

16. Was that delay in starting justifiable delay?—I think so. Under ordinary circumstances it takes at least six months to obtain plant from England or Europe, and in this instance Mr. McLean made it his business to visit Europe for the purpose of inspecting the large tunnel-works which were in progress there, in order to make himself acquainted with the most modern method of carrying out such work. His doing that enabled him to prosecute his work in a better manner than he otherwise would without the knowledge thus gained.

17. When fixing the time for the completion of the contract was it assumed that work would be started and continued from both ends of the tunnel?—Yes.

18. And that they would meet about the centre?—No; we reckoned that from a quarter to a third would be completed from the Bealey end, and the balance from the Otira end.

19. Would that factor alone—that three-fourths of the work had to be done from one end—not increase your estimate of the cost?—We took that into consideration, or, rather, Mr. Hay did.

20. Your estimate was £500,000: the price the lowest tenderer got was very nearly £600,000?—Yes.

21. Would that difference of £100,000 have been sufficient to compensate for the loss sustained through not having a full complement of men?—It is rather a difficult question to answer. I should feel inclined now to say that our estimate was too low, without the difficulties that have arisen regarding labour.

22. Do I understand from you, then, that, apart from the difficulty of obtaining sufficient labour, there are other factors which have made it more expensive for the contractor to complete the work than were taken into consideration at the time the estimate was prepared?—Yes.

23. Would you mind stating what these are?—There seems to have been a general increase in the cost of carrying work out, judging by what it has cost us to carry out other tunnel-work throughout the Dominion.

24. There has been an increase in the cost of work of this description since the contractors signed this contract?—Yes.

25. What would that increase amount to, approximately?—The highest cost of constructing a tunnel on the same line of railway, near Broken River, about the time this contract was let was about £32 per lineal yard. Since then the size of the tunnels has been increased slightly, but tunnels in similar country now are costing us £40 and £41 per lineal yard. The increased cost is not accounted for by the increase in the size of the tunnel; so there are other factors helping to cause the increase. What they are it is rather difficult to say.

26. But there they are: you know that as a fact?—Yes.

27. Do you know for what distance the tunnel has been pierced from the Bealey end?—About 26 chains, I think.

28. In the four years they have been at work could they have pierced that tunnel to a greater length at that end?—Yes, I think so.

29. What were the difficulties in piercing the tunnel at that end, do you know?—I do not quite know. I have never been able exactly to realize the difficulties the contractors have experienced.

30. Was it through excessive water accumulating at that end?—No, there is no excessive water—nothing out of the way.

31. They were able to control the water?—Their plant is more than ample to deal with any water that they have encountered so far.

32. Do you think, from your knowledge of the locality, that it would have been as easy to pierce the tunnel from the Bealey end as the Otira end?—Oh, no. It is easier to work uphill.

33. Would the difficulties in working down hill be such as to justify their hope of being able to pierce the tunnel almost entirely from the Otira end?—I do not think so.

34. I mean, at the same cost?—I think it could be pushed on at the same cost from the upper end under the conditions that are existing.

35. You have examined the Bealey end?—Yes.

36. Are you satisfied that work at the Bealey end could be pushed on without much greater expense than from the Otira end?—It would cost more, but not a great deal more, I think.

37. There would be the haulage of the spoil uphill?—Yes, there would be greater haulage.

38. At the other end it would run out by gravitation?—Yes.

39. But the actual working of the face?—I do not see why that should cost any more.

40. Can you account in any way, then, for the fact that such a short distance has been pierced at the Bealey end?—No, I cannot. The reason that has occurred to me is that the contractors have considered it to their advantage to prosecute the work from the Otira end at a greater rate than from the Bealey end. That is their business, of course; it is not a matter for the Government to interfere with.

41. *The Chairman.*] There are no provisions in the contract directing that?—No.

42. *Hon. Mr. Fraser.*] There is a waterfall somewhere over the course of the tunnel, is there not?—There are several waterfalls.

43. Is there not one particularly big one?—There is the Punchbowl. It is not a very large waterfall: it is a high one.

44. Is there a large volume of water?—No, not a very large volume.

45. Does that water flow over the course the tunnel will take?—It flows over the top of the tunnel after it has fallen.

46. The tunnel would be constructed below where it strikes the ground?—Yes.

47. What height is it, where it strikes the ground, above where the roof of the tunnel will be?—At least 50 ft., I think.

48. How far would that be from the Otira end? Is it nearer the Otira end or the Bealey end?—Nearer the Bealey end.