

The second textural type is ubiquitous throughout the N Zone. These pyroxenes are subophitic or interstitial, and have a starved, "chicken-wire" appearance on rock surfaces. They are irregularly shaped and vary in size from 2–3 cm to 20 cm. Pyroxene of this type has more chadocrysts in the N Zone than in the L Zone.

Although the plagioclase in the N Zone is generally subhedral and lath-shaped, the grains in a number of localities are anhedral and have a disorganized, "crystal-mosaic" texture.

Olivine is absent in all but a few localities in the N Zone. Where it does occur it is abundant and clustered in masses.

Magnetite is extremely abundant and ubiquitous in the N Zone. It occurs as interstitial grains, as poikilitic crystals enclosing plagioclase, and as intergrowths with pyroxene that commonly form red lumps 5 to 10 mm across on rock surfaces.

Orthopyroxene is more common in the N Zone than in the M Zone of this area. It occurs as intergrowths with clinopyroxene and magnetite. Olivine, where present, commonly bears reaction rims of orthopyroxene.

Traces of late-magmatic quartz, biotite, and brown hornblende are found locally. These minerals do not occur in the lower zones.

The N Zone is characterized by igneous lamination that is more poorly defined than the lamination in underlying zones. Obvious rhythmic layering is rarely found. Boulders are rounded and rock surfaces are smoother than in the M Zone.

Much of the N Zone rock appears to have been subjected to hydrothermal alteration. Mafic minerals are altered to chlorite, tremolitic amphibole, and epidote. Three miles east and northeast of the map area, the layered complex is so intensely altered that it cannot be assigned to a zone.

An unusual nonigneous rock occurs in the southwestern part of the map area (center S $\frac{1}{2}$ NE $\frac{1}{4}$ sec. 34), on a ridge west of State Highway 54. This is a brick-red, well-indurated arkose, thought to represent the Permian Tepee Creek lithofacies of the Post Oak Conglomerate (Merritt and Ham, 1941; Mayes, 1947; Chase, 1950, 1954).

The rock, 0.5 to 3 mm in grain size, is composed of quartz, perthite, plagioclase, magnetite, and white mica, as well as both granitic and anorthositic rock fragments, in a very fine-grained matrix. It has a vuggy, honeycombed texture from weathering of unstable minerals (fig. 105).



Figure 104. Photomicrograph of thin section from N Zone exhibiting part of a zoned ophitic pyroxene.



Figure 105. Ridge-forming Tepee Creek facies of Post Oak Conglomerate.