Publicity as to the facilities available to manufacturers through the Committee from the Department and the need for increased research by industries has been undertaken, and a preliminary and hopeful approach has been made to one additional important industry suggesting the formation of a research association.

The closest degree of co-ordination has been established with the Industrial Psychology Division, and this will be maintained. A scheme has been elaborated for regional scientific servicing in the main centres, with a special experiment in this direction in the Auckland District.

MINERAL RESOURCES COMMITTEE

Personnel.—Mr. C. H. Benney (Chairman), Mr. R. L. Andrew, Mr. W. M. C. Denham, M.P., Mr. W. Donovan, Dr. J. Henderson, Mr. R. F. Landreth, Mr. E. O. Macpherson, Mr. F. J. A. Brogan (Secretary).

The Committee continued to supervise and co-ordinate field surveys and laboratory investigations of mineral resources (except coal, which is dealt with by the Coal Survey Committee), particularly those of wartime importance, carried out by the Geological Survey, Dominion Laboratory, and Mines Department.

Clarendon Phosphate Deposits.—Prospecting of the medium and low-grade phosphate in the Clarendon district ceased during the year, and a full report describing the prospecting and giving estimates of quantities and results of sampling has been prepared for publication. A report describing the geology of these deposits and discussing their origin has recently been published as a departmental bulletin.

Serpentine.—Geological work on deposits of serpentine rock in North Auckland for serpentine-superphosphate manufacture consisted in checking the geological estimates with the quantities as revealed by quarrying. Serpentine bodies at Te Kuiti and at Blackridge, near Mossburn, Southland, were examined to estimate the amount of suitable rock available, and to advise on their survey and prospecting.

Mica.—A deposit of mica was discovered by one of the Department's geologists in South Westland at a considerably lower altitude than that previously located. The deposit, which is accessible at all times of the year, is being worked by Radio Corporation of New Zealand, Ltd., and good-quality mica is being obtained in quantities sufficient for the company's present requirements. Representative samples of trimmed mica from this deposit are to be sent for evaluation to Australia, where mica of certain grades is required for war purposes.

Clays, Limestone, and Ironsand.—Other surveys which came under review by the Committee were concerned with clays for pottery, bricks, and tiles; limestone for agricultural and industrial purposes; and ironsands. With regard to ironsands, the Committee recommended that further investigational work on ironsands be undertaken to see whether an economic process of treatment could be devised, particularly from the point of view of simultaneous economic recovery of vanadium and titanium.

NEW ZEALAND WOOL MANUFACTURERS' RESEARCH ASSOCIATION

Director: Professor F. G. Soper

Wool Manufacturers' Research Association Committee.—Mr. W. R. Carey (Chairman), Professor E. R. Hudson, Mr. H. Lee, Mr. E. Moore, Dr. R. O. Page, Mr. T. C. Ross, Mr. G. C. Warren, Mr. W. L. Wood, Dr. E. Marsden (Secretary).

Non-shrink Treatment of Wool.—The testing of knitted-wool fabrics for shrinkage after treatment in the New Zealand mills either by the wet chlorination or the dry chlorination process has continued to occupy a large part of the time of the laboratory. Further assistance in the setting-up of the dry chlorination non-shrink process in mills has been given. This process is the one associated with the trade-mark "Woolindras" when the goods are processed in the United Kingdom.

Service to Members.—Other service problems have continued to be investigated—*e.g.*, the cause of uneven dyeings, analyses of stains, soaps, and detergents, and of the soap alkali and grease content of scoured wool. Two tours of the members' mills have been made by the chief chemist, and assistance has been given to three mills in designing and equipping mill laboratories.

Training of Chemists.—The increasing tendency of the industry to appoint mill chemists has been associated with the institution of an initial course of practical training in the research laboratories of two to three months' duration. This is proving of great benefit and serves as a further link between the mill and the Research Association.

Essay Prize.—A prize was instituted in 1944 for the best essay, judged primarily as a contribution to the development of wool textile procedure and knowledge. Good support was received and the prize promises to serve a valuable purpose.

Institution of Technical Sub-committee.—A first step in the institution of a sub-committee dealing with various aspects of wool-manufacturing has been effected in the setting-up of the Wet Processes Sub-committee. The personnel are experienced dyers of the woollen-mills. The function of this sub-committee is to discuss the most profitable lines of research work in scouring, dyeing, milling, chlorinating, waterproofing, and other wet processing and to consider reports on these problems prepared by the research staff. So far the work has been concerned with dyeing.

Dyeing Problems.—Wool always loses strength in the boiling process associated with dyeing, but some dyeing processes cause much greater loss in strength than others. The conditions causing the losses in strength in woollen-mill dyeings by the metachrome process have been studied by the chief research chemist, Mr. R. V. Peryman, and defects have been elucidated. Arising from this work it is probable that the woollen-mills will be able to make important improvements in this method of dyeing. Extension of these studies to the loss of strength of wool when dyed black is proceeding both by laboratory and mill tests.

PLANT CHEMISTRY LABORATORY

Director: Dr. R. J. Melville

The principal work of the Laboratory has been in connection with the preservation of food by dehydration. Vegetables and apples have been the subjects of most of the work, though some work has been carried out with stone-fruits and with pears.