

GBE/3

4th March, 1958.

MEMORANDUM.

The following petrographic descriptions apply to selected sections of cores from Nos. 1 and 2 D.D.H.s. on the 10th Legion Mine in the Zeehan district. The specimens illustrate contact or thermal metamorphism and metasomatism of sediments intruded by Serpentine, the complex being later subjected to granitic intrusion.

D.D.H. No. 1.

- 89' Light grey, very fine grained rock with dark cloudy patches.
- In this section the rock is an interlacing mass of tremolite needles with interstitial diopside and sericite. In the dark areas magnetite fills the interstices between the tremolite crystals.
- 106' Dark green, fine grained rock, easily scratched.
- In this section the rock shows a fine grained structureless mass of interlacing crystals. Serpentine is prominent in patches and disseminated radiating crystals, with very low birefringence. Hornblende also is plentiful in plates, corroded to appear acicular or granular masses, according to orientation along or normal to the C. Axis. Idocrase occurs as small grains and larger irregular masses of neutral tint showing cleavage, and with anomalous polarisation colours of the first order. The rock is an amphibolite.
- 115' Fine grained greenish mottled rock.
- In this section the rock is seen to consist of masses of interlacing needles of hornblende, which in some areas have been altered to serpentine. Calcite is plentiful in granular masses and magnetite is rather sparsely disseminated. There are also several small irregular areas of oligoclase, into which hornblende needles project. The oligoclase areas may consist of small anhedral crystals fitting tightly together in a mosaic, or single crystals, sometimes showing simple twinning. The rock is an amphibolite.
- 192' Dark greyish green mottled rock, not easily scratched.
- In this section a composite structures revealed, definite textures and mineral assemblages being confined to different areas. Plastic flow texture is prominent. Veinlets containing quartz, quartz and sericite, and Serpentine cut through the rock.