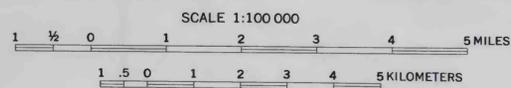


EXPLANATION

(Surficial Quaternary deposits including stream alluvium, glacial debris, talus, colluvial and landslide deposits are not shown on map)

-  **MAFIC INTRUSIVE ROCKS (PLIOCENE?)**
-  **INTRUSIVE PORPHYRITIC ROCKS (OLIGOCENE)**—Includes laccoliths ranging in composition from porphyritic hornblende granodiorite to quartz monzonite porphyry and sills of hornblende granodiorite and rhyodacite. These rock types comprise the laccoliths and associated sills on the south and east sides of the map area from Mount Lamborn to Chair Mountain
-  **WASATCH FORMATION (EOCENE)**—Varicolored claystone and siltstone: lenses of sandstone and conglomerate. Forms nonresistant slopes that are extensively mantled by colluvial and landslide debris. Maximum remaining thickness about 490 meters
-  **OHIO CREEK (PALEOCENE) AND MESAVERDE (UPPER CRETACEOUS) FORMATIONS, UNDIVIDED**
Ohio Creek Formation: light-gray sandstone, shale, and conglomeratic sandstone. Locally difficult to distinguish from rocks of underlying Mesa Verde Formation
Mesa Verde Formation: light-brown to gray sandstone, gray shale, carbonaceous shale, and coal. Rollins Sandstone Member, 45–75 meters thick, at base. Sandstones of both formations commonly form ledgy slopes and cliffs
Maximum thickness of both formations about 825 meters
-  **MANCOS SHALE (UPPER CRETACEOUS)**—Gray to dark-gray nonresistant marine shale; locally baked to hornfels near intrusive rocks. Forms rounded hills and moderately to highly stream dissected soft slopes. Approximately 1,220–1,310 meters thick
-  **Contact**—Dashed where inferred beneath surficial deposits and where inferred from aerial photographs in areas where detailed geologic mapping is lacking; queried where extent of unit beneath surficial deposits is not known
-  **Fault**—Dashed where approximately located. U, upthrown side; D, downthrown side
-  **Structure contours, approximately located**—Long dashed where inferred under Mount Gunnison laccolith. Drawn on top of Rollins Sandstone Member except in the Chair Mountain quadrangle where the contours depict the base of the Mesa Verde Formation about 45–60 meters stratigraphically lower in section. Structural control is too poor in most of the Chair Mountain quadrangle to show the contours separately from those in the remaining part of the map area. Contour interval 100 meters; datum is mean sea level
-  **Syncline**—Dashed where approximately located
-  **Coal prospect**
-  **Coal mine**—Number indicates carbon/oxygen value (dry basis)
-  **Oil and gas test, dry hole**—Number indicates carbon/oxygen value (dry basis)
-  **Core hole drilled for coal**—Number indicates carbon/oxygen value (dry basis)
-  **Isopleths of carbon/oxygen ratios of coal in the Mesa Verde Formation**—Long dashed in areas of sparse control; queried in areas where other interpretations are possible; short dashed where projected across areas of no coal

Base from U.S. Geological Survey 1:24,000, Electric Mountain, 1961, Bull Mountain, Chair Mountain, 1963, Minnesota Pass, Paonia Reservoir, Somerset, West Beckwith Peak, 1964, Bowie, and Paonia, 1965



Geology compiled from Johnson, 1948, Hanks, 1962, Godwin, 1968, Hail, 1972, Osterwald and others, 1972, and D. L. Gaskill, unpublished reconnaissance mapping, 1973

GEOLOGIC MAP OF THE SOMERSET COAL FIELD, COLORADO