U. S. GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

ECONOMIC GEOLOGY

TENNESSEE – NORTH CAROLINA
ROAN MOUNTAIN QUADRANGLE

LEGEND
(continued)

⚒ *Mines and quarries*
x *Prospects*

Known mineral deposits

Brown hematite
(deposits in residual clays of the Shady limestone)

Magnetite
(lentils near contact of Cranberry granite and Roan gneiss)

Talc and soapstone
(bodies in Roan gneiss)

Mica
(in pegmatite lenses)

LEGEND

SEDIMENTARY ROCKS
(Areas of subaqueous deposits are shown by patterns of parallel lines)

- **Tellico sandstone** *(red and gray calcareous sandstone)*
- **Athens shale** *(blue and black calcareous shale)*

UNCONFORMITY

- **Knox dolomite** *(light and dark magnesian limestones with chert nodules)*
- **Nolichucky shale** *(variegated calcareous shales and thin limestones)*
- **Honaker limestone** *(massive blue and gray limestone with chert)*
- **Watauga shale** *(purple, reddish, and yellow shale and sandy shale, with thin limestones)*
- **Shady limestone** *(grayish limestone with chert)*
- **Hesse quartzite** *(massive white quartzite)*
- **Erwin quartzite** *(massive white quartzite)*
- **Murray slate** *(gray slates and shales)*
- **Nebo quartzite** *(chiefly white quartzite)*
- **Hampton shale** *(banded gray shale with thin sandstone layers)*
- **Nichols slate** *(grayish slate and shale with sandy layers)*
- **Cochran conglomerate** *(white sandstone, quartzite, and conglomerate)*
- **Hiwassee slate** *(chiefly dark, banded slate with layers of sandstone and conglomerate)*
- **Unicoi formation** *(white sandstone and quartzite with shale, arkose, conglomerate, and a bed of amygdaloid, Ca)*
- **Snowbird formation** *(chiefly light-colored quartzite and sandstone; includes beds of slate, conglomerate, arkose, and amygdaloid, Ca)*

ORDOVICIAN
CAMBRIAN

IGNEOUS ROCKS
(Areas of igneous rocks are shown by patterns of triangles and rhombs; metamorphism is indicated by hachures)

- **Beech granite** *(coarse or porphyritic granite, light or reddish in color)*
- **Cranberry granite** *(mainly granite and granite-gneiss)*
- **Soapstone, dunite, and serpentine**
- **Roan gneiss** *(chiefly hornblende gneiss and schist, with some diorite)*

ARCHEAN

METAMORPHIC ROCKS OF UNKNOWN ORIGIN
(Areas of metamorphic rocks of unknown origin are shown by hachures)

- **Carolina gneiss** *(chiefly mica-gneiss and mica-schist, includes other gneisses, granite, and diorite)*

ARCHEAN

Faults

Legend is continued on the left margin.

(Bristol) (Abingdon) (Estillville) (Asheville) (Greeneville) (Cranberry) (Morganton) (Mt. Mitchell)

82° 30′ 20′ 10′ 82° 00′ — 36° 30′ 20′ 10′ 36° 00′

Geology by Arthur Keith, assisted by H. B. Goodrich and H. S. Gale.
Surveyed in 1893, 1900, 1904, and 1906.

H. M. Wilson, Geographer in charge.
Triangulation by W. C. Kerr and S. S. Gannett.
Topography by Hersey Munroe, W. L. Miller, W. N. Brown, Geo. R. Guerdrum, and E. G. Hamilton.
Surveyed in 1901–1902.

TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION 1902.

Scale 1:125000
1 0 1 2 3 4 5 Miles
1 0 1 2 3 4 5 Kilometers

Contour interval 100 feet.
Datum is mean sea level.
Edition of April 1907