

Local subsurface information does not resolve this question, and Powell and others (1980) named them as separate members of the same formation (Roosevelt Gabbros). Exposures of biotite-olivine gabbro along a creek in the north-central part of sec. 33, T. 4 N., R. 15 W., are taken to be Sandy Creek Gabbro, but this is presently under investigation.

Mount Scott Granite

The Mount Scott Granite is nonmicrographic in this area, as reported earlier by Merritt (1965). A modal analysis of sample W-76 occurring west of the diabase dike in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 9 yields 34.5 percent quartz, 55.25 percent alkali feldspar, 2.25 percent plagioclase, 3 percent hornblende (some may be secondary), 2.25 percent biotite (some also secondary), 1.5 percent oxides, 0.75 percent sphene, and traces of fluorite, epidote, zircon, and apatite. The grain size varies between 1 and 4 mm. This rock is as even grained and coarse as the Mount Scott is known to be (fig. 119). Ovoid feldspars are present, but they

are not as outstanding as in other exposures, particularly those farther east. This may mean that the sill and (or) overburden was thicker in this region, and the sill cooled more slowly. The later intrusion of Quana Granite nearby also may have acted to keep temperatures high while permeating the rock with fluid, thus promoting crystallization adjustments.

Hybrid Rocks

These rocks of intermediate composition occur in an east-trending band across the crest of Big Four Mountain. The band can be seen in the aerial photograph (fig. 108), oriented from the map (figs. 106A, 106B), as heading eastward from a small pond, up a tree-lined gully. The rocks vary in mafic content, ranging in color from pink and gray to dark gray. The rocks are fine to medium grained, with quartz and pink feldspar phenocrysts and xenoliths of biotite gabbro.

Similar hybrid rocks have been interpreted as resulting from partial recrystallization and melting

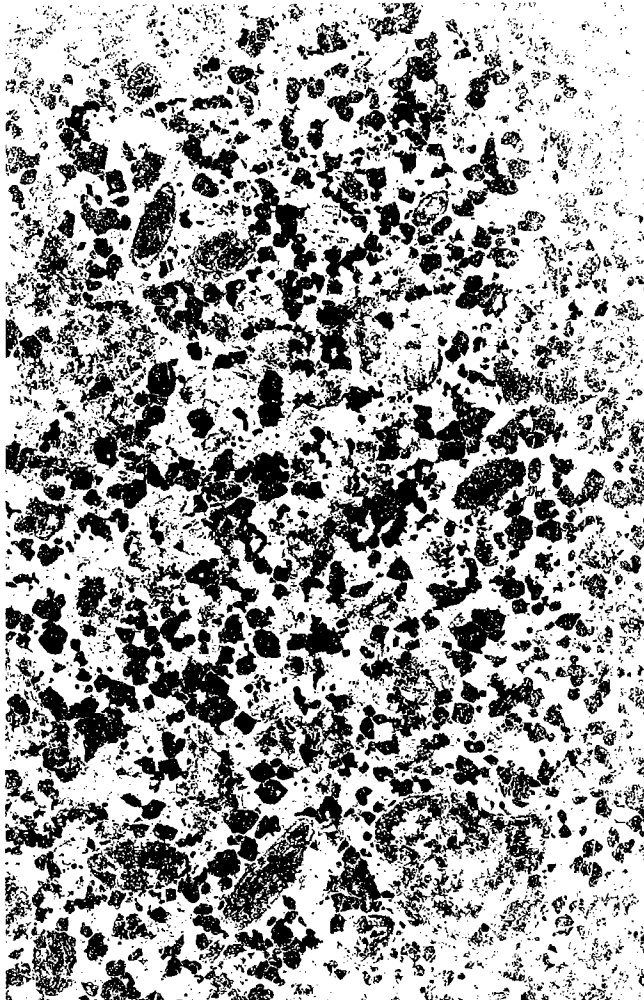


Figure 119. Photograph of thin section (width about 1 inch) of Mount Scott Granite (W-76). Note characteristic ovoid feldspar and nonmicrographic texture.



Figure 120. Photograph of thin section (width about 1 inch) across several layers of Hale Spring pegmatite, no. 1 dike of Johnson (1955). White areas are quartz and feldspar. Dark and gray areas are arvedsonite. Acmite is present but too fine to be seen at this scale.