

## ABSTRACT

The mapped area occupies 42 km<sup>2</sup> in the Lower Shag Valley adjacent to the town of Dunback.

Two basement lithologies occur juxtaposed by the Late Tertiary reversal of the Waihemo Fault Complex;

1. The textural zone 1 - 2B quartzofeldspathic Torlesse Supergroup (redefined) north east of the Waihemo No. 2 Fault including sandstone, siltstone, mudstone and massive recrystallized marble (Blue Mountain Formation). Compressional faulting and minor folding are widespread within the Torlesse locally.

2. The textural zone 3 - 4 quartzofeldspathic Otago Schists, a subgroup of the Haast Schists, southwest of the Waihemo No. 2 Fault beneath the Lower Tertiary marine transgressive sediments within the Shag Valley fault angle depression.

Cretaceous - Tertiary terrestrial - marine lithofacies resting conformably on the mature low relief Otago Schist erosion surface are subdivided into two formations;

1. The fluvial/marginal marine quartz sandstone-conglomerate of the Herbert Formation (cf. Taratu Formation).

2. The Abbotsford Formation; a deepening marine transgressive sequence divided into four informal members, composed of greensand, siltstone, glauconitic mudstone, fossiliferous calcareous mudstone and a micaceous silty sandstone. Faunal and mineralogic content of the Abbotsford Formation in the Makareao area indicate a non-schist derived source and affinities with the Dunedin and Hampden Beach sections.

Quaternary gravel outwash and terrace surfaces are locally well developed, covering a large part of the Tertiary sediments in the Shag Valley.