

DESCRIPTION OF MAP UNITS

Qal ALLUVIAL DEPOSITS (HOLOCENE)—Gravel, sand, silt, and clay in stream valleys and alluvial fans.

Qas ALLUVIAL, EOLIAN, AND LAKE DEPOSITS (HOLOCENE)—Cherty sand, silt, and clay on ridges.

Qap TERRACE AND FILL DEPOSITS (HOLOCENE AND PLEISTOCENE)—Gravel, sand, and silt; includes small areas of alluvial fans, talus, and landslide deposits.

Qc COLLUVIUM (HOLOCENE AND PLEISTOCENE)—Boulder- to clay-sized debris in talus deposits formed by landslides, steeply eroding hillsides, and steep, and subduction; includes terrace, slope wash, and alluvial fan deposits.

Qs SURFICIAL DEPOSITS (HOLOCENE AND PLEISTOCENE)—Disaggregates of surficial deposits not distinguished as alluvium on photogeologic maps.

Qty TILL (PLEISTOCENE)—Deposits of Pleistocene(?) glaciation.

Qgl TERRACE AND FILL DEPOSITS (PLEISTOCENE)—Deposits of Pleistocene(?) glaciation.

Qgc TERRACE AND FILL DEPOSITS (PLEISTOCENE)—Deposits of Bull Lake(?) glaciation and pre Bull Lake(?) glaciation.

Qgt TERRACE AND FILL DEPOSITS (PLEISTOCENE)—Deposits of Bull Lake(?) glaciation and pre Bull Lake(?) glaciation.

OTa HIGH-LEVEL ALLUVIUM (PLEISTOCENE AND PLIocene)—Gravel preserved on ridge tops, characterized by abundant bench boulders as much as 4 ft (1.2 m) in diameter. It shows the unit has been previously mapped as bench of Tertiary age.

Tb BASALT OF BROADWAY SLITE (PLEISTOCENE AND MIOCENE)—Dense black resistant alkali basalts in low flow (up to 200 ft (61 m) thick, interbedded with, and within conglomerates. Craters preserved thickness is 800 ft (244 m) on Grand Mesa. Ages determined from several localities range from 10 to 25 m.y. (Lambert and others, 1975).

Tm BASALT DICES AND FLUXES (PLEISTOCENE AND MIOCENE)—Probable facies of bench flows of Tertiary age; also includes flows.

Tm MIDDLE TERTIARY INTRUSIVE ROCKS (EOLIGOCENE)—Granodiorite and quartz monzonite stocks, dikes, sills, and pegmatite bodies, generally porphyritic, but ranging in some large bodies. Ages range from 20 to 28 m.y.

Taf ASH FLOW TUFF (EOLIGOCENE)—Dense siltic welded tuff and vitrophyre.

Tu UTAH FORMATION (Eocene)—Siltstone, sandstone, and mudstone. Maximum preserved thickness on Battlement Mesa is about 1,000 ft (305 m).

Tg GREEN RIVER FORMATION (Eocene)—Mudstone, of shale, siltstone, and sandstone.

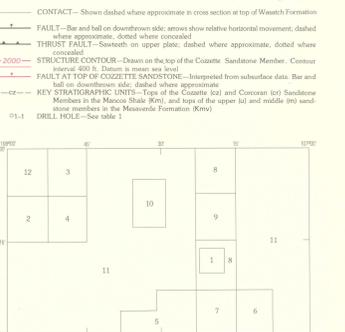
Tw WASHACHE FORMATION (Eocene and Paleocene)—Claystone, siltstone, and sandstone. Contains conglomerates and conglomeratic sandstone at base where the Otis Creek Member of the Mesaverde Formation (Upper Cretaceous) was combined with the Washatch Formation on source map (Tweiss and others, 1976).

Kmv MESAVERTS FORMATION (UPPER CRETACEOUS)—Otis Creek Member at top consists of sandstone, conglomeratic sandstone, and conglomerates, as well as some siltstone and mudstone beds. Separated from the overlying Tertiary sediments by an unconformity that is characterized by faceted conglomeratic sandstone. The base of the Otis Creek Member is gradational. The remaining Mesaverde Formation consists of sandstone, shale, and coal. Dashed lines mark the type of the upper and middle members of Dostal and Yeard (1968). The Cameo coal zone is above the Rollins; the Rollins Sandstone Member is at the base.

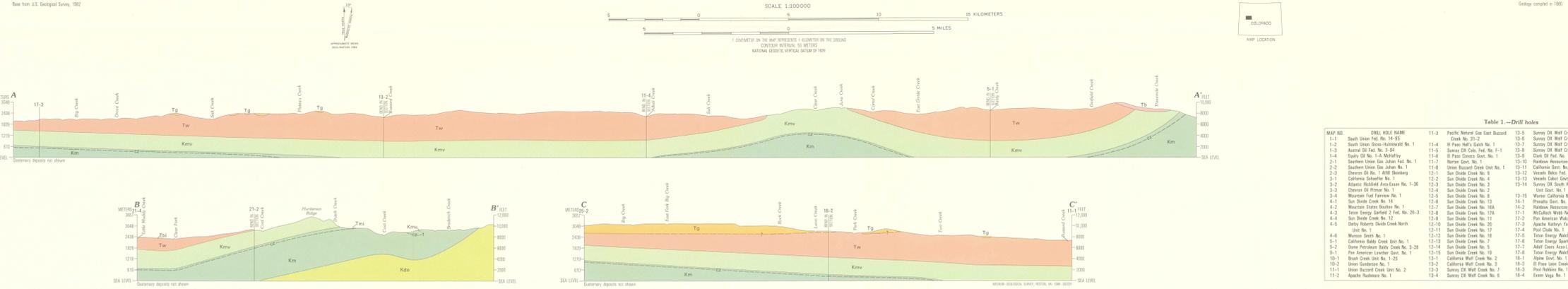
Km MANCOSIA SHALE (UPPER CRETACEOUS)—Shale and thin sandstone units. Dashed lines mark top of the Cannon and Cannon Sandstone Members of Kew (Young, 1965), which are mapped with Km. The Palisade coal zone is above the Cannon.

Kdo DAKOTA SANDSTONE (UPPER CRETACEOUS) AND OLDER ROCKS—Undivided.

Basalt work indicates that the Otis Creek Formation, previously considered Tertiary in age, is Late Cretaceous in age and separated by an unconformity from the underlying Tertiary. As a result, it has been reduced in rank to a member of the Mesaverde Formation (Johnson and May, 1965).



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GEOLOGIC MAP AND CROSS SECTIONS OF THE CARBONDALE 30' X 60' QUADRANGLE, WEST-CENTRAL COLORADO

By
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1984

Table 1.—Drill Holes

MAP NO.	DRIILL HOLE NAME	11-3	11-4	11-5	11-6	11-7	11-8	11-9	11-10	11-11	11-12	11-13	11-14	11-15	11-16	11-17	11-18	11-19	11-20	11-21	11-22	11-23	11-24	11-25	11-26	11-27	11-28	11-29	11-30	11-31
1-1	South Union Fed. No. 14-05	11-3	11-4	11-5	11-6	11-7	11-8	11-9	11-10	11-11	11-12	11-13	11-14	11-15	11-16	11-17	11-18	11-19	11-20	11-21	11-22	11-23	11-24	11-25	11-26	11-27	11-28	11-29	11-30	11-31