

941. Now, may there be other errors?—There might be the error of a link in the off-set, but I do not think there are any.

942. Have you compared that plan with Mr. Bishop's plan?—No; I do not remember having done so.

943. Have you seen the working-plan of the mine?—I saw one when I was making the survey at the colliery.

944. Have you seen this plan [producing Bishop and Taylor's plan]: look, for instance, at this portion—the submarine workings; you see there is a very great difference between that and yours?—Yes.

945. Well, now, would you be surprised to hear that Mr. Bishop had made this plan from the same workings by actual survey, except some that were filled in and were not accessible; you see there is a great difference?—Will you allow me to put it on this [the witness then compared Bishop and Taylor's plan with his own]. A portion of it, the extreme boundary, appears to be correct, but it does not seem to fit very well in this other part.

946. If that plan is made from actual survey, does it not show a correct mode of working and safe pillars?—If they were left as they are represented.

947. Now, as to the other questions you were asked, Mr. Twining, how do you say the water would tend to support the roof?—If the mine was filled with water, the weight of water—the pressure—would have a tendency to keep the roof up.

948. The weight of the column of water?—Yes; and the solid body.

949. That is all that you mean—the mechanical question as to the upward pressure, because of the weight of the column of water?—Yes.

950. Now, what effect has water upon shales such as these: are you familiar with the shales there?—At Shag Point?

951. Yes?—No; I cannot say that I am familiar with them.

952. Do you know the effect of water upon any shales?—If it is left standing full of water, and the water is drawn off, afterwards the shales have a tendency to come in; but if the water is not drawn off the shales do not come in.

953. What shales are you speaking of?—I am speaking of coal measures, generally, that I have seen.

954. Are you aware what has been experienced in this mine—that water has the effect of disintegrating the shales?—I have had no experience of the shales in this mine; I am only speaking generally of other places.

955. The weight of the water, the pressure of the water, would tend to drive it through the shales, would it not?—No; I do not think so.

956. Now, you say you noticed a creep on one occasion: would you point out again where that was?—I cannot say exactly where it was; but we had come there (pointing to the plan).

957. It was not in the submarine workings?—We had come through here, and were having something to eat at the time, when it began to sound and crack on the roof.

958. That is what you speak of as a creep?—Yes.

959. You heard a cracking?—Yes.

960. Did you see the falls?—No; I only heard it, and we withdrew from the place. I cannot tell you exactly where it was.

961. You do not know the coal-measures at Shag Point: would you be surprised that, in the ordinary coal—solid walls of coal—a great noise is made where it is perfectly and absolutely safe?—No; not at all; it is very common.

962. In supporting a roof of this sort, supposing you had falls taking place, should you resort to packing?—I should have been inclined to pack that roof, I think.

963. And if an Inspector of Mines had ordered you to do it, you would have set to work to do it, I suppose: what would you then pack it with?—I think with timber.

964. Props or chocks?—No; cross-way chocks.

965. Do you think you could have packed these drives that you saw?—Some of them.

966. Do you know that these are shallow workings here—thin seams?—Yes; on that side it is thinner.

967. Would the falls have had less significance here, where the coal is thin, than here, where it is thick?—Yes; they would not have had the same effect on the roof.

968. Could they have packed these supposing coal is taken out and the roof began to come in; at what height will it choke itself?—Of course it varies according to the strata.

969. But in strata of that character?—To make it solid, do you mean, so that no water could come in?

970. So that it would stop the falling of the roof—stop it from coming in any longer?—It would have to fill solid so far up; I do not know what thickness.

971. How far?—It just depends upon what thickness it was there.

972. What, the roof?—No; the coal.

973. But suppose the coal is taken out?—It might have been 10ft. or 12ft. thick there.

974. No; I assume that it is 3ft. or 4ft. thick there?—It might have fallen 12ft. or 14ft.

975. In the 3ft. or 4ft. seam?—Yes.

976. That would all depend upon the character of the measure?—It might be more on the upper seam; it was very high there; you could not see on the top of the fall.

977. Where the thin seam was, how were they?—Some of them I could not tell you; we went as far as we could get.

978. I suppose you expect to find falls in every mine, do you not, especially with a rock cover?—Yes.

979. *Mr. Reid.*] There is one question I will ask you with reference to packing. You say you could pack in some places: would it be the lesser falls or the larger falls that you could pack?—When it was first starting to fall; before any large falls had taken place.