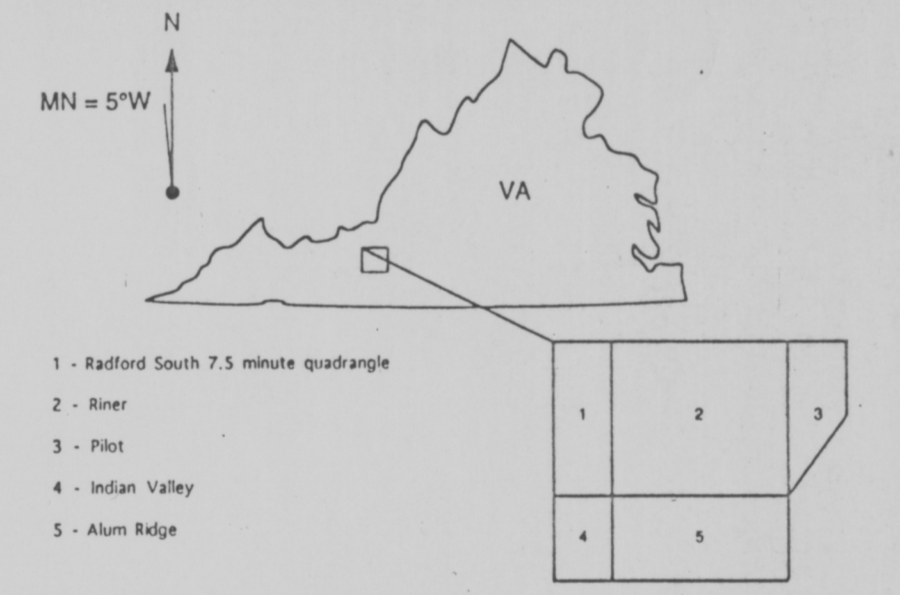
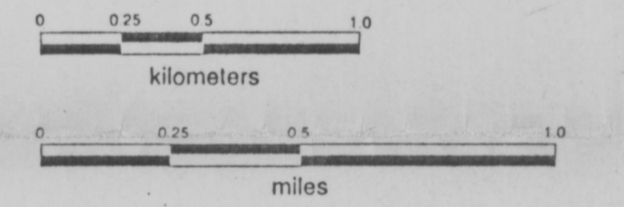


# GEOLOGIC MAP OF THE FRIES FAULT ZONE SOUTH OF RINER, VIRGINIA

compiled by Richard S. Whitmarsh, 1990

includes contacts adapted from Truman (1976), Kaygi (1979), and Bartholomew *et al.* (1992); see text for references  
sites 1 through 5 (circled) are referred to in text under LITHOLOGIC DESCRIPTIONS

LD  
5655  
V855  
1994  
1478  
SLN  
C



## EXPLANATION

- Ecg** Chilhowee Group; metasediments including quartz arenites, feldspathic sandstones, siltstones, and rare calcareous breccias. Well-foliated near contacts with Pilot Gneiss and Little River Gneiss.
  - pEa** Ashe Formation; predominantly biotite-quartz-feldspar schists with few exposures of muscovite phyllite.
  - pEpg** Pilot Gneiss; exposures near Copper Valley include chlorite-epidote-actinolite schists and layered gneisses with lesser amounts of leucocratic gneiss, mafic dikes/sills, graphitic schist, and rare garnetiferous tectonites. Mylonitic textures predominate and locally include porphyroclasts of feldspar and/or hornblende.
  - pElrg** Little River Gneiss; feldspar-augen gneiss, exhibits varying degrees of mylonitization, locally ultramylonitic at base. Includes rare exposures of garnet-bearing porphyroblastic gneiss oriented at a high angle to the dominant fabric.  
lc = leucogranite, in close association with metamorphosed dioritic dikes/sills (dark)
  - pEx** granoblastic gneiss of uncertain affinity.
- 
- strike and dip of upright and overturned strata
  - strike and dip of compositional layering
  - trend of subvertical foliation in porphyroblastic gneiss
  - trend and plunge of extension lineation, crenulation fold axes, and minor overturned synformal fold axes
  - thrust fault with offsetting transfer faults; teeth on upper plate
  - lithologic contact; all contacts are approximate, dashed where uncertain, queried where conjectural