tunnel excavation, including over-break, on five Western Maryland tunnels. The Big Savage tunnel of the Western Maryland was omitted purely by oversight, according to the testi-

mony of the Bureau's witness Eigen. In rebuttal, the Clinchfield sought to include this tunnel in the adjustment of the Bureau's data at the abnormal unit price of \$4.71 for tunnel excavation and over-break, including haul. Any analysis of the costs presented by the carrier for the Big Savage tunnel is conclusive that it was an abnormal project. For example, it had an airlock section, in which the tunnel excavation cost \$17.27 per cubic yard, thereby making it decisively abnormal.

It also had ^a soft ground section in which the tunnel excavation cost \$9.29 per cubic yard.

We submit the Bureau would be justified in omitting the Big Savage tunnel from any tunnel exhibit, as being abnormal, and as not being comparable with any tunnel to be reproduced on the Clinchfield.

Commissioner Lewis. Before you leave that account, did this cost of \$21,000,000 by the Meadows Company for some 150 miles of construction, include this price of \$6 for tunnel work?

Mr. Swink. It did.

Cross ties were assigned a unit price of 55 cents each in the basic engineering report on the Clinchfield in South Carolina on the basis of data contained in valuation order 14. These carriers request 60 cents each for cross ties in the states of Kentucky, Virginia, Tennessee and North Caro-

lina, and 65 cents each in South Carolina. The increased prices are based upon a study by its purchasing agent, Staratt, who estimated ^{that} only 53 per cent of the 1,083,000 ties could be obtained locally. The remaining 47 per cent, he estimated, would be received from the territory served by connecting lines.

At the hearing, the Bureau recommended a decrease of 5 cents each in the unit price of 55 cents assigned to cross ties. The carriers' returns to the Commission disclose the distributing point for ties to be F.O.B. carrier's line. The weighted average price paid for cross ties during the five years preceding valuation date was 43.7 cents per tie, F.O.B. distributing point, according to the carriers' annual report to the Commission. Where ties are local, the Bureau at the present time assumes material yard and inspection as the only additional expense to be incurred.

Counsel asserts the Bureau's price does not include haul except in South Carolina, where ties could not be produced off the right of way. An analysis of the Bureau's price of 50 cents will show that statement to be incorrect, in view of the fact that the Bureau allowed a haul of 81 miles in South Carolina and 165 miles per tie in Kentucky.

The record also shows 5,000 locust ties in the Sandy Ridge tunnel, for which the Clinchfield made a separate classifica-

tion in tie prices of 85 cents each. The Bureau's witness testified that cross ties are inventoried as a class. These locust ties were averaged with the other ties and the difference in the weighted average cost was approximately 2 mills per tie.

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Bureau's exhibit 48 contains excerpts from the assistant field engineer's notes, which indicate timber for ties and bridges could probably be obtained locally. In support of this assertion, we have the statement of the general manager of the Clinchfield, Mr. Phetteplace, that cross ties are about the only item of its material and supply account which can be obtained locally.

The issues under account 9 on the Clinchfield of South Carolina and Black Mountain Railroad relate to unit prices in the classification of certain rail as relay. In fact, in the field inventory no distinction was made by the field parties between openhearth and Bessemer. The engineering reports of these carriers assign a price of \$33.70 per gross ton to all new rail, without describing openhearth or Bessemer on the assumption they occur in approximately the same quantities throughout the system.

The Clinchfield contends for a unit price of \$34.13 1/2 per gross ton, based on actual purchases. The difference between the contended unit and those assigned by the Bureau is 43 1/2 cents per gross ton. Under the method adopted by

the Bureau in distributing rail, it is delivered at points of attack offering the most favorable freight rates.

Commissioner Aitchison. That is the same question we had argued in the Great Northern case?

Mr. Swink. It is, Your Honor.

Commissioner Aitchison. It was presented by Mr. Hartman, was it not?

Mr. Swink. Yes sir. From these points of attack, rail is distributed by company haul -----

Commissioner Meyer. I think Commissioner Aitchison has it in mind that we can save time by not arguing that.

Mr. Swink. There is only one point I want to show, that under the exhibit presented by the carrier, he has used the full commercial rate to the carrier's line, to fix distributing points, whereas the Bureau has only allowed company haul over the company's line.

Commissioner Meyer. Now, I see a shaking of the head in the negative over here.

Mr. Swink. The proof lies in the exhibit, Your Honor.

Commissioner Meyer. Perhaps this is a good place to stop. You can look that up and see whether the shaking of the head is justified.

Mr. Bailly. I would like to say one word in answer to the question as to whether the Virginian claimed all of its

tunnel costs. I have here before me the Virginian's abstract of testimony in their valuation case, and it shows that they claim \$3.90 per cubic yard as a proper unit price to apply, the Bureau having applied a price of \$3.50. They themselves develop this same figure that Mr. Elgon developed of \$3.63, but they claimed there is a trend in their tunnel prices and it should be \$3.96 as of valuation date.

Commissioner Meyer. We will suspend now until ten o'clock to-morrow.

(Whereupon at 4 o'clock P. M., a recess was taken until to-morrow, October 29, 1926, at 10 o'clock A. M.)