

064164

64, 71 344001

Not under licence

LYELL E.Z. EXPLORATIONS

Queenstown

Report on

SUMMARY OF THE MODDER RIVER ULTRABASICS

59-298
 REPORT ON SUMMARY OF THE MODDER
 RIVER ULTRABASICS
 LYELL EZ OPERATIONS
 (copy 1)

Summary of the Modder River Ultrabasics

KEE. ~~6/11/59~~ 4/11/59.

Report No. G 108

344

59-298.

000

MICROFILMED

4th November,

9

Summary of the Modder River Ultrabasics

The Modder river ultrabasic belt stretches from Asbestos Point in the north to just north of the mouth of the Hibbs river in the south. It is generally of the order of half a mile wide, never exceeding one mile.

Airborne magnetics suggested that this belt was a discontinuous one which probably consisted of nine or ten separate intrusions, which may or may not have a tenuous connection at depth.

The evidence from magnetics of the whole belt pointed to these ultrabasic bodies having steep dips, which, from magnetics and photogeology, would be in general to the east (this could neither be proved nor disproved by the ground investigation).

Magnetics also suggested that these ultrabasics were sheet-like bodies having a vertical pitch.

Ground investigations on two of the ultrabasic masses some four miles south of Macquarie Harbour tended to confirm the photogeological finding that the ultrabasics had been intruded along the faulted Precambrian-Dundas contact.

With experience, it was realised that the contact between the Dundas sediments and the serpentinite was clearly indicated by three features.

1. There was a marked difference in vegetation on the two rock types.
2. There was a short but sharp slope down from the higher Dundas plateau to the lower swampy serpentinite areas.
3. The soils derived from each type of rock were found to be distinct, given close inspection.

Strong shearing was evident within these intrusives, particularly at their contact with the country rock. In these shear zones there was a development of talc and other hydrated micaceous minerals. These shears were sometimes the cause of electromagnetic anomalies.

The serpentinite seen was very variable, both in texture and

colour. The colour ranged through pale yellowish green, blue green, dark green, to a greenish and yellowish black. The texture ranged from fine grained to coarsely ($\frac{1}{4}$ ") holocrystalline. Where sheared, the serpentinite was soft, foliated, wet, and very friable. Often grooved surfaces were present.

At places within the serpentinitic mass there was a considerable proportion of dense hard fine grained gabbro of a pale green colour mottled with white. The felspar in the gabbro was apparently not altered to any great extent. The relationship of the gabbro to the serpentinite could not be determined as outcrops were very sparse.

The serpentinite generally contained chromite, though not in significant amounts.

Geochemical work showed the widespread presence of nickel, which was apparently very finely and sparsely disseminated as no nickel minerals were recognised.

Osmiridium was virtually absent from the area.

R. G. Elms.

References

1. G73 The Ultrabasic Rocks of the Gordon Concession, S.W. Tasmania - M. Audley-Charles
2. G89 Report on Anomalies 10/3b, 10/4a (Regional Report on Modder River Area) - R.G. Elms