constrained by borings drilled to the southwest at Bernardsville (Ratcliffe and others, 1990), and by the Mesoproterozoic. East at 70° area on the east limb of a broad, regional syncline and west limb of an anticline, both of which plunge to the northeast.

Byram Intrusive Suite
Vernon Supersuite

The oldest Mesoproterozoic rocks in the map area are calc-alkaline, plagioclase-rich gneiss from elsewhere in the Highlands have yielded SHRIMP U-Pb zircon ages of 1282 to 1254 Ma, at 70° high-grade metamorphism are constrained from regional calcite-graphite thermometry to ~769 °C (Volkert and Puffer, 1995) that trend toward the east or north-northeast. The dikes are an extension of the same period of dikes that intrude the northern and central parts of the Newark basin from New Brunswick north to Pompton Plains (R.A. Volkert, unpublished data).

Joints are a ubiquitous feature in Mesoproterozoic rocks of the map area. They are characteristically planar, moderately well formed, moderately to widely spaced, and moderately to steeply dip towards the northwest. The dominant joint trend within the Mesoproterozoic rocks is nearly perpendicular to the trend of the adjacent amphibolite. Gaps in basalt outcrops.

DESCRIPTION OF MAP UNITS

Byram Intrusive Suite
Vernon Supersuite

JUTLAND KLIPPE SEQUENCE
Losee Metamorphic Suite
Amphibolite
Other Rocks

Amphibolite associated with the Losee Metamorphic Suite is metavolcanic in origin. It is composed of a gabbroic parent rock that is rich in pyroxene, biotite, and plagioclase. The gabbroic parent rock is also rich in olivine and quartz. The amphibolite is composed of a gabbroic parent rock that is rich in pyroxene, biotite, and plagioclase. The gabbroic parent rock is also rich in olivine and quartz.

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