

Experiments on a semi-industrial scale, extending over a considerable period, were also carried out in Auckland by Mr. J. M. Steele, who was chiefly instrumental in the flotation of the Trevor Oils Company and the New Zealand Peat Oils Company, and who, by his confidence and enthusiasm, has kept the project alive. Little progress, however, is being made at present by the New Zealand Peat Oils Company.

Subsequent to the formation of the New Zealand Peat Oils Company, distillation-works were established by the Parenga Kauri Oils Company at Red Hill, in the Northern Wairoa district, the chief object being to distil the residue left after the removal of kauri-gum from the swamp material. The technical difficulties in regard to the extraction of oils had, however, not been overcome when the works were destroyed by fire. The expenditure on these works, in plant and experiments, amounted to nearly £14,000. Industrial experiments were made, both on the dry distillation of peat and on the extraction of oils from peat by oil which had previously been obtained by dry distillation. Extensive laboratory investigations were made by the company's chemist, Mr. F. D. H. Ulrich, on the extraction of oils from kauri swamp timber. From wood free from adhering gum he is reported to have obtained from 50 to 60 gallons of oil per ton of dry wood. This oil was fractionated, yielding about 13 per cent. of oil suitable for motor-spirit, 70 to 80 per cent. of heavier oils useful for various purposes, and a residue of pitch.

Finally, in addition to the above investigations, experiments are at present being carried out for the K.G. Company (Limited).

Briefly, this is the story of the investigations made up to the present time. It may be noted that all this experimental work has been the result of private enterprise, and, with the exception of the analyses made by Dr. Maclaurin from time to time, no Government money has been expended. It is safe to say that a sum of £25,000 has been expended by private individuals and companies on investigations connected with the production of oils from kauri peat. Many patents have been taken out during the past few years by various investigators, indicating the interest that is being taken in kauri peat oil.

Although no practical results have yet been obtained in the way of establishing the industry, this is not necessarily due to the project being economically impracticable. The lack of success of the above companies is attributable to a variety of causes, including unforeseen misfortunes, and the failure of directors to realize the paramount importance, if not the absolute necessity, of complete investigations, both on a laboratory scale and on a semi-industrial scale, before launching out on an industrial undertaking. There is still almost complete ignorance of the nature of the oils produced and of their commercial value. More complete investigations should have been carried out before the formation of companies, whose shareholders are impatient at the necessary slowness of scientific investigations.

Further, the carrying-out of scientific investigations has some disadvantages to a company, inasmuch as no one company has a monopoly of the gumfields, and discoveries made at great expense are available to other companies with which the investigating company may be in competition.

Again, the results obtained by private investigations do not inspire the same confidence in the minds of prospective investors as official results. It is manifest, too, that with independent investigations being carried on with the same object there will be a large amount of waste by overlapping, much unnecessary expense, and probably much incomplete work. Such investigations could obviously be carried out at much less expense and much more effectively by the Government.

If a successful industry can be established, it will undoubtedly become large and important, and of great benefit to the country. We consider that the laboratory experiments, including Dr. Maclaurin's work on samples collected under our direction, and the results of the operations of the various companies, so far as they go, are of an encouraging nature.

With regard to the best means of advancing the development of the industry, we are strongly of opinion that much investigation is still desirable, if not essential, and that in the case of the laboratory researches and semi-industrial experiments the necessary investigations should be carried out by the Government in the manner suggested below in regard to clause 9 of the order of reference. In addition to