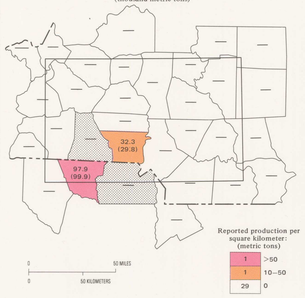
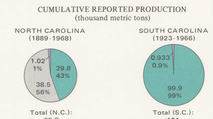
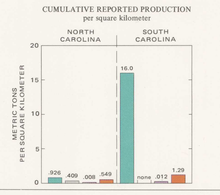
BARITE (402)

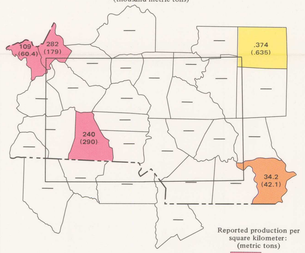


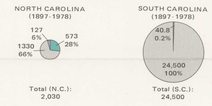


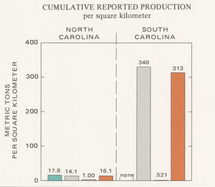


Production of barite in the quadrangle was from quartz-sericite schists in the Kings Mountain belt. The largest producer, the Kings Creek mine in Cherokee County, was in operation from 1923 to 1966. Production was reported from Gaston County for the late 1800's and early 1900's. Records of barite production prior to 1889 were not available for use in this compilation.

KAOLIN AND SPECIALTY CLAYS (406)

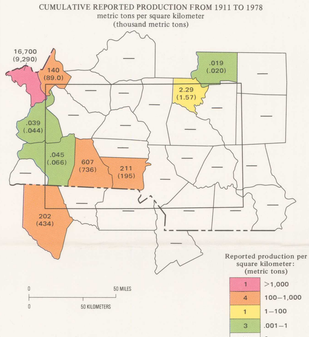


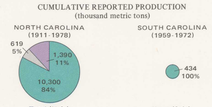


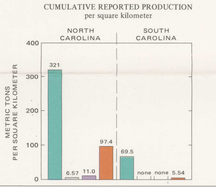


Kaolin and specialty clays (406) includes fire clay, fuller's earth, and kaolin, materials used in paper coating and filling, refractories, and ceramics, and as absorbents or thickeners. It also includes some marl, calcareous marl, and greensand marl. These materials are classified as nonmetallic minerals (400); see common clay and shale (103). Most reported production is from counties in the Kings Mountain belt or the Blue Ridge belt. Reported production from Guilford, Mitchell, and Richmond Counties is probably from outside the quadrangle.

FELDSPAR (408)

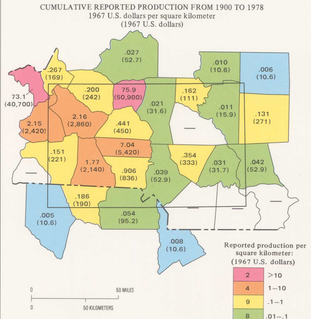


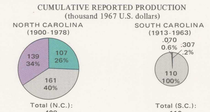


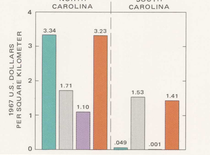


Soda and potash feldspar was produced, along with mica, from weathered granites and pegmatites of the Blue Ridge belt (Spruce Pine district), Inner Piedmont belt, and Kings Mountain belt. Some production from the Kings Mountain belt (Cleveland and Gaston Counties) has been a byproduct of spodumene mining. Reported production for Avery, Forsyth, Mitchell, and Spartanburg Counties is from outside the quadrangle.

GEMSTONES (411)

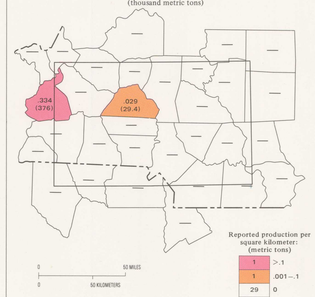


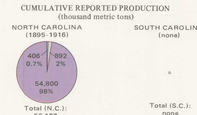


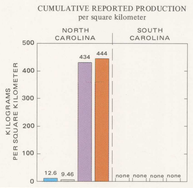


Reports of gemstone production from North Carolina and South Carolina include several types of precious and semi-precious stones and mineral specimens. Reported production includes commercial ventures as well as some estimates of value of materials collected by rock hounds. Gemstone production has not been reported consistently in physical units; thus, the cumulative production is presented only in value units (1967 dollars). Gemstone deposits in several parts of North Carolina are operated as tourist attractions. Gemstones produced from Charlotte quadrangle counties include hiddenite and emerald from the Hiddenite area in Alexander County and emerald and aquamarine from the Spruce Pine area in Mitchell county. Other minerals and gems that have been included in various reports of value of gemstones produced in North Carolina and South Carolina are actinolite, agate, amethyst, beryl, corundum, diamond, epidote, feldspar, garnet, kyanite, malachite, moonstone, olivine, opal, quartz, rhodolite, rhodonite, ruby, rutile, sapphire, serpentine, topaz, tourmaline, and unakite. Reported production of gemstones for Avery, Forsyth, Guilford, Lancaster, Mitchell, Montgomery, Randolph, Spartanburg, and Wilkes Counties is probably from outside the quadrangle.

GRAPHITE (412)

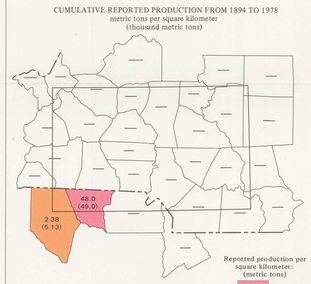


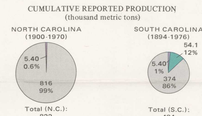


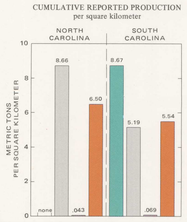


Reported production of amorphous graphite from Catawba and Rutherford Counties is probably from an interlayered mica-schist and biotite gneiss of the Inner Piedmont belt.

LIME (413)

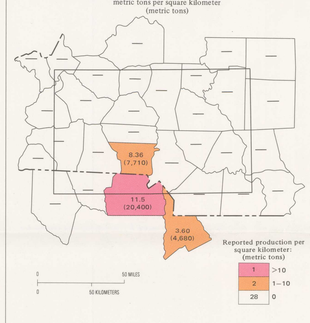


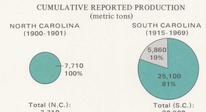


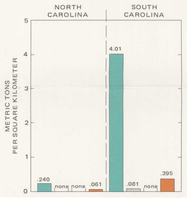


Lime (413) includes production of lime, limestone, and "shell" used for agricultural and chemical purposes and for cement production. In more recent years, this material has been included with limestone used for construction material purposes and is classified as stone (108). Reported production is from quarries in the Kings Mountain belt. The Limestone Springs quarry (Gaffney Marble Member of the Blacksburg Formation) in Cherokee County is the principal producer. Reported production from Spartanburg County is from outside the quadrangle.

PYRITE (419)

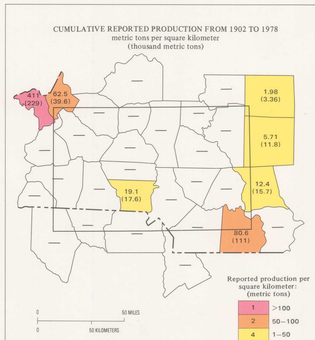


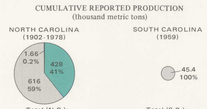


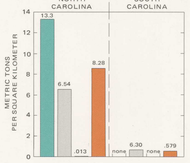


Pyrite mining was reported in the quadrangle as early as 1865, but the earliest production statistics used in this compilation were for 1900. Most production was from deposits in the Kings Mountain belt. Reported production for Gaston County (Oliver mine) in the early 1900's was from quartz-sericite schist. Pyrite was produced as a byproduct from kyanite mining (Henry Knob) in York County in the 1960's. Reported production from Lancaster County in 1918 was from outside the quadrangle.

INDUSTRIAL SANDS (421)

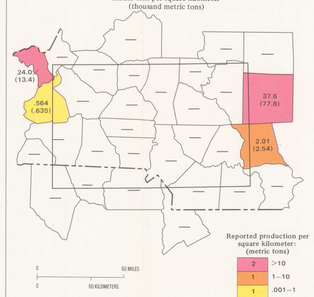


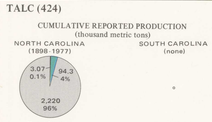


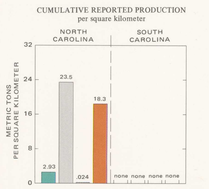


Industrial sands (421) includes production of crushed quartz and of olivine used as foundry sand. Most reported production of speciality or industrial sands is included in totals for sand and gravel used mainly for construction purposes; this industrial sand production is included in statistics for sand and gravel (107). Reported production of crushed quartz is mostly from counties in the Blue Ridge belt, the Kings Mountain belt, and Triassic-age rocks (the Wadesboro basin); reported production from Anson, Avery, Guilford, Mitchell, Montgomery, and Randolph Counties is probably from outside the quadrangle. Reported production of olivine is from the Blue Ridge belt, outside the quadrangle.

TALC (424)

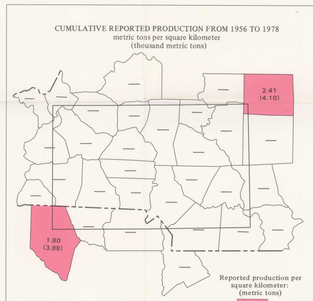


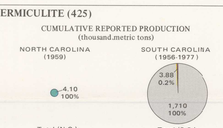


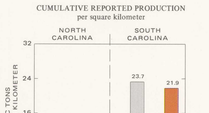


Reported production of talc and pyrophyllite (principally soapstone) has been from counties in the Blue Ridge belt and from Montgomery and Randolph Counties in the Carolina slate belt. This production was from outside the quadrangle.

VERMICULITE (425)

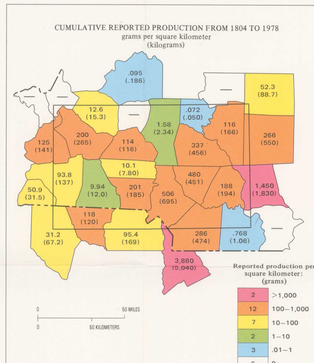


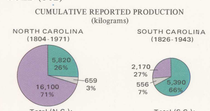


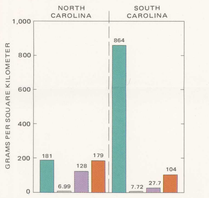


Reported production of vermiculite shown for Guilford and Spartanburg Counties is from outside the quadrangle.

GOLD (502)

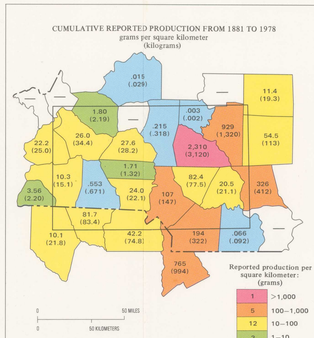


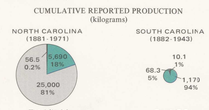


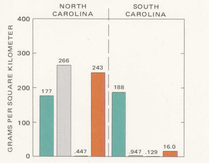


Reported production is mainly from counties that straddle the boundary between the Charlotte belt and the Carolina slate belt and from counties in the South Mountains area (Burke County and vicinity). All reported production from Lancaster County (Haile mine) and most reported production from Montgomery County (Iola mine) are from outside the quadrangle, as is reported production from Anson, Guilford, Polk, Spartanburg, and Wilkes Counties. Production for years prior to 1881 is not included in the county totals on this map; only State production totals are available for these early years.

SILVER (504)

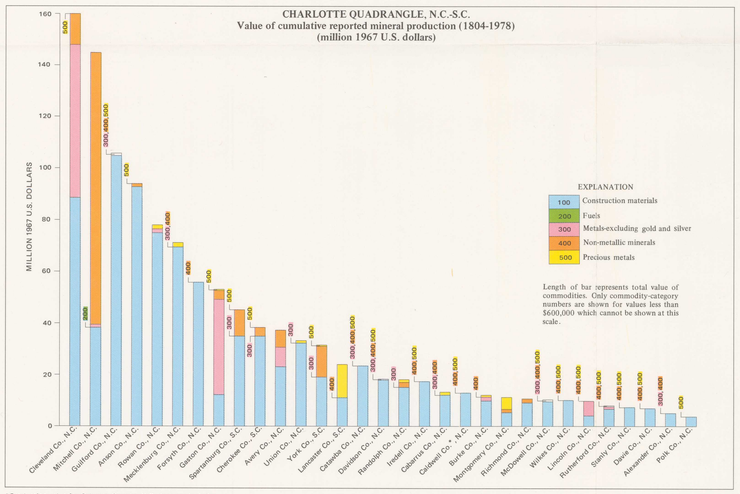






Most reported silver production is from gold and copper ores that have been mined in counties that straddle the boundary between the Charlotte belt and the Carolina slate belt. In addition, some reported silver production during the late 1800's and early 1900's from silver-lead ores of the Cid district (Davidson County) has been included in the county totals presented here. All or most reported production from Anson, Guilford, Lancaster (Haile gold mine), Montgomery, Polk, Randolph, Spartanburg, Union, and Wilkes Counties is from outside the quadrangle.

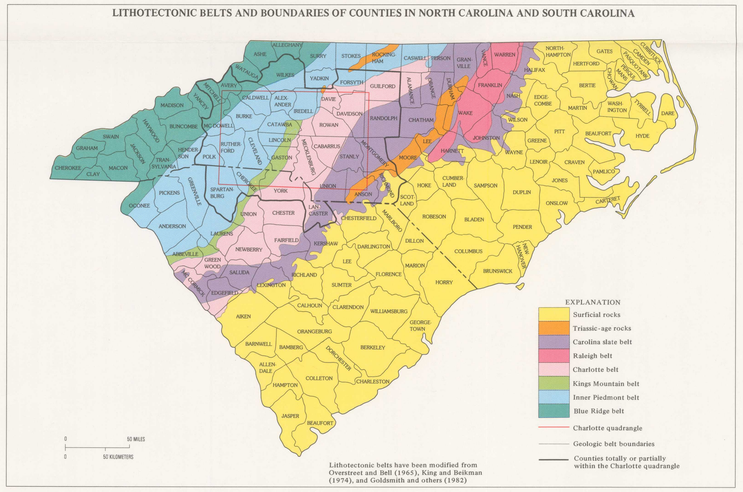
CHARLOTTE QUADRANGLE, N.C.-S.C.
Value of cumulative reported mineral production (1804-1978)
(million 1967 U.S. dollars)



Length of bar represents total value of commodities. Only commodity-category numbers are shown for values less than $600,000 which cannot be shown at this scale.

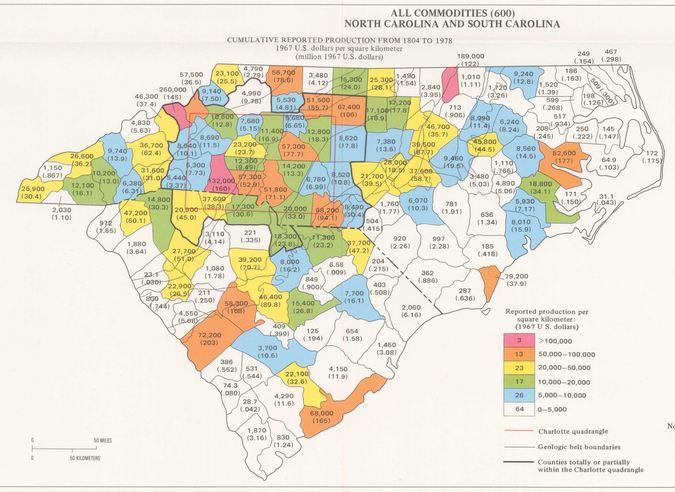
* Production value for Caldwell County, N.C. does not include 2.6 million dollars for material classified as metals (300); see note on all commodities (600) map.

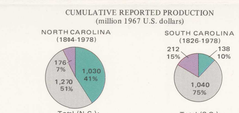
LITHOTECTONIC BELTS AND BOUNDARIES OF COUNTIES IN NORTH CAROLINA AND SOUTH CAROLINA

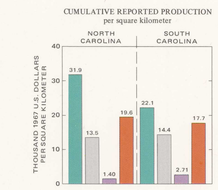


Lithotectonic belts have been modified from Overstreet and Bell (1965), King and Beikman (1974), and Goldsmith and others (1982)

ALL COMMODITIES (600)
NORTH CAROLINA AND SOUTH CAROLINA







Note: Production data in this report do not include titanium produced during 1942-52 in Caldwell County, N.C. (Ilmenite, valued at 2.6 million 1967 dollars, contained 63,700 metric tons of titanium). The production took place outside the Charlotte quadrangle. These data were not available until after the data base used for this report was completed.

MINERAL PRODUCTION MAPS OF THE CHARLOTTE 1°X 2° QUADRANGLE, NORTH CAROLINA AND SOUTH CAROLINA

By
John H. DeYoung, Jr., Michael P. Lee, and James P. Dorian

1985

Interior—Geological Survey, Reston, Va.—1984—G84210