

## Hybrid Rocks

Rocks of intermediate composition and varying color and texture occur along the contacts between the gabbroic rocks and the granite. Some of these are merely contaminated granites. Others, however, exhibit unusual coarse textures, with plagioclase, pyroxene, and magnetite crystals several centimeters in length. The mechanism by which these rocks were formed is not yet clear.

## Hale Spring Pegmatite

This sodic amphibole-bearing, quartz-feldspar pegmatite occurs as strikingly banded dike rocks in secs. 3, 4, and 9, T. 3 N., R. 15 W. The Hale Spring pegmatite is thought to be nearly the youngest igneous rock in the area, and to have formed from the last-stage fluids of the Quanah Granite.

## Miscellaneous Dikes

Granitic and aplitic dikes are ubiquitous throughout the outcrop area of the Glen Mountains Layered

Complex. One such dike in secs. 1 and 2, T. 3 N., R. 16 W., marks the site of a fault that produces a repeated section of the L and M Zones.

Diabase dikes cut the Roosevelt Gabbros and the granite in several places. An interesting example can be seen below Mount Baker, in the SW SE NE sec. 19, T. 4 N., R. 15 W.

## Meers Quartzite

Four new localities of the Meers Quartzite have been identified: (1) SE NW NE SE sec. 8, T. 3 N., R. 15 W., in Mount Scott Granite; (2) NW NE NE SW sec. 4, T. 3 N., R. 15 W., on Sandy Creek Gabbro; (3) SE NW NE sec. 30, T. 4 N., R. 15 W., on N Zone, Glen Mountains Layered Complex; and (4) NW SW NE sec. 19, T. 4 N., R. 15 W., at the contact between Mount Scott Granite and the Mount Baker hornblende gabbro. These localities are symbolized on the map (fig. 34) as a star. Some of these are sillimanite-bearing (for example, no. 2). See the discussion by Gilbert (this guidebook) concerning the significance of the Meers outcrops.

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TABLE 14.—CHARACTERISTICS OF N ZONE, COMPARED TO UNDERLYING M ZONE  
GLEN MOUNTAINS LAYERED COMPLEX

- 1) Clinopyroxene typically is sub-ophitic, irregularly shaped with a strung-out, "chicken-wire" appearance on outcrop. Size varies from 2 to 20 cm. Absence of characteristic fine ophitic clinopyroxene with chadocryst plagioclase randomly oriented and smaller than laminated cumulus plagioclase.
  - 2) Chunky, round, coarse-ophitic clinopyroxene common at the M-N Zone transtion.
  - 3) Orthopyroxene more common.
  - 4) Olivine generally absent.
  - 5) Poikilitic magnetite is ubiquitous.
  - 6) Laminated plagioclase distinctive locally.
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