

DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS (HOLOCENE)

Qal Alluvium

Cl Colluvium

Qt Alluvial-fan deposits

Qls Landslide deposits and mudflows

Qg

Gr

Tw

Trsd

Rel

Rv

Sd

Sl

Sf

Sfu

Sf

Sfu

Ka

Kbr

KJsp

GRAVEL (HOLOCENE AND PLEISTOCENE)--Cobble-gravel to silt-size particles in lag concentrates overlying parts of the Hilliard Shale and Advaville Formation; derived predominantly from the Hans Fork Conglomerate Member of the Evansston Formation

GREEN RIVER FORMATION (EOCENE)--White-weathering marlstone, calcareous siltstone, and claystone. Present only in one small outcrop in southeastern corner of quadrangle. 200+ ft (61+ m) thick

WASATCH FORMATION (EOCENE)--Red, maroon, yellow, and gray mudstone; yellow, brown, and gray, fine- to coarse-grained sandstone. Sequence contains some stream-channel conglomerate beds containing boulders, cobbles, and pebbles of quartzite, chert, and limestone. As much as 2,000 ft (610 m) thick

EVANSTON FORMATION (PALEOCENE AND UPPER CRETACEOUS)--Gray siltstone, carbonaceous claystone, and shaly mudstone; quartzitic siltstone, gray carbonaceous sandstone, and some dark-brown concretionary ironstone. 200+ ft (61+ m) thick

Hans Fork Conglomerate Member (Upper Cretaceous)--Boulder-conglomerate beds containing small boulders, cobbles, and pebbles of well-rounded quartzite, chert, and limestone and interbedded white to brown calcareous sandstone; forms conspicuous boulder trains on topographic highs in western part of quadrangle. As much as 1,000 ft (305 m) thick

ADAVILLE FORMATION (UPPER CRETACEOUS)--Predominantly gray-brown weathering carbonaceous shale and mudstone that contains beds of yellowish-brown to reddish-brown sandstone and siltstone; contains workable coal beds as much as 30 ft (9 m) thick (Advaville 1 coal) in lower part. 2,000+ ft (610+ m) thick

Lazert Sandstone Member--Light-gray to white fine- to coarse-grained sandstone; basal part of formation. About 200-400 ft (61-122 m) thick

HILLIARD SHALE (UPPER CRETACEOUS)--Dark-gray to dark-brown marine shale, siltstone, and sandy shale; contains a few conspicuous light-gray to light-tan, fine-grained, resistant sandstone beds in upper part. About 6,000 ft (1,829 m) thick

FRONTIER FORMATION (UPPER CRETACEOUS), UNDIFFERENTIATED

Upper unit--Middle part consists of a prominent hogback of white to light-gray weathering, oyster-bearing sandstone (Oyster Ridge Sandstone Member) overlain by shale and thin beds of gray sandstone that contains the Kemmerer coal zone; underlain by a thick shale interval that contains the Willow Creek coal zone in the Kemmerer area. About 1,200 ft (366 m) thick

Lower unit--Dark-gray shale, tan siltstone and brown sandstone; sandstone beds less resistant than those in upper unit; contains the Spring Valley coal zone in lower part. About 1,000 ft (305 m) thick

ASPEN FORMATION (LOWER CRETACEOUS)--Light- to dark-gray siltstone and shale, quartzitic sandstone and porcelanite; forms prominent silver-gray hogbacks. About 900-1,000 ft (274-305 m) thick

BLAIR RIVER FORMATION (LOWER CRETACEOUS)--Black to dark-gray fissile shale and olive to tan weathering, fine-grained sandstone; contains a few thin fossiliferous limestone beds. About 500-600 ft (152-183 m) thick

GANNETT GROUP (LOWER CRETACEOUS), STUMP SANDSTONE AND PREUSS RED BEDS (UPPER JURASSIC), UNDIFFERENTIATED

Gannett Group--Upper part contains interbedded red sandy mudstone with thin beds of gray to reddish- to purplish-gray limestone; lower part contains brick-red shale and mudstone, tan to red sandstone and conglomerate


Stump Sandstone--Greenish- to brownish-gray crossbedded fine-grained sandstone and limestone
 Preuss Red Beds--Purplish-red to red silty mudstone and thin beds of red, tan, and gray
 sandstone. Total thickness about 1,200 ft (366 m)

TWIN CREEK LIMESTONE (UPPER AND MIDDLE JURASSIC)--Light-gray fine-grained limestone and shaly limestone that weathers into splinters; contains a red calcareous mudstone and light-gray limestone breccia (Gypsum Springs Member) at its base. About 800 ft (244 m) thick.

Shown in cross section only

JR NUGGET SANDSTONE (JURASSIC? AND TRIASSIC?)--Buff to pinkish-tan quartzite and calcareous quartzitic sandstone. About 700 ft (213 m) thick. Shown in cross section only

CONTACT--Approximately located

②  COAL BED--Dashed where approximately located. Thickness of coal in feet^{1/}, measured triangle; V indicates coal thickness measured by Veatch (1907). Number in circle to measured coal section

$\frac{U}{D}$ FAULT--Dashed where approximately located; dotted where concealed. U, upthrown side;

3000
-2000-
OVERBURDEN DEPTH LIMIT (in feet^{1/})
STRUCTURE CONTOURS--Dashed where control less accurate and where projected over land surface.

Drawn on top of Lazeart Sandstone in western part of quadrangle and on base of Kemmerer coal zone in central part of quadrangle. Contour interval 1,000 ft (305 m)

⊙ ABANDONED OIL AND GAS TEST HOLE
 † SYNCLINE--Showing troughline; dotted where concealed

32 STRIKE AND DIP OF BEDS

⊕ HORIZONTAL BEDS
→ 3 COMPONENT OF DIP OF BEDS

✱ COAL MINE--Inactive or a

 LINE OF MEASURED SECTION

1/To convert feet to metres, multiply by 0.3048

M(200)
R290
76-663
sheet 1
c.1

