

*Clutha River Investigations.*—Investigation of three possible sites for a major development near Coal Creek upstream from Roxburgh has been under way, and foundation conditions are being examined by means of open cut, shaft-sinking, tunnelling, and boring. It was necessary to build a camp to accommodate staff and workmen and to construct access roading.

## IRRIGATION

*Central Otago.*—In contrast to those of last year, weather conditions have been exceptionally dry, especially during the latter part of the season. The rainfall registered in Alexandra was 6·87 in. from May to December and 2·40 in. from January to March. The driest conditions of all were in the Tarras area, which has an average annual rainfall of 20 in.; here 3·29 in. of rain fell between October and March, of which only 1·69 in. was precipitated after January.

After the end of January the level of the river supplying the Ardgour and Tarras Schemes fell until only 33 cusecs were available for sale to an area of 4,254 acres. Even so, supplies to both schemes were better than in the 1938–39 season, when the January–March rainfall was heavier. On the Hawkdun Scheme similar conditions have prevailed.

On all other schemes the storage dams were at a high level at the beginning of the irrigation season and water-supplies have been well maintained.

The dryness of the season has been reflected in sales of water on the Omakau Scheme, operating on a supply-and-demand basis. Up to 31st March the consumption was 10,534 acre-feet, compared with the previous highest total of 10,380 acre-feet for the whole of the 1937–38 season.

The areas supplied on all schemes and the number of irrigators show little change, the figures being 53,000 acres and 511 irrigators.

The financial statement for the Central Otago schemes shows revenue as £28,133 and working-expenses as £32,809, a loss of £4,676.

Normal maintenance work and renewals have been carried out and the recording of stream flows and meteorological data have been continued.

Survey parties have been engaged on new proposals for irrigation on the Maniototo Plain, and on the Fraser River and Upper Clutha power and irrigation schemes.

*Canterbury.*—The season's irrigation operations have been hampered by unusually wet weather with high ground-water conditions.

Levels Plain Scheme—commanding 12,000 acres—has been in operation nine years. This year 550 acres have been irrigated for a revenue of £85 from fifteen irrigators.

Redeliff Scheme—commanding 4,600 acres—has been in operation ten years. This year no irrigation water has been used and the revenue was £52.

Ashburton–Lyndhurst Scheme—commanding 68,000 acres—has been in operation two years. This year 2,030 acres have been irrigated for a revenue of £256 from forty-four irrigators.

A further 1,356 acres of land were prepared for irrigation by the border-dyke method, making a total of 2,947 acres completed.

Mayfield–Hinds Scheme—to command 81,000 acres—is under construction, but is retarded by the shortage of man-power and plant.