

## SOUTHERN INSPECTION DISTRICT (T. McMILLAN, INSPECTOR OF MINES)

## QUARTZ AND ALLUVIAL MINING

*Waitaki County*

Sluicing operations were carried out in the auriferous gravels of the Livingston and Macrewhenua Goldfields.

*Waihemo County*

Repair work only was done in the Golden Point Gold and Scheelite Mining Co.'s Deep Dell Mine. The Lewis co-operative party cleaned out the tail-races and Donaldson Battery site and obtained good returns: they also tested the deep-lead gravels overlying the schist bedrock on the hillslope below the original reef outcrops. Four men were employed and 350 ton of sands treated.

*Callery Party, Deep Dell, Macrae's.*—Driving, rising, sinking, stopping, and prospecting operations were carried out on both sides of Round Hill, and 165 tons of ore were treated at the Deep Dell Battery during the year.

*The Innes Freehold Mines.*—Sinking, driving, rising, and stopping operations were carried out at the hilltop mine, and driving and sinking operations at the open-face outcrops on the southern slope near the main road.

*The Macrae's Flat Gold-mining Co.*—The No. 2 graver-pumping plant has continued to operate steadily at the upper section of the Macrae's Flat, and the depth of the auriferous gravels elevated by the electrically operated gravel-pump has been from 4 ft. to 20 ft.

*Maniototo County*

The alluvial mines at Naseby, Kyeburn, St. Bathans, Cambrians, Vinegar Hill, and Patearoa operated steadily whenever water was available. The quartz-mine operated by M. S. Earl at Ophir was closed down and all plant and equipment sold for removal.

*Tuapeka County*

Mining operations were carried on steadily at the Sailor's Gully Tribute Mine, Waitahuna, by J. Hore and party. The Blue Spur and Gabriel's Gully party also operated steadily near the head of Gabriel's Gully. Very little work was done at the Tuapeka Mouth alluvial mine.

*Southland County*

*The Nokomai Gold-mining Co.* closed down in February for the duration of the war. Sluicing operations were carried on in the Waikara Goldfields.

*Wallace County*

*The Round Hill Gold-mine* operated steadily during the year. Two acres have been elevated to a depth of 75 ft., and another 2 acres have been stripped to a depth of 35 ft. This mine is the chief alluvial producer in the Southern District.

Sluicing operations were carried on steadily at the Old Township diggings, Orepuki.

*Lake County*

*State Scheelite-mines.*—In the Glenorchy State Mine the No. 7 or main trucking level has been extended to a distance of 1,187 ft. from the portal. The reef averages about 1 ft. in thickness, but the scheelite content is low. No. 7 rise has been risen a distance of 214 ft. in a south-westerly direction in order to connect with the No. 6 level. The reef varied from 1 ft. to 4 ft. in thickness and then thinned down, to a reef track only, for the final 40 ft. to No. 6. The reef was low grade and in places carries a small amount of gold. No. 4 rise was extended a distance of 108 ft. in order to connect with the old workings, and stopping operations have been carried out in low-grade ore. Stopping has also been carried out off No. 2 rise. No. 1A rise was extended to a distance of 150 ft. in order to connect with the old workings. The south-west side of this rise was stoped out with good results, and the north-east side of the rise is now being stoped. In the No. 4 stope above No. 1A rise the reef has carried ore on both the hanging and footwall sections, and has yielded fair-grade ore. Nos. 1 and 2 stopes below No. 6 level have been worked, and although some small lenses of good ore were located, the ore has generally been low grade. Rising and stoping has been carried out above the No. 6 level, but results generally have been poor. In the No. 5 level a considerable amount of prospecting-work failed to reveal any stoping ore. In the No. 4 level much prospecting-work has been carried out in an endeavour to locate the reef on the east side of the fault, but nothing of value has been located. In the No. 3 level considerable driving and rising work was done but the results were poor and work has been discontinued. Near the end of the year a winze was commenced below No. 7 level in order to test the reef to the dip. During the year 25 tons 8 cwt. of scheelite concentrates were won from this mine, principally from the rises and stopes between Nos. 6 and 7 levels. The ventilation of the mine has been considerably improved. An average of twenty-five men has been employed at the mine, five at the treatment plant and four at headquarters.

*Paradise State Mine.*—The No. 1 or intermediate level on the east reef has been extended to a distance of 665 ft. from the portal. From 315 ft. where the west reef joins up with the east reef the reef has been very broken and of low value. A distance of 185 ft. was driven in the west reef, which varied from 6 in. to 4 ft. in width, but yielded only low-grade ore. Stopping was also carried out above this level, but the ore yielded can only be classed as second-grade ore. The No. 2 or Low Level: This level was extended a further 345 ft. to a distance of 892 ft. from the portal. The reef became very broken, and from 550 ft. only a track remained with a few small lenses of ore, so that the last 340 ft. of driving yielded nothing of any value. In order to ascertain if parallel reefs existed after the junction of the east and west reefs, crosscuts were put out to the east and west, but nothing of importance was located. Rise No. 3 was risen to No. 1 level at 440 ft. from portal and was 59 ft. on the underlie of the reef. At 548 ft., No. 4 rise was risen and the reef was nearly vertical at this point and the distance risen was 37 ft. No. 5 rise was risen at 656 ft. and was 38 ft. The rises did not expose first-grade ore. On the west or big reef, 168 ft. of driving was carried out until it joined up with the east or small reef. A rise was also put up to the No. 1 level. Stopping operations were also carried out, but the results were poor, the reef pinching in places to a track only. On the west reef, stoping operations have also been carried out over a length of 298 ft. The results obtained from the ore stoped has not attained the value obtained from the same section of the No. 2 level. A drive known as No. 3 was driven south from the bank of the Dart River on the calculated line of the reef; 151 ft. of driving was carried out, but the extension of the reef was not located. Another reef-line was located approximately 1,000 ft. west of the main reef, and stripping operations revealed a reef channel carrying a slight scheelite content, but values were low and operations were discontinued. On account of a dry season early in the year, increased water-race and water-storage accommodation had to be provided. The result of the year's operations yielded 11 tons 16 cwt. of concentrates, and twenty-two men were employed.

*Mount Larkin Reefs.*—Operations were carried on at the lower end of the big slip and also on a vertical reef-line on the right-hand side of the Larkin Creek about 30 chains above its junction with the Buckleburn.

*Heather Joek Scheelite Syndicate (Wylie Bros.), Western Slope, Mount Larkin.*—During the summer season an aerial ropeway was erected from Forbe's reef to the track on the left-hand side of the Bonnie Jean Creek. This has improved the transport position and enabled this party to transport a compressor to Forbe's reef. Sluicing and mining operations were carried out during the working season at this high-elevation mine.

*Elliot Bros. and Tripp, Bonnie Jean Mine, South-western Slopes of Mount Larkin.*—Sluicing and mining operations were carried out effectively during the working season and a large quantity of overburden was sluiced away during the flush-water season. In the slack-water period a drive was put in on the reef in the southern section of the claim. When operations were resumed in the spring an aerial ropeway was erected from the storage-bin to the left-hand terrace of the Bonnie Jean Creek in order to reduce transport costs and speed up operations.