UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Geologic reconnaissance map of the Government Springs quadrangle, Montrose and Ouray Counties, Colorado

By

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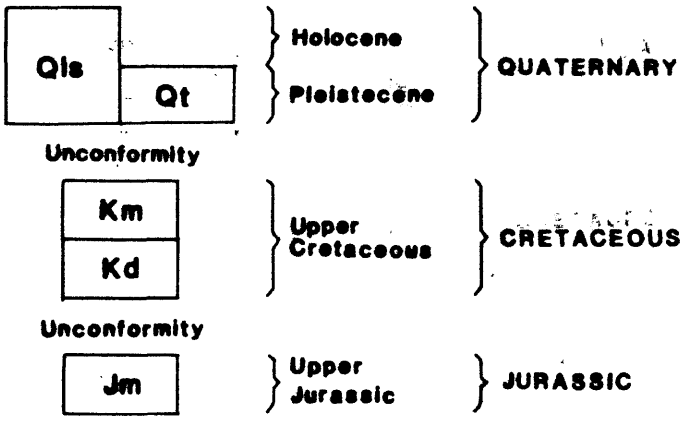
This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.

[1] Denver, Colorado

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

Qls LANDSLIDE DEPOSITS (HOLOCENE AND PLEISTOCENE)--Slumped ground, slides, and chaotic rock masses. Developed within nonresistant claystone of Morrison Formation

Qt TERRACE DEPOSITS (PLEISTOCENE)--Sand and gravel. Gravel clasts mostly waterworn volcanic rocks; the rest mostly fragments of Dakota Sandstone

Km MANCOS SHALE (CRETACEOUS--Dark-gray to brown clay shale. Minor siltstone and sandstone. Very soft and nonresistant. Only basal part present in three isolated outcrops. Maximum remaining thickness about 40 ft (12 m)

Kd DAKOTA SANDSTONE (CRETACEOUS)--Sandstone, conglomeratic sandstone, and carbonaceous shale. Commonly comprises three units (in ascending order): (1) Light-gray to brown crossbedded to massive cliff-forming sandstone, containing conglomeratic lenses and in may places a basal conglomerate; (2) a less resistant medium- to dark-gray unit of interbedded carbonaceous shale and thin bedded sandstone; (3) a light-gray to brown resistant cliff- and dip-slope-forming unit of mostly fine-grained quartzitic sandstone. Surface of most of quadrangle is a dip slope developed on this upper resistant unit. Thickness 120 to 150 ft (37 to 46 m)

Jm MORRISON FORMATION (JURASSIC)--Includes Brushy Basin Member and upper part of Salt Wash Member, not differentiated on map. Also includes discontinuous lenses of Burro Canyon Formation of Cretaceous age at top. Brushy Basin Member consists of varicolored green, red, and gray claystone and mudstone, lesser sandstone, siltstone, and lenses of conglomerate and conglomeratic sandstone. Generally soft, nonresistant, poorly exposed, and subject to slumping and landsliding. Thickness of Brushy Basin Member about 300 to 350 ft (91 to 107 m). Salt Wash Member consists mostly of light-gray to brown, fine- to medium-grained, lenticular channel sandstone, and brown, green, and red mudstone and claystone; poorly exposed Base not exposed. Maximum thickness of exposed beds not more than 250 ft (76 m). Burro Canyon Formation consists of discontinuous channel-form conglomerate beds, and varicolored, mostly green, claystone. These beds are present at various places at the top of the mapped unit. A similar distribution pattern of these rocks was observed by Bush and others (1959, p. 332) in the nearby Placerville area. Because the presumed Burro Canyon beads are lithologically similar to beds in the Morrison Formation, and lie below the disconformity at the base of the Dakota Sandstone,

they are here included with the Morrison Formation. Maximum thickness of Burro Canyon beds unknown; probaby a few tens of feet

———— CONTACT--Approximately located.

FAULT--Bar and ball on downthrown side.

—— 8000 —— STRUCTURE CONTOUR--Approximately located. Drawn on the base of the Dakota Sandstone, showing elevation in feet above mean sea level. Contour interval 200 ft(about 61 m).

REFERENCE

Bush, A.L., Bromfield, C.S., and Pierson, C.T., 1959, Areal geology of the Placerville quadrangle, San Miguel County, Colorado: U.S. Geological Survey Bulletin 1072-E, p. 299-384.