

on the basis of one group of samples labeled "high grade", which show  $K$  values similar to those in the Opinicon Lake region, and another group labeled "low grade" which show substantially higher  $K$  values of 10–12. These latter rocks are suggested to have been metamorphosed at temperatures of roughly 400°C. No mineral assemblages are quoted by Saxena and Hollander (1969), but examination of the original sources shows that the supposedly "low grade" rocks all contain sillimanite, which according to the data of Gilbert *et al.* (1968) implies a temperature greater than 622°C. Several contain kyanite in addition, implying high pressures. Clearly such rocks cannot be correctly termed low grade metamorphic rocks. Similar  $K$  values of 10–12 are found by Gable and Sim (1969) for part of the Front Range in Colorado, where migmatite is abundant, and it is expressly stated that the rocks must have been above the melting temperature of granitic compositions. The temperatures implied by the data of Gable and Sim (1969) are approximately 850° at pressures of 6.3 kb. Significantly, the non-migmatitic areas have lower  $K$  values of 6–8, corresponding to temperatures of roughly 760° at 6.0 kb.

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