

a long life is assured at Kimibia, where the No. 5 area is estimated to contain 527,000 tons of coal with 2,406,000 cubic yards of overburden. Additional equipment in the shape of Athey wagons and conveyor belts to work between the pit and the screens have recently been ordered for this mine.

Boring-operations have indicated an area containing 60,000 tons of coal in the vicinity of the Wilton State Coal-mine suitable for opencast mining, and a commencement will be made on this area as soon as stripping-operations are complete at Kemp's. In addition to these State-controlled opencasts, a new opencast, the Alison, commenced operations in the Huntly Field during 1947 under private control. In the Waitewhena Field, operations continued satisfactorily, despite difficult stripping-conditions. At Ohai the Bar 20 State opencast mine became exhausted during the year, but operations were commenced at the Black Diamond Mine, purchased by the State during the year. Boring-operations have recently outlined an attractive area for opencasting on the Star area at Ohai and work has already commenced there and production is expected by October of this year. At Wangaloa the State opencast continued operations successfully during the year. There is considerable scope for expansion of this form of mining in this area, and the Mines Department is investigating adjoining areas.

Consideration is now being given to the restoration of areas containing abandoned opencast mines. At Glen Afton, pines have been planted and are growing well. On the other hand, experiments with the planting of pines and toetoe at Kemp's have not been successful owing to the high sulphur content of the coal and overburden, but experiments are proceeding on soil consolidation. At the new opencast at Star Mine the topsoil will be removed separately and the surface restored, as far as possible, to its original state.

As experience is gained in this form of mining and modern high-capacity equipment becomes available, it is realized that it is capable of extension beyond the limitations previously set. It has the merit of allowing practically full extraction of the coal, and hence must be considered from the angle of coal conservation.

It is expected that there will be considerable expansion of opencast mining, and to assist this the technical staff of the Mines Department has been strengthened by the addition of an Engineer experienced in this form of mining.

### MINING PRACTICE

Owing to difficulties in obtaining equipment overseas it has not been possible to proceed as far as was planned in the mechanization of coal-mines. In particular, the programme announced last year for the Wilton State Coal-mine has not as yet been carried out in its entirety for this reason, though increased use of coal-cutters has been made at this colliery with satisfactory results.

During the year a programme for the mechanization of the Webb State Coal-mine at Stockton was drawn up, and orders have been placed for £80,000 worth of equipment. The plant ordered includes main belt conveyors, subsidiary belt conveyors, chain scraper conveyors, pneumatic picks, and rotary air-drills, together with compressors and the requisite subsidiary equipment. For a commencement the operations must be regarded to a certain extent as experimental, but the results will be invaluable when the mechanization of other State coal-mines comes under consideration.

It is expected that the projected Morley State Coal-mine in the Ohai Field will lend itself to mechanization, and to this end the District Manager, State Coal-mines, Ohai, together with the District Manager, State Coal-mines, Mangapehi, have recently visited Australia in order to make themselves conversant with mining practice in that country.

Further consideration has been given to the proposals to experiment with hydraulic stowage at the Mangapehi State Coal-mine. A detailed survey has shown that there are difficulties in the use of the pumice deposits which were originally intended for this