Geology

A brief listing of features encountered along the footpath or in the vicinity is given. Table 36 gives modal determinations for some of the rock units.

1. Quanah Granite is somewhat finer here than at Quanah Parker Lake (Stop 5), even though both seem equally close to the contact. The appreciable width of the contact or marginal facies implies that the Quanah quenched against more than the Glen Mountains Layered Complex. It is probable that the Mount Scott Granite sill overlay this immediate vicinity. Consequently, the Quanah Granite quenched laterally and vertically in this area. The Mount Scott has since been eroded back, and our evidence for its former position lies in the number of inclusions of Mount Scott here, the variable porphyritic character of the Quanah, and regional topographic shelves that may represent the former floor of the Mount Scott Granite sill.
2. Just across the bridge from the parking area, a horizontal aplitic dike (about 30 cm thick) occurs that represents late-stage Quanah crystallization. Along the upper contact is a vuggy quartz zone, implying vapor saturation. Departing eastward from the path, a number of Mount Scott inclusions can be found in the Quanah.
3. At a distance of approximately 180 m along the trail, particularly at a small bend in the path around a boulder, a number of angular xenoliths are found (fig. 139). Rhyolite fragments, and particularly other fragments interpreted as metasedimentary, are more fractured than the porphyritic host Quanah. This fracturing appears to have formed before inclusion into the magma. The abundance of xenoliths other than Mount Scott suggests that the Quanah did not displace the Mount Scott significantly, at least regionally. Instead, the Quanah has intruded into the volcanic matrix that was the original host for the Mount Scott. By intruding into that matrix and finally against the Mount Scott, it trapped fragments of the preexisting rock.

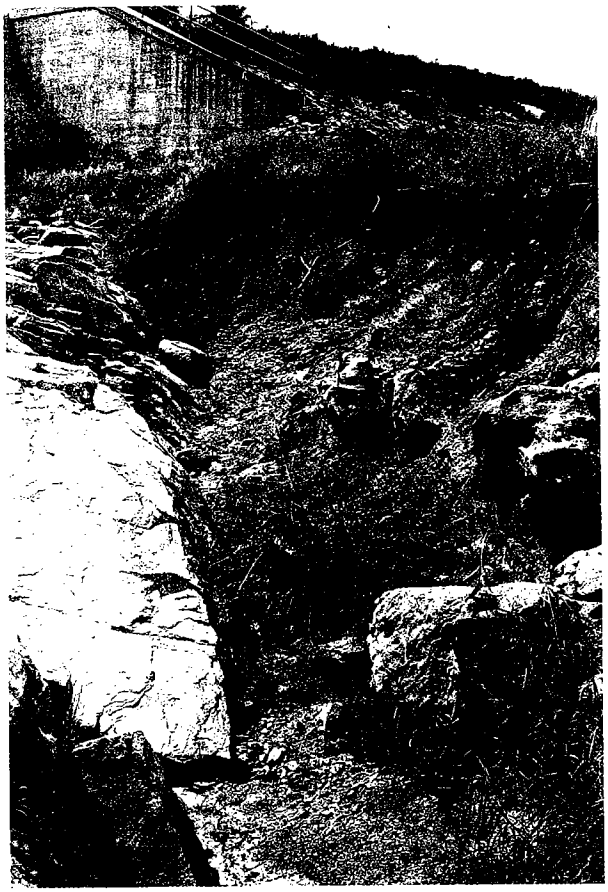

Figure 138. Photograph looking westward along contact where Quanah Granite on left (south) has intruded Glen Mountains Layered Complex on right (north). Boulders protruding from altered and weathered matrix in places are pieces of layered complex. Rock surface dipping steeply northward is contact of granite against gabbro.

Figure 139. Photograph of outcrop along trail where angular fragments of Mount Scott Granite, Carlton Rhyolite, and metasediments(?) are found.