

HYDROGEOLOGIC UNITS

[illegible]

The two miscellaneous classifications account for the sedimentary rock within the Triassic basins and the undifferentiated crystalline basement rocks east of the Fall line that are overlain unconformably by Coastal Plain sediments of Cretaceous age and younger.

[illegible]

A regression of adjusted yields on hydrogeologic units is shown in Figure 7. The hydrogeologic unit III (igneous, intermediate intrusive) has the highest average yield, followed by unit IV (igneous, basic). The regression coefficients for the igneous units are positive, indicating that igneous rocks are more productive than sedimentary rocks. The regression coefficients for the sedimentary units are negative, indicating that sedimentary rocks are less productive than igneous rocks. The regression coefficients for the metamorphic units are also negative, indicating that metamorphic rocks are less productive than igneous rocks. The regression coefficients for the igneous units are significantly different from zero, indicating that igneous rocks are more productive than sedimentary rocks. The regression coefficients for the sedimentary units are also significantly different from zero, indicating that sedimentary rocks are less productive than igneous rocks. The regression coefficients for the metamorphic units are also significantly different from zero, indicating that metamorphic rocks are less productive than igneous rocks.

and displaced by numerous faults and zones of shearing, some of which are many miles long. Nearly everywhere are joints that are commonly clustered in groups oriented along one or more preferred directions. All rocks have been subjected to weathering and erosion, which resulted in the widening of fractures and the formation of new openings such as stress-relief fractures. These breaks in the otherwise solid rock are conduits for ground-water flow.

bedrock may be exposed at land surface on steep slopes, on rugged hills, or in stream valleys, but nearly everywhere else it is overlain by unconsolidated material that may be more than a hundred feet thick. Collected samples of unconsolidated material include sand, gravel, silt, clay, alluvium, and soil, is referred to as regolith. The water-storing and -conducting characteristics of the regolith and the hydrologic characteristics of the relation between them determine the water-supply potential of the groundwater system in the Piedmont and Blue Ridge provinces.

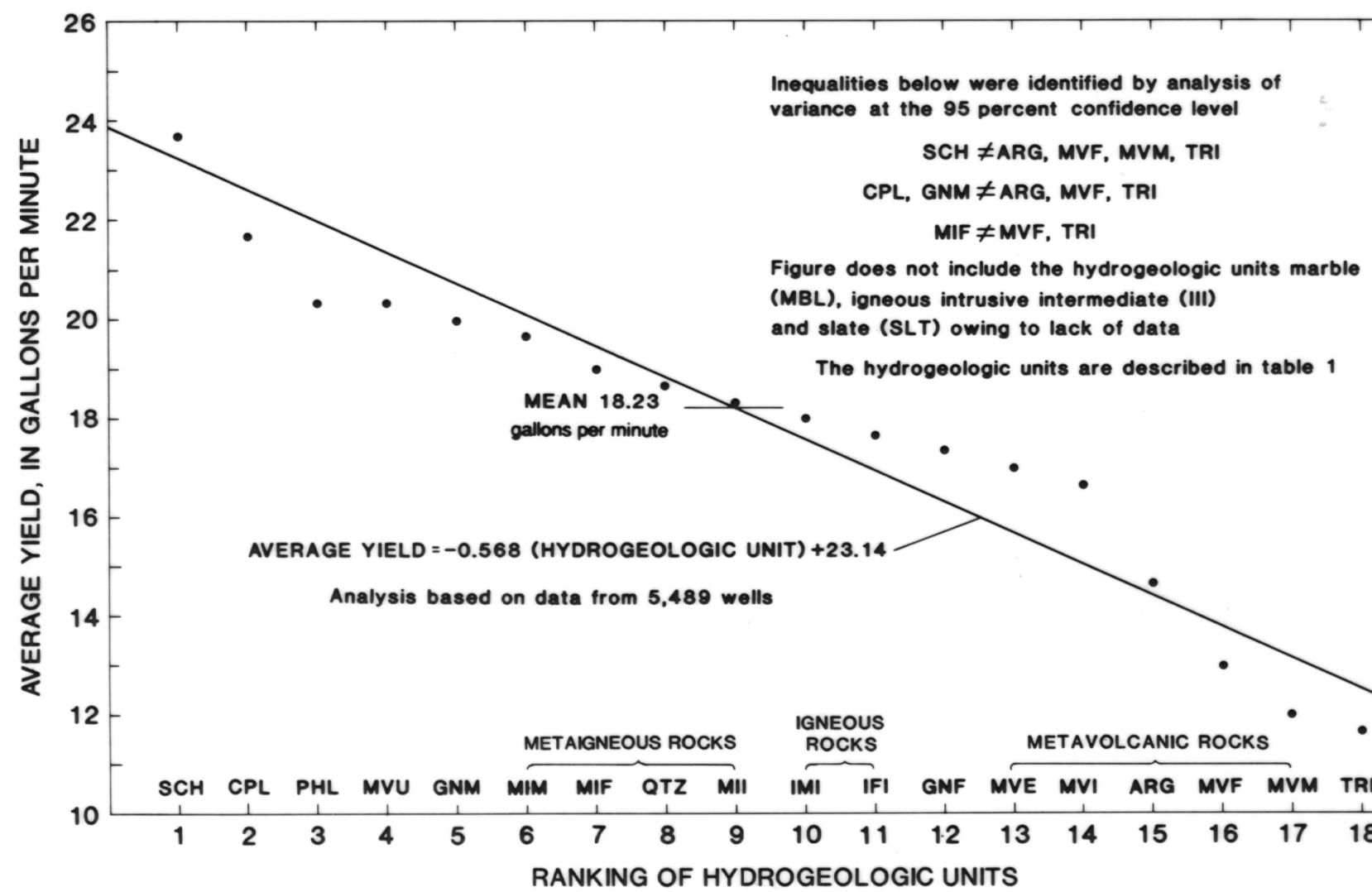
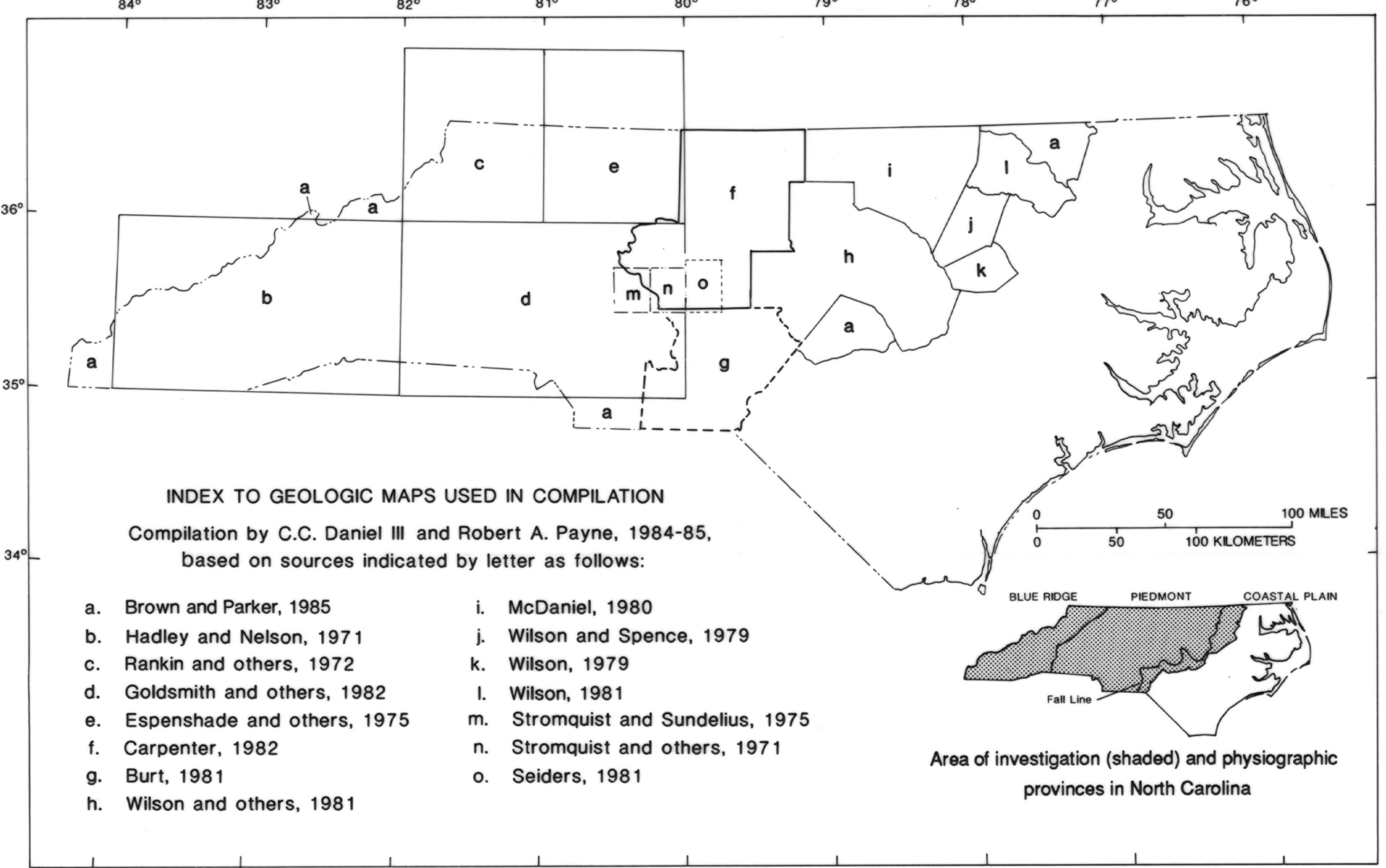


Figure 2.--Average yield of wells of average depth and diameter in the hydrogeologic units of the Piedmont and Blue Ridge provinces of North Carolina.



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