All drilling is being carried out with machine drills, and the most modern type of scraper equipment for removing the spoil has been provided. Work is carried on by the top-heading or bench system, Canadian type of timbering being employed, and collapsible steel profiling is used for the concrete lining, the concrete itself being placed and conveyed pneumatically.

The haulage of spoil will be handled by a new type of Diesel-engined locomotive which is specially adapted for underground work.

Excavation work has only been commenced recently, but the following progress has been made:—

No. 1.—Okiwi Bay, at 82 m. 42 ch.: The top bench is being excavated.
No. 2.—Ohau, at 84 m. 40 ch.: The north portal and 6 ft. of lining have been completed, and driving for the next length has been commenced.
No. 3.—Half-moon Bay, at 85 m. 72 ch.: The south portal and 33 ft. of lining have been completed in the open, and driving of the first length underground has been commenced.

On the general formation work mechanical excavators are being largely used, and their use has resulted in the work being speeded up very considerably.

It was originally proposed to locate the Kaikoura Station some distance from the centre of the town in order to obtain the best alignment, and the shortest possible distance between the terminal points of the line, but it was later decided on account of traffic considerations that the Kaikoura Railway-station should be located near the centre of the Kaikoura Township, and this portion of the line has been resurveyed to give effect to this.

At the southern end work has been concentrated mainly on the section between Parnassus and the Oaro River, and the cuttings between 54 m. and 62 m. are now about 50 per cent. completed.

Road access has been opened from Oaro, at 67 m. 30 ch. to the north end of the Amuri Bluff tunnel at 62 m. 68 ch. by means of a track along the sea-coast.

The most spectacular work on this section has been the excavation of the Hawkswood Cutting at 48 m. 30 ch. A start was made dismantling and re-erecting the $1\frac{1}{2}$ cubic yards Ruston steam drag-line, which was put into operation digging a gullet 30 ft. deep and about 60 ft. to 70 ft. wide at the top in October, 1936, and an 8 cubic yard carryall and caterpillar tractor was provided to rehandle and spread the material clear of the final batter lines. Two $\frac{3}{4}$ cubic yard Diesel shovels were started at the south end on successive levels below the steam drag-line excavation from the south end, and a second steam drag-line was put into operation in February, 1937. The first steam drag-line having by this time excavated the gullet mentioned above over the whole length of the cutting, both machines were then started widening the upper level. A third $\frac{3}{4}$ cubic yard Diesel shovel was then started at the north end of the cutting, working south. Later the south end second lift shovel was converted to work as a drag-line, and, after digging a bench for the steam drag-line on the right batter to work from, was moved to pull the batters down for the north end shovel to load to the trucks. All machines were working three shifts, material being led to bank by trucks and steam locomotives, and rehandling of spoil from the steam drag-lines by the 8 yd. carryall and tractor and Angledozer and tractor. The best four-weekly output for all machines was 43,780 cubic yards. Of the 291,439 cubic yards left in the cuttings when the works closed in 1931, approximately 248,000 cubic yards had been excavated by the end of June, 1937.

At the same time as earthwork was proceeding and the formation work was advancing from Parnassus, the building of bridges to cross the gaps in this formation was also in hand. The two chief bridges in the first 10 m.—at Leader River, 44 m. 65 ch., and Conway River, 50 m. 50 ch.—are strangely of the same length, 724 ft., and each have sixteen spans of 45 ft., with plate girders on concrete piers founded on piles in the case of the Leader Bridge and on solid papa in the case of the Conway. At the Leader River the piers have been completed and a start has been made placing the girders. At the Conway River there are three piers yet to complete.