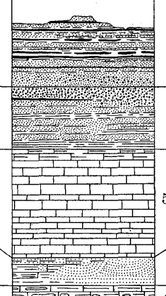
U. S. GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

# COLUMNAR SECTION

ALABAMA
GADSDEN SHEET

GENERALIZED SECTION FOR THE GADSDEN SHEET.
SCALE: 1000 FEET = 1 INCH.

| Period. | Formation Name. | Symbol. | Columnar Section. | Thickness in Feet. | Character of Rocks. | Character of Topography and Soils. |
|---|---|---|---|---|---|---|
| Carboniferous | Walden sandstone. | Cw |  | 500± | Coarse sandstone and sandy shale with beds of coal and fire-clay. | Broad, level plateaus intersected by narrow, rocky gorges.<br>Gray, yellow, and red, sandy loam. |
| | Lookout sandstone. | Cl | | 60–570 | Conglomerate and massive sandstone.<br>Sandy shale with beds of coal and fire-clay. | Cliffs of plateau escarpments.<br>No soil. |
| | Bangor limestone. | Cb | | 560–1100 | Shaly limestone.<br>Massive, blue crinoidal limestone. | Steep slopes forming the lower part of the plateau escarpments.<br>Black and red clay-soils.<br>Narrow valleys. |
| | Oxmoor sandstone. | Co | | 0–380 | Coarse, porous sandstone and sandy shale. | Low, sandy ridges. |
| | Fort Payne chert. | Cp | | 180–300 | Calcareous and sandy shale.<br>Cherty limestone and heavy beds of chert. | Sharp, narrow ridges, parallel to the sides of the anticlinal valleys.<br>Cherty and sandy soil. |
| Dev. | Chattanooga black shale. | Dc | | 20–45 | Black carbonaceous shale. | |
| | Rockwood formation. | Sr | | 180–650 | Greenish clay-shale with beds of red fossil iron ore.<br>Sandy shale and thin-bedded sandstone. | |
| Silurian | Chickamauga limestone. | Sc | | 665–1200 | Blue, flaggy limestone with mottled, earthy beds. | Level valleys.<br>Scanty, blue clay-soil where the rocks are nearly horizontal, and deeper, red clay where the beds are steeply inclined. |
| | (Breccia.) | Scb | | 0–50 | Breccia or conglomerate consisting of chert pebbles in calcareous matrix. | |
| ? | Knox dolomite. | Sk | | 3000–3500 | Magnesian limestone, white, gray, or light-blue, generally granular and massively bedded, containing nodules and layers of chert. | Low ridges and irregular rounded hills.<br>Deep, red clay-soil with a few fragments of chert, grading into white or gray soil composed almost entirely of chert. |
| Cambrian | Conasauga shale. | €c | | 1000+ | Greenish clay-shale with thin beds of blue seamy limestone. | Level valleys—"Flatwoods."<br>Stiff, blue clay-soil. |

NAMES OF FORMATIONS.

| Period. | Names and Symbols used in this Folio. | | Smith: Geology of the Valley Region adjacent to the Cahaba Coal Field, Alabama. 1890. | Smith: Outline of the Geology of Alabama. 1878. | Safford: Geology of Tennessee. 1869. |
|---|---|---|---|---|---|
| Carboniferous | Walden sandstone. | Cw | Coal measures. | Upper coal measures. | Coal measures. |
| | Lookout sandstone. | Cl | | Lower coal measures.<br>Millstone grit or Conglomerate. | |
| | Bangor limestone. | Cb | Bangor limestone. | Upper sub-carboniferous or Mountain limestone. | Mountain limestone. |
| | Oxmoor sandstone. | Co | Oxmoor sandstone. | Lower sub-carboniferous or Siliceous group. | Siliceous group. |
| | Fort Payne chert. | Cp | Fort Payne chert. | | |
| Dev. | Chattanooga black shale. | Dc | Black shale. | Genessee or Black shale. | Black shale. |
| Silurian | Rockwood formation. | Sr | Clinton or Red Mountain formation. | Clinton or Red Mountain group. | Dyestone group.<br>White Oak Mountain sandstone. |
| | Chickamauga limestone.<br>(Breccia.) | Sc<br>Scb | Trenton or Pelham limestone. | Trenton.<br>Chazy. | Trenton, Lebanon, or Maclurea limestone. |
| Camb. | Knox dolomite. | Sk | Knox dolomite. | Quebec (Knox dolomite and Knox shales). | Knox dolomite. |
| | Conasauga shale. | €c | Montevallo or Choccolocco shales. | | Knox shale. |

C. WILLARD HAYES,
*Geologist.*