

GEOLOGY-INTRODUCTION

For a comprehensive background on the geology of Heemskirk granite, descriptions of granite types (petrological and geochemical) relationships between them, styles of alteration - mineralization, regional structure refer to Klominsky 1972 and Wells 1978. The first a regional coverage the latter a detailed study of the South Heemskirk Tin field.

In the present mapping project the primary division of granites was made on the basis of grainsize:

fine	< 2mm average grainsize
medium	2-5mm average grainsize
coarse	> 5 mm average grainsize

Grain size is reflected in the weathering pattern of granites, coarser grained with broad rounded exfoliation surfaces, resulting from wide spaced joints, whilst finer grained (particularly "White" granites) form more rugged outcrops with closer spaced jointing.

Color was used as secondary subdivision, this a more locally variable characteristic, dependent on feldspar coloration:

R/W	red K feldspar, white plagioclase
R/R	both K feldspar and plagioclase red
W	all feldspars white

Grain size and color combinations results in seven main subdivisions, in addition porphyries associated with "Red" and "White" granites.

Granite types have been differentiated on the basis of hand specimen descriptions, the resulting geological plan see Dwg. 2 is very similar to Klominsky's map indicating consistency between the above divisions and more detailed petrological and geochemical differentiation of Klominsky. According to Wells 1978 all granite types are compositionally similar ranging from true granites to adamellites.

As with previous mapping the granite has been divided into "Red" and "White" granites, the former possibly older overlying the "White".

RED GRANITES

a) R/W, red K feldspar and white plagioclase, fine-coarse grained equigranular, biotite is the only recognisable mafic and mica. Fine-medium grained types containing tourmaline nodules.

b) R/R all feldspars red, variable from fine-medium grained, commonly with quartz > feldspar phenocryst (max. 10mm) usually contains tourmaline nodules. This division is equivalent of "intermediate" of 1981 section.