

built for 60 tons of shale a day; and Mr. Johnstone recommended that additions be made to increase this to 100 tons a day; and it was on this 100 tons a day that he made his estimate of twenty-five years' work of shale being in sight. In regard to the quality of the shale and the suitability of treating the shale, Mr. Johnstone's report will give you better information than I can, because the treatment of shale is not in my line. The only information I can give from my own experience is as to the actual proof of the shale. Mr. Johnstone was very conservative indeed in his estimate—in fact, he was so conservative that we felt rather hurt at the time that he did not make a very much bigger estimate than he did. But he wished to be on the safe side, and his estimate of the quantity was twenty-five years' work without any further prospecting being done. With regard to the question of whether the shale is better worth working than the oil-wells, I cannot give you very much information about that. The only thing is that at Orepuki we have actually proved the shale. In his report Mr. Johnstone shows what the shale contains. Of course, when you start to sink a well for oil you have not got it until you have got the oil. Samples of the Orepuki shale were sent Home and tests were made—tests of shale from the borehole, and also from the numerous outcrops round the basin where the shale occurs; and his results are given in his report.

*The Chairman:* What prevented the works being operated again?—My company is an English company, and when the works were opened up, through one trouble and another the company was very badly hit financially, and they were not in a position at the time to carry on, and the works were closed down. An attempt was made to float a further company to work Orepuki, but for some reason or other which I do not know they were unsuccessful. Just before the outbreak of the war the local directors undertook to form a company here, and they had started the work of placing the shares—I think it was on the 1st July—and they had got a very encouraging start when the war broke out, and, as you know, nobody knew what was going to happen as regards finance. The result was that when hostilities started it ruined our prospects for the time for doing anything. Probably had we had another three or four weeks things would have been far enough on to have gone to an allotment.

Do they propose to go on with it now?—My local directors are now carrying on negotiations with the English board, which they hope are going to result in a fresh attempt being made to do something.

This report of Mr. Johnstone's does not say anything about the cost of producing the oil?—I think the figures are given there.

*Mr. Hornsby:* I think it is only fair to the witness that we should tell him something of what has been said with regard to the small extent of shale. We had evidence that there is very little shale there.

*The Chairman:* This report contradicts that.

*Mr. Luke:* The British expert says there is twenty-five years' work?—Yes, at 100 tons a day. Mr. Johnstone is looked upon as one of the first men in the shalefields at Home. In his report he states what he thinks of the shale itself. He also states that the works are quite suitable for carrying on the refining of oil; and as far as prospecting goes, I can show any expert over the ground.

*Mr. Hornsby:* Does he mention anything about sulphur in that report?—He gives the results of the tests made by Sir Boverton Redwood at the Pumpherston works; and I think my directors have letters, which I think I could obtain for you, in which Sir Boverton Redwood states that no special process of desulphurization is necessary.

Can you let us have that?—I think my directors have a copy. As to the first report, I will be glad to furnish you with that. In this report he does not make any statement about the cost of production beyond the mining cost.

*The Chairman:* To what do you attribute the failure of the works in the first place?—I can only go on hearsay, and certain records we have in the office show, as far as I can see, that it was mainly on account of the fact that the expert sent out from Scotland was not able to use the retort at Orepuki properly. The Orepuki works, I understand, were designed on the same principle as the Pumpherston works, which are looked upon as the most successful shale-works in Scotland. The expert sent out originally condemned the retort, and said the shale could not be treated in that. The shipments of shale sent Home were, as I have said, treated in the Pumpherston works, and were treated successfully. Mr. Johnstone paid great attention to our retorts when they were constructed, and he was able to get a man who was working at the retorts of the Orepuki works. He (Mr. Johnstone) stated that the manager had not enough experience in working that type of retort; and it resulted in the burning instead of the roasting of the shale; in getting the products out the shale was being burnt, and a very large quantity of crude oil was being burned instead of being driven off in gas.

And then they took the duty off, and that just finished it?—Yes. I believe myself that Orepuki could have stood the duty, but unfortunately every trouble seemed to come up at one time, and the company finally got into such a position that they were not able to carry on.

It is said that one-fifth of the product would be paraffin-wax?—Yes.

We have had a proposition put to us to take the duty off wax?—Of course, if that were done, it would make the chance of the Orepuki works much more risky. It would be a bad thing if anything were to happen in that direction. It would mean more difficulties, because Orepuki shale appears to be very rich in paraffin-wax.

In the case of the witness I have referred to, paraffin is his raw material used in his industry, and that is why he wants the duty off: he wants it as a raw material?—Yes.

From what you tell us there is no immediate prospect of the works being reopened?—There is no immediate prospect, although we are hoping that our London office is going to be successful in carrying out certain negotiations which are going on at present.