

mine at Stockton as an extension to the Webb Mine in a block which proved unsuitable for opencast mining but which should lend itself to a high degree of extraction by underground mining.

In order to prolong the life of the Wallsend State Coal-mine, the neighbouring Tyneside Mine, which was abandoned many years ago after flooding, is to be unwatered and reopened. Not only will this allow of the recovery of the coal remaining in the mine, but will also permit the mining of a coal barrier that has been left in the adjoining Wallsend Mine for safety reasons. It is anticipated that the life of the Wallsend Mine will be increased by these operations.

On the other hand, with altered circumstances, it has been decided not to proceed with the development of two areas—namely, the extension of the Liverpool State Coal-mine and the Morley area in the Ohai Coalfield. In the case of the Liverpool Mine, it has been decided that the available labour could be concentrated to greater advantage on the extraction of coal in pillars as rapidly as possible and thus recover the maximum amount of coal possible. Accordingly, it has been decided to defer opening up this new area until such time as the exhaustion of the present Liverpool Mine is imminent.

A careful survey of the productive capacities of the southern sub-bituminous coal-fields has revealed the existence of possible large opencast mines which could only be worked economically by large-scale operations. Accordingly, it has been decided to defer the development of the new Morley Colliery until these opencast possibilities have been fully considered, and it is possible that the opening-up of the new Morley underground mine may be deferred for some years.

At the moment there would appear to be ample productive capacity to meet the market demands for coal, and the only mines approaching exhaustion are those of Wilton, in the Waikato, and Millerton. In the locality of the latter mine, boring operations are now being carried out to locate a new area for underground development.

It has become increasingly apparent that the only mining method by which a high rate of extraction from our thick coal-seams is possible is one involving some form of stowing. Plans have now been completed whereby experiments in hydraulic stowage are to be made at the Mangapehi State Coal-mine. A good source of stowing material occurs in the ignimbrite formation that overlies the coal measures at this mine, and it is proposed to introduce this material in crushed form to the underground workings through bore-holes. Hydraulic stowage is to form an integral part of a highly mechanized mining method for which the necessary equipment is being ordered. Experimental work at this mine will be valuable in giving reliable information upon which the economics of this process can be assessed under New Zealand conditions, and it can be determined whether it is applicable to other mines with similar conditions.

During the year a commencement was made with the construction of the aerial ropeway at Stockton, and while considerable progress has been made, delivery of steel has been slower than expected and the ropeway will not be in operation as soon as expected. This ropeway should not only allow of a considerable expansion of coal-production from the Stockton Plateau, but also permit of a substantial reduction in transport costs. Preliminary work has been carried out on the Denniston area, where an aerial ropeway is to be substituted for the present endless-rope haulage system, thus effecting a diminution in the labour required for transport and consequent reduced costs.

Further purchases of private coal-mines by the State have been made. In the Ohai field the last surviving privately-owned mine, the Linton, was purchased by the Crown, and participation in the Waikato field by the State has been increased by the purchase of the Renown Coal-mine. As a consequence of these purchases, only five coal-mines of any size are left in New Zealand under private control. A small mine, the Burnwell, in the Reefton district was also purchased.