

hostel for Gravity have been abandoned, as it was felt that the money and building-materials available for this purpose could be put to better use in providing additional houses for married men, thereby encouraging men to make permanent homes in mining villages.

It is disappointing to have to report a decrease in tons produced per man underground and in tons produced per man on the pay-roll of underground mines. The introduction of the seven-hour day is, of course, responsible for a part of this decrease, but other contributory factors have been the shortage of experienced men and the more difficult mining conditions and longer haulages that have been encountered in the older mines.

It is of interest that of late years the output per hewer shift has remained remarkably constant, and the inference is strong that the over-all decrease is due to the greater number of men required in maintaining services and in transporting coal from the face to the surface.

While it is realized that New Zealand mines do not lend themselves to mechanization in as complete a degree as in overseas practice, still progress in partial mechanization has not proceeded to the degree expected. It was hoped that a programme of partial mechanization to be carried out at the Wilton State Coal-mine would provide a useful working test on the basis of which mechanization in other mines could be more confidently planned. So far four chain-type coal-cutters, three electrically driven coal-cutters, and nine electrically driven drills have been put into operation at this mine, but delivery of the scraper-loader equipment was delayed so long that development work in the section of the mine where experimental work on their use was contemplated had been completed and the experiment had to be abandoned. The use of power-driven coal-drills, either driven by electricity or by compressed air, is expanding, and the use of coal-cutters is also increasing. During 1949, power drills were introduced at both Burke's Creek State Coal-mine and Blackball State Coal-mine, and two coal-cutters were put into operation at the latter mine. An experiment of interest is to be made in the Ohai Coalfield during the present year in the use of a duck-bill coal-loader on pillar work.

Another trend in coal-mining practice in New Zealand will be the use of belt conveyor systems in place of the older methods of transport. Conveyors are at present being installed in the Webb State Coal-mine; they are projected for the Kamo State Coal-mine; they form an integral part of the mechanization scheme contemplated for the Mangapehi State Coal-mine, and will be extensively used in the new State mine at Denniston on the Plateau lease. It is at this last mine that mechanization under local conditions should be tested under the most favourable conditions, as the mine has been planned and will be developed from the outset to facilitate the use of mechanized mining equipment, and the necessity to adapt working methods to unfavourable conditions resulting from previous mining operations will not arise.

To maintain coal-production at the present level and meet the gradually increasing demand that must be expected, it is essential that new mines be opened up to replace mines approaching exhaustion. To this end, three main development programmes have been planned for this present year. At Denniston work will be continued on the opening-up of the Plateau lease. Already much preparatory work has been carried out. An access road has been constructed, a winch and compressors installed and housed, an electric-power transmission line provided, a temporary substation built, and the portals of the stone drives prepared, by use of a scraper loader, for driving operations. Everything is now in readiness for the commencement of driving the stone tunnels which will give access to the coal-seam. It has now been decided to open up a small underground