

Railway Construction—Contract No. 15.

415. After that had you any connection with any works on the Pacific Railway?—In April, 1877, I went on contract 15, as engineer for the contractor, Mr. Whitehead. April, 1875, went on Con. 15 as engineer for Whitehead.
416. How did you procure that position?—Mr. Whitehead wanted an engineer, and, I believe, applied to Mr. Fleming for a recommendation, and, I understand, I was recommended by Mr. Fleming. S. Fleming recommended him.
417. Did you proceed to work on section 15?—Yes. Went to Sec. 15 May, 1877.
418. About what time?—In May, 1877.
419. Had any work been then done upon it?—The work had been commenced in March, I think, but very little had been done. Work had been commenced in March but little progress had been made.
420. At that time had plans been prepared showing the location of the line, or the quantities of different kinds of work, or any other particulars which would enable you to ascertain pretty well what was required?—There was no information in the possession of the engineers that would enable one to make an accurate estimate of the final quantities of work on the contract. No means of making accurate estimate of final quantities of work on the contract.
421. Had the location been made?—The trial location had been made, but the permanent location was not completed, and they had not complete profiles made. Trial location made; permanent location not complete, profiles incomplete.
422. What particulars are generally requisite before commencing work on a railway?—It is generally considered necessary to have a complete working plan and profile of the contract work to be done.
423. What is a working plan?—The working plan is a plan of the country, showing the exact location of the line of railway.
424. Was there any such plan when you went there?—The line has been changed several times since, and there was no plan at that time showing the work as finally done. Line changed several times.
425. Was there any working plan at that time of any line actually located?—There was a plan of a located line.
426. Was there any profile of a located line as there located?—I cannot answer that question, but I can say that I was not able to get a complete profile of the line. The contractor was not furnished with a complete working profile of the line. Never furnished with profile of line.
427. Do you know whether there was such a thing in existence?—I believe there was not. I believe that the levels were not sufficiently far advanced to enable them to make a working profile. Believes no such thing existed.
428. Besides this working plan and the profile, which you mention, is it necessary or usual to have the line cross-sectioned?—It is necessary in order to enable them to calculate the quantities of material. Cross-sectioning necessary in order to calculate the quantities.
429. What does cross-sectioning mean?—It means taking a section of the ground at right angles to the centre of the line. The profile of the centre of the line is a longitudinal section. Short sections taken at right angles to that are cross-sections.
430. Can quantities be estimated even approximately without cross-sectioning?—Not unless the ground is perfectly level; it could not be done on contract 15.
431. Was the ground not level?—No; the ground was very rough on contract 15—very much broken. Ground very rough.