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## An occurrence of tacharanite and scawtite in the Huntly gabbro, Aberdeenshire

THE rare mineral tacharanite (Sweet, 1961), associated with scawtite, occurs sporadically in narrow fracture-filled veins in gabbro at Binhill quarry, Cairnie, Huntly. Previously, tacharanite was reported from dolerite amygdaloids on the Isle of Skye (Sweet, *op. cit.*) and hydrothermally metasomatized quartzite inclusions in basalt of the Bramburg, near Göttingen (Koritnig, 1972). In Scotland, Agrell (1965) noted scawtite from the well-established dolerite/limestone contact-type environment, at Kilchoan, Ardnamurchan; however limestone is not present at Binhill quarry.

In the quarry three types of narrow, steeply dipping, post-granite-pegmatite veins have been recognized, each consisting principally of calcite, xonotlite, or prehnite. Xonotlite (with very minor scawtite) also occurs as cavity in-fill in prehnite veins. Scawtite-rich areas appear sheared and contain xonotlite pools and transcurrent very fibrous tacharanite, or tacharanite stringers. Scawtite also forms the margins of a pink xonotlite vein. The tacharanite fibres ( $n = 1.525$ , perpendicular to fibre length) frequently imperceptibly merge into chlorite of the wall-rock. Plombierite could not be detected on tacharanite X-ray powder photographs although this phase was suspected during examination under the electron microscope (Gard, personal communication).

Uralitization is limited to narrow wall-rock regions of the veins and to pegmatites bearing apatite and tourmaline. One pegmatite has been altered to a 'tuffaceous' prehnite-rich area containing residual unaltered euhedral apatite, and others to zones exhibiting rudimentary parallelism of prehnite stringers. In the pegmatites hydrated calcium silicates are also present and xonotlite, white micaceous and pale blue gyrolite, and the zeolite laumontite have been identified.

Harker (1965) demonstrated scawtite genesis to be pressure-independent (up to

50 000 lb. in<sup>-2</sup>) and within the temperature range 140–300 °C. It is conceivable that scawtite in Binhill quarry developed from xonotlite due to localized low CO<sub>2</sub> concentration resulting from a fortuitous igneous chemistry. The latter could result from uralitization, for Allan (1970) pointed out that in the Morven–Cabrach mass uralitization resulted mainly in an increased water content, which he attributed to the newer granites of north Deeside. Some xonotlite veins are conceivably contemporaneous with post-granite-pegmatite xonotlite, gyrolite, laumontite, and prehnite stringers. Tacharanite, which in scawtite-rich areas is post-xonotlite, appears to result from scawtite alteration. If uralitization be the causative agent then similar hydrated calcium silicate assemblages may well be found in other Aberdeenshire gabbros.

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## Gardar Filing Interrogation System

G.F.I.S. (Gardar Filing Interrogation System) consists of a library of Gardar rock analyses on magnetic tape and a set of programs that select and process required portions of the data file. The Gardar Province of South Greenland is a Precambrian (1100 to 1300 Myr) alkaline igneous province consisting of supracrustal rocks, a great number of dykes, and a limited number of plutonic complexes. Following suggestions made at the first 'Friends of Gardar' conference (Edinburgh, 1972) the writer investigated the viability of setting up a 'data bank'. It became clear that a fully structured data bank was beyond the scope of the writer in the time available. However, a simple file of analyses and bibliographies that can be searched sequentially has been compiled in Fortran IV using a modified version of the I.C.L. J. operating system.

Each data record consists of a chemical analysis in weight per cent and in cation