# Bibb County

Comprising approximately 625 square miles, Bibb County lies in the central area of the state. It is bounded to the south by Perry County, to the west by Hale and Tuscaloosa Counties, to the north by Jefferson and Shelby Counties, and to the east by Chilton County.

Much of the county is characterized by level and moderately sloping, broad ridges with terraced streams consistent with the East Gulf Coastal Plain, however, the northeast part of the county lies in the Alabama Valley and Ridge section.

It is extremely rich in ore, coal, clay, and timber and since its founding as Cahawba County in 1818, Bibb County has contributed many resources to the growth of Alabama and the nation.

Today Bibb County is home to some of the South's most treasured places: Tannehill and Brierfield Ironworks Historical State Parks, Talledega National Forest, Oakmulgee Wildlife Management Area, and the Cahaba River National Wildlife Refuge.

## Super Site Selection Criteria

Bibb County was selected as a Super Site for this series on the basis of information reported in *Rocks and Minerals of Alabama – A Guide for Alabama Rockhounds (Circular 38, 1966)*. The guide identified two minerals—barite and fluorite—as being prominent in prospect pits scattered throughout the woods in a community called the "Sinks Area", located approximately 10 miles west of Centreville, just off Hwy 25. Additionally, barite rosettes and sand concretions were reported outside Centreville near the intersection of US Hwy 82 and AL State Hwy 25.

## Featured Rocks and Minerals

**Barite ($BaSO_4$)** – barium sulfate. Formed by the chemical reaction of soluble barium bicarbonate with sulfate-bearing waters.

The name "barite" is derived from the Greek words βάρος for *weight* and βάρυς for *heavy*, due to its unusual heaviness for a non-metallic mineral.

A member of the orthorhombic crystal system, barite can be a transparent, translucent or opaque mineral with a pearly, vitreous luster. It is a soft specimen (Mohs – 3.0 – 3.5) with brittle tenacity, perfect cleavage and an irregular or uneven fracture. While it streaks white, barite specimens are found in many colors including white, yellow, brown, grey, blue, orange, red, pink, purple, green, gray, black and colorless samples. It may also be multicolored and banded, however, sunlight can cause all colored samples to fade to white or colorless.

Barite has the capacity to fluoresce in UV light causing it to appear yellow, orange or pink. It may also strongly phosphoresce greenish-white, and can even be thermoluminescent at times. Heat affects it in other ways, as well. Barite is insoluble in water, acids and bases, but it is moderately soluble in hot, concentrated sulphuric acid due to formation of hydrogen sulphate. When heated above 1400°C, it decomposes to barium oxide, sulphur dioxide and oxygen.

In addition to its great range of colors, barite has varied crystal forms and habits and is a common mineral of wide distribution. Typically found as thick to thin tabular crystals and as bladed, white masses—usually in clusters with the crystals growing more or less parallel to one another. Occurrences are most often associated with weathered carbonate rocks where the more soluble rocks have been removed, leaving the insoluble barite as irregular masses. Barite often replaces other minerals, and may even replace organic materials such as wood, shells, and fossils.

In Alabama, barite occurs as vein deposits in limestone and dolomite and as secondary residual deposits derived from weathering. These deposits are situated in a 13-county area that extends from Bibb County in central Alabama to Cherokee County in northeast Alabama. Barite was mined in Alabama as early as the 1840s. Mining continued sporadically up until the 1940s with most of the production from Bibb, Calhoun and Shelby counties.

Barite has a number of commercial uses and is found as a chemically inert filler in drilling muds and fluids, as a white pigment in cosmetic products and paints, and as a filling material for polymers and papers. It is also the main source of the barium used in the medical field in conjunction with X-rays.

**Fluorite – ($CaF_2$) –** a calcium fluoride mineral.

The name "fluorite" is derived from the Latin "fluere," meaning *to flow*, due to its use as a flux. (Note: The term "fluorescence" is derived from fluorite. The element fluorine also derives its name from fluorite, a major source for the element.)

A member of the isometric crystal system, fluorite is a transparent mineral with a dull, vitreous luster. It is a moderately soft specimen (Mohs – 4.0) with perfect cleavage, brittle tenacity and a splintery, sub-conchoidal fracture. Fluorite streaks white and specimens are available in purple, lilac, golden-yellow, green, colorless, blue, pink, champagne and brown.

It fluoresces in UV light and may also be phosphorescent. Additionally, it may be thermoluminescent or triboluminescent, and will melt at 1360º. Fluorite is slightly soluble in hot hydrochloric acid and it decomposes in sulphuric acid. Collectors should be aware that some specimens are light sensitive.

Fluorite is found as a common gangue mineral in hydrothermal veins—especially those containing lead and zinc minerals—and in some greisens, granites, and pegmatites. As a component of some marbles and other metamorphic rocks, it is often associated with the minerals calcite, dolomite, barite, sphalerite, cassiterite, quartz, gypsum, and especially lead and silver.

In Alabama, fluorite is most often found in veins and cavities in limestone and dolomite rocks of the Paleozoic region.

Fluorite has numerous uses, but large quantities are used as a flux in the manufacture of steel and aluminum, in the preparation of hydrofluoric acid, and in optical instruments.

## Additional Minerals of Bibb County

In addition to barite and fluorite, the www.mindat.org website currently lists the presence of 16 other mineral specimens in Bibb County. They include: calcite, Celestine, goethite, hematite, illite, kaolinite, limonite, marble, marcasite, montmorillonite, petrified wood, quartz (var: chalcedony and chert), rhodochrosite, sphalerite and sulphur.

Over 150 mines are on record in Bibb County; many associated with the iron industry. Most sites are clustered in and around Woodstock at the northern edge of the county and extending along a northeastwardly line from Centreville, which is near the southern edge of the county.

**Sources:**


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