DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN-FILE REPORT
79-1176
WARFIELD CREEK QUAD., WYO.

Base from U.S. Geological Survey, 1962

Geology mapped by J.W. M'Gonigle in 1977-78; assisted by R.M. Leckie in 1978

SCALE 1:24 000

1 ½ 0 1 MILE

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

PRELIMINARY GEOLOGIC MAP OF THE WARFIELD CREEK QUADRANGLE, LINCOLN COUNTY, SOUTHWESTERN WYOMING

By
John M'Gonigle
1979

CORRELATION OF MAP UNITS

Qal, Qsw	Qaf, Qg	Qs, Qt	Holocene and Pleistocene(?)	QUATERNARY
Twb, Twss, Twm, Tw	Tga, Tgf, Tgr		Eocene	TERTIARY
TKe			Paleocene	TERTIARY
Keh (b), Kehs, Kav, Kal			Upper Cretaceous	CRETACEOUS
Ꞧt			Lower Triassic	TRIASSIC

DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS (HOLOCENE AND PLEISTOCENE?)

Qal Alluvium

Qaf Alluvium, colluvium, and alluvial-fan deposits

Qs Slump and landslide deposits

Qsw Slope-wash deposits

Qg Gravel deposits--Predominantly of cobble gravel on terraces; derived in part from the Upper Cretaceous Hams Fork Conglomerate Member of the Evanston Formation

Qt Terrace deposits--Predominantly of alluvial materials on stream terraces

WASATCH FORMATION (EOCENE)

Twb Bullpen Member--Red, gray, and green mudstone, gray and tan fine- to coarse-grained sandstone, and some light-gray and tan laminated limestone. Thickness about 220 feet (67 meters) in northern part of quadrangle

Twss Sandstone tongue--Tan to brown medium- to coarse-grained crossbedded sandstone. Pinches out in southeastern corner of quadrangle. Maximum thickness about 80 feet (24 meters)

Twm Mudstone tongue--Brown and reddish mudstone and shale. Maximum thickness about 60 feet (18 meters)

Tw Main body--Gray, brown, red, maroon, and yellow mudstone; yellow, gray, and brown fine- to coarse-grained sandstone and conglomerate. As much as 340 feet (104 meters) thick in northern part of quadrangle

GREEN RIVER FORMATION (EOCENE)

Tga Angelo Member--Whitish-weathering calcareous shale, siltstone, and limestone; tan laminated limestone, brown algae limestone. Maximum thickness about 200 feet (62 meters) in quadrangle

Tgf Fossil Butte Member--Tan laminated limestone; marlstone, brown oil shale; gray shale and siltstone, and tan to brown fine- to coarse-grained crossbedded sandstone stringers. Thickness as much as 220 feet (67 meters)

Tgr Lower tongue--Light-gray and brownish shale, marlstone, and siltstone; minor tan to brown sandstone stringers. Pinches out toward southeastern part of quadrangle. Thickness as much as 120 feet (37 meters)

EVANSTON FORMATION (PALEOCENE AND UPPER CRETACEOUS)

TKe Main body (Paleocene and Upper Cretaceous)--Gray claystone and siltstone; some tan to reddish mudstone; carbonaceous claystone and sandstone; a few coal beds. About 260 feet (80 meters) exposed in quadrangle

Keh -b- Hams Fork Conglomerate Member (Upper Cretaceous)--Boulder-conglomerate beds containing well-rounded boulders, cobbles, and pebbles of quartzite, chert, and limestone; gray and tan sandstone; gray mudstone. b, mapped trace of boulder-conglomerate bed. Unit forms conspicuous hogbacks. Thickness as much as 900-1000 feet (275-305 meters)

Kehs Sandstone unit in southeastern part of quadrangle

Kav ADAVILLE FORMATION (UPPER CRETACEOUS)--Nonmarine gray, brown and tan shales and siltstones; brown and gray, medium- to fine-grained, locally bioturbated, platy to crossbedded sandstones; carbonaceous shales; contains numerous thin to thick (>40 feet) coal beds. Around 2000 feet (620 meters) thick

Kal Lazeart Sandstone Member--Very light gray, yellow-brown, and tan fine- to medium-grained thick cliff-forming sandstone units; brownish-gray shale and coal beds in slopes between sandstone cliffs. Sandstone units show bedding and marine fossils indicative of progradational beach sequences. Around 500-600 feet (150-183 meters) thick in exposures directly east of quadrangle

Ꞧt THAYNES LIMESTONE (LOWER TRIASSIC)--Gray sandy limestone and siltstone, and red silty shale. Only a small patch is exposed in the Warfield Creek quadrangle; best nearby exposures of unit just south of quadrangle along north side of Little Muddy Creek. These and associated rocks thrust over Cretaceous rocks along the Absaroka thrust fault

CONTACT--Dashed where approximately located, dotted where concealed. All Quaternary contacts approximately located or gradational

COAL BED--Dashed where approximately located, dotted where concealed, queried where uncertain; arrow shown where bed pinches out. Thickness of coal in feet, measured at triangle

CARBONACEOUS SHALE

SANDSTONE BED

FAULT--Dashed where approximately located, dotted where concealed. Bar and ball on apparently downthrown side

STRIKE AND DIP OF BEDS

ANTICLINE--Arrow shows direction of plunge

SYNCLINE--Arrow shows direction of plunge

BOUNDARY OF STRIP MINE

CLINKER--Rock fused and baked by the heat produced by coal burning underground and at the surface