

and according to the evidence of Mr. Grant, the present Chief Engineer, it is now under investigation. There is no suggestion anywhere in the evidence that any excessive overbreak had been intentionally returned.

Another item referred to in Mr. Lumsden's statement was the return of frozen material as loose rock. Mr. Poulin, the district engineer of District 'F,' was appointed after the time within which the contract was to have been completed had expired, and his instructions from Mr. Lumsden were to hasten the work of construction as rapidly as possible. The season of summer work was short, and certain material was returned as loose rock which had been removed while frozen solid. Mr. Lumsden, however, several times during the course of his evidence stated that he made no charge with respect to frozen material, and notably on page 334.

There is also some question about the allowance of indurated material in borrow pits near Wabigoon as loose rock. This was reported to Mr. Lumsden by Mr. Poulin at the time of its classification without objection from him, and the evidence appears to establish that the classification of this material was correctly made in accordance with engineering practice. In any event the item is small in amount.

Another ground of complaint was that the engineers had classified massed material by percentages instead of by actual measurement. In the letter of instructions of Mr. Lumsden, already referred to, of January 30, he distinctly excepted from his order that measurements should be made in all cases where measurements was impracticable. The evidence shows that actual measurements have in all cases been made of the total quantities of material moved, and also actual measurements of all ledge rock. It appears that in certain cuts the massed material occurred in very irregular formations, and it was found by the engineers impossible to measure accurately the quantities of material which should be returned as assembled rock. In such cases measurement by percentage, as authorized by Mr. Lumsden was resorted to and the evidence establishes that this had been the practice on other railways, and is in accordance with the best engineering methods. In fact all the engineers examined declared upon oath that no other means of classification of such material is known to engineering science.

These questions are all questions of engineering opinion, and do not involve in the aggregate a very serious amount; the returns and progress estimates are all subject to revision, the commissioners being far more than amply protected by the security held by them.

As regards the alleged over-classification of assembled rock, Mr. Gordon Grant, who has had the advantage of making a personal inspection of the road spoke of it as a tempest in a teapot. (p. 535).

In view of the increase in the cost of the road over the preliminary estimates, your committee thought it proper to inquire carefully whether this was in any appreciable degree attributable to over-classification. The first estimate attributed to Mr. Schreiber in 1903 was previous to any surveys whatever having been made, and was simply a rough estimate of what it might probably cost to build through such a country. The later estimates of quantities printed on page 5353 of *Hansard* (Mech. 11, 1910) and reprinted on p. 548 of the Proceedings before this Committee contained in the first, third and fifth columns was compiled for the purpose of enabling the commissioners to appreciate the tenders of the contractors, or, as it is commonly called, to 'moneyout' the tenders, and was in many cases based upon preliminary lines which were subsequently very materially changed, and which did not include a number of items entering into the cost of construction. These figures were not communicated to the contractors tendering but were intended solely as a guide to the Commissioners in determining which were the lowest tenders according to the prices asked for different classes of material in each tender. As he stated above, they were based to a considerable extent upon preliminary lines, that is, the first projected lines of surveys. These lines were superseded by the revised location, and these again by the final location, and as Mr. Lumsden says, even the final location was in many