

COLUMNAR SECTIONS

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

TENNESSEE
LOUDON SHEET

| GENERALIZED SECTION NORTH AND WEST OF LOUDON. | | | | | | |
|---|--|-------------------------------------|--|--------------------|---|--|
| SCALE: 1000 FEET = 1 INCH. | | | | | | |
| PERIOD. | FORMATION NAME. | SYMBOL. | COLUMNAR SECTION. | THICKNESS IN FEET. | CHARACTER OF ROCKS. | CHARACTER OF TOPOGRAPHY. |
| CARBONIFEROUS | Briceville shale. | Cbv | | 300+ | Blue, gray, and black, argillaceous shales, with sandstone beds and coal seams. | Valleys. |
| | Lee conglomerate. | Cle | | 900 | Massive, white sandstone, locally cross-bedded, with conglomerate layers near the bottom. | High, rocky mountains and ridges. |
| | Pennington shale. | Cpn | | 400± | Sandy and calcareous shales interbedded, with small beds of sandstone. | Slopes of mountains of Lee conglomerate. |
| | Newman limestone. | Cn | | 700 | Massive, blue and dove limestone, cherty near the base. | Steep slopes and cliffs, and small ridges. |
| DEV. | Chattanooga shale. | Dc | | 80 | Black, calcareous and carbonaceous shale. | Narrow valleys. |
| | Rockwood formation. | Sr | | 600 | Red, yellow, and brown, calcareous shales and sandy shale; white sandstone and iron ore near the top. | Sharp, straight ridges. |
| SILURIAN | Chickamauga limestone. | Sc | | 700-1400 | Massive, blue limestone; red, flaggy limestone; gray, argillaceous and shaly limestone. | Low, round hills and rolling valleys. |
| | Holston marble. | Shl | | | Variegated, reddish, brownish, and gray marbles, shaly marble, and shale. | Smooth, rounded hills. |
| | Knox dolomite. | Sk | | 3500-3800 | Magnesian limestone, white, gray, light- and dark-blue, with nodules of chert. | Broad, cherty ridges and high, rounded hills. |
| | Conasauga shale. | Cc | | 600-850 | Yellow, red, and brown, calcareous shale, with thin beds of limestone and shaly limestone. | Valley and slopes of Knox dolomite ridges. |
| CAMBRIAN | Rome formation. (Rome sandstone) | Cr (Crs) | | 400-850 | Brilliant red, yellow, green, and brown, sandy and argillaceous shales. | Slopes of Rome sandstone ridges. |
| | Apison shale. | Ca | | 1000+ | Red, yellow, and brown sandstones and sandy shale. | Sharp ridges with notches and gaps. |
| | GENERALIZED SECTION SOUTHEAST OF CHILHOWEE MOUNTAIN. | | | | | |
| AGE UNKNOWN | Pigeon slate. | pg | | 1300+ | Banded, gray and bluish-gray clay-slate and sandy slate, with a few sandstone beds. | Irregular ridges and knobs, with steep slopes. |
| | Citico conglomerate. | c | | 100-300 | Coarse and fine quartz-conglomerate; coarse and fine, white sandstone. | High, sharp ridges. |
| | Wilhite slate. | wi | | 100-200 | Bluish-black slate, with limestone conglomerate and limestone at the top. | Narrow valleys and slopes of Citico conglomerate ridges. |
| NAMES OF FORMATIONS. | | | | | | |
| PERIOD. | NAMES AND SYMBOLS USED IN THIS FOLIO. | | SAFFORD: GEOLOGY OF TENNESSEE, 1899. | | | |
| CARB. | Briceville shale. Lee conglomerate. Pennington shale. | Cbv Cle Cpn | Coal measures. | | | |
| | Newman limestone. | Cn | Mountain limestone. | | | |
| | Grainger shale. Chattanooga shale. | Dg Dc | Siliceous group. Black shale. | | | |
| DEV. | Rockwood formation. | Sr | Dyestone group. | | | |
| | Clinch sandstone. Bays sandstone. | Scl Sb | Clinch Mountain sandstone. | | | |
| SILURIAN | Sevier shale. Tellico sandstone. Athens shale. | Ssv St Sa | Trenton and Nashville series. | | | |
| | Holston marble. Chickamauga limestone. | Shl Sc | Trenton, Lebanon, or Maclurea limestone. | | | |
| | Knox dolomite. | Sk | Knox dolomite. | | | |
| | Nolichucky shale. Maryville limestone. Rogersville shale. Rutledge limestone. | Cn Cm Crg Crt | Cc | Knox shale. | | |
| CAMBRIAN | Rome formation. Apison shale. | Cr Ca | Knox sandstone. | | | |
| | Hesse sandstone. Murray shale. Nebo sandstone. Nichols shale. Cochran conglomerate. Sandsuck shale. | Ch Cmr Cnb Cnc Ch Cs | Chilhowee sandstone. | | | |
| AGE UNKNOWN | Pigeon slate. Citico conglomerate. Wilhite slate. | pg c wi | Ocoee group. | | | |

| GENERALIZED SECTION SOUTH AND EAST OF LOUDON. | | | | | | |
|---|---|-----------------|-------------------|--|--|--|
| SCALE: 1000 FEET = 1 INCH. | | | | | | |
| PERIOD. | FORMATION NAME. | SYMBOL. | COLUMNAR SECTION. | THICKNESS IN FEET. | CHARACTER OF ROCKS. | CHARACTER OF TOPOGRAPHY. |
| CARB. | Newman limestone. | Cn | | 650+ | Bluish-gray shale and shaly limestone. Massive, blue limestone. | Low, open valleys. |
| DEVONIAN | Grainger shale. | Dg | | 1100-1200 | Red and yellow, sandy shale. Massive, white sandstone. | Slopes of high ridges and lines of low knobs. |
| | Chattanooga shale. Clinch sandstone. | Dc Scl | | 6-50 0-100 | Black, calcareous and carbonaceous shale. Massive, white sandstone. | Narrow valleys. Small ridges and benches. |
| SILURIAN | Bays sandstone. | Sb | | 1100-1300 | Red sandstone, calcareous sandstone, and sandy limestone. | Irregular hills and knobs. |
| | Sevier shale. | Ssv | | 300-400 | Bluish, calcareous shale and shaly limestone, with lentils of calcareous sandstone. Bluish-gray, calcareous sandstone and sandy shale. Bluish, calcareous shale and limestone. Variegated marble. | Low valleys with uneven surfaces. Ridges and lines of hills. Low valleys with uneven surfaces. |
| | | Ssvs | | 100-200 | | |
| | | Ssv | | 400 | | |
| | | Ssvs | | 350-550 | | |
| | Tellico sandstone. | St | | 450-750 | Bluish-gray and reddish, calcareous sandstone and sandy shale interbedded. | Ridges and lines of high hills. |
| | Holston marble. Chickamauga limestone. | Shl Sa Sc | | 1000-1200 | Variegated marble, blue, calcareous shale, and limestone, grading eastward into blue, calcareous shale, carbonaceous at the base. | Low valleys with slightly uneven surfaces. |
| Knox dolomite. | Sk | | 3500-3800 | Magnesian limestone, white, gray, light- and dark-blue, with nodules of chert. | Broad, cherty ridges and high, rounded hills. | |
| CAMBRIAN | Nolichucky shale. | Cn | | 650 | Yellow and brown, calcareous shale, with limestone beds. | Flat, open valleys. |
| | Maryville limestone. | Cm | | 0-250 | Massive, dark-blue limestone. | Open valleys and lines of low knobs. |
| | Rogersville shale. | Crg | | 180 | Bright-green clay-shale, with a bed of limestone. | Lines of low knobs. |
| | Rutledge limestone. | Crt | | 0-200 | Massive, dark-blue limestone. | Open valleys. |
| | Rome formation. (Rome sandstone.) | Cr (Crs) | | 500+ | Brilliant red, yellow, green, and brown, sandy and argillaceous shale. Red, yellow, and brown sandstone and sandy shale. | Slopes of Rome sandstone ridges. Sharp ridges with notches and gaps. |
| | Hesse sandstone. | Ch | | 500+ | Fine, massive, white sandstone. | High, sharp-crested mountains. |
| | Murray shale. | Cmr | | 300 | Bluish-gray, sandy shale. | Steep slopes and depressions. |
| Nebo sandstone. | Cnb | | 500-650 | Fine and coarse, massive, white sandstone. | High, sharp-crested mountains. | |
| | Nichols shale. | Cnc | | 800-900 | Bluish-gray, sandy shale. | Steep slopes and narrow valleys. |
| Cochran conglomerate. | Cch | | 800-900 | Massive, white sandstone, coarse and fine. | High, sharp-crested mountains. | |
| | Cch | | 100 | Red sandstone and gray, sandy shale. | Small depressions. | |
| Sandsuck shale. | Cs | | 700 | Coarse conglomerate, with quartz and feldspar pebbles. | High, round-topped mountains and ridges. | |
| | Cs | | 500+ | Bluish-gray, argillaceous shale. | Slopes of Cochran conglomerate mountains. | |

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