North Carolina Geological Survey
Division of Land Resources
Department of Environment, Health, and Natural Resources

Plate 1
Bulletin 95
Lawrence and Hoffman (1993)

INTERPRETIVE GEOLOGIC MAP OF BASEMENT ROCKS BENEATH THE NORTH CAROLINA COASTAL PLAIN

by

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Sub-Coastal Plain geology portrayed on this map is based on widely spaced drill data and indirect geophysical evidence. While the map is accurate within the limits of the available data, it is not intended to have site-specific application—particularly in areas remote to the well control shown on the map.

Geologic contacts and structures within the exposed crystalline rock areas are compiled from numerous literature sources cited in the text. The distribution of exposed crystalline rocks and exposed Triassic sedimentary rocks is from the *Geologic Map of North Carolina* (North Carolina Geological Survey, 1985).

Base map provided by the U. S. Geological Survey (revised 1972) is Lambert conformable projection based on 33° and 45° standard parallels and the 1927 North American datum. This same base was used for the *Geologic Map of North Carolina*.

Scale 1:500,000
1 inch equals approximately 8 miles

10 0 10 20 30 40 Miles
10 0 10 20 30 40 50 Kilometres

EXPLANATION

Rock Symbols

Sedimentary Rocks

grw	graywacke
mdst	slightly metamorphosed mudstone
sed	undifferentiated slightly metamorphosed mudstone, siltstone, and sandstone
slts	siltstone

Volcanic Rocks (slightly metamorphosed)

fv	felsic volcanics
ft	felsic tuff
iv	intermediate volcanics
it	intermediate tuff
mv	mafic volcanics
mt	mafic tuff
kr	keratophyre

Plutonic Rocks

di	diorite
db	diabase
gb	gabbro
gr	granite
gd	granodiorite
qmz	quartz monzonite

Metamorphic Rocks

mgw	metagraywacke
mms	metamudstone
mslt	metasiltstone
mss	metasandstone
msd	metasedimentary rocks
ph	phyllite
sph	sericite phyllite
bs	biotite schist
gms	garnet mica schist
2ms	two-mica schist
ms	muscovite schist
bg	biotite gneiss
fg	felsic gneiss
hbg	hornblende-biotite gneiss
am	amphibolite
mgb	metagabbro
mgr	metagranite
mto	metatonalite
mtr	metatrondhjemite
hfs	hornfels
um	ultramafic rocks

Modifying terms

sl	slaty
phy	phyllitic
volc	volcaniclastic
sch	schistose

Geologic Symbols

- BL-T-1-81 — Well location and code
- CU-T-2-76* — Well in which diabase was penetrated – no data available to permit mapping of the diabase body
- Inferred contact of lithologic unit – dashed where magnetic anomaly data are equivocal or missing; queried where extension is unknown; form lines where lithologies are not labeled
- Fault compiled from literature sources – arrows indicate direction of relative displacement
- Inferred fault – arrows show direction of inferred relative displacement
- Inferred thrust fault – saw teeth are on upper plate
- db — Diabase dike (Jurassic) – those shown in areas of exposed crystalline and Triassic sedimentary rocks compiled from literature sources; others are interpreted from aeromagnetic data
- Areas of exposed crystalline rocks
- Areas of exposed Triassic sedimentary rocks
- –200 — Structure contour on basement surface in feet relative to mean sea level – the contour interval varies as follows:
  From +200 feet to –1000 feet — 200-foot contour interval
  From –1,000 feet to –2,000 feet — 500-foot contour interval
  From –2,000 feet to –10,000 feet — 1,000-foot contour interval

Virginia
North Carolina
South Carolina