



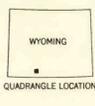
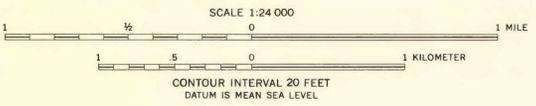
CORRELATION OF MAP UNITS

Qt ₁	Holocene and (or) Pleistocene	QUATERNARY
Qt ₂		
Qt ₃		
Qt ₄		
UNCONFORMITY		
FSA	Paleocene	TERTIARY
Tfu		
FSB		
UNCONFORMITY		
Kle	Upper Cretaceous	CRETACEOUS
Kal		
Kec		
Ker		
Ket		
Kram		
Krsu		
Krsm		
Krsk		
Krsb		
Krsc		
Kbl		

- DESCRIPTION OF MAP UNITS**
- Qt₁** ALLUVIUM (HOLOCENE AND/OR PLEISTOCENE)—Unconsolidated gravel, silt, and clay. Thickness 0-85 ft (0-26 m)
 - Qt₂** Terrace gravel—On Salt Wells Creek 0 to 15 ft (0-5 m) above stream level
 - Qt₃** Terrace gravel—On Salt Wells Creek 15 to 35 ft (5-11 m) above stream level
 - Qt₄** TERRACE GRAVEL (HOLOCENE AND/OR PLEISTOCENE)—Unconsolidated gravel capping terraces. Thickness 0-10 ft (0-3 m)
 - Qt₅** COLLUVIUM (HOLOCENE AND/OR PLEISTOCENE)—Talus and slopewash deposits
 - FSA** FORT UNION FORMATION (PALEOCENE)—Gray shale and interbedded variegated mudstone, gray siltstone, gray very fine grained to coarse-grained sandstone, gray and brown carbonaceous shale, and coal. Intraformational unconformities are indicated by fossil soils, *FSA* and *FSB*. Lower 1200-1600 ft (370-490 m) exposed in the Mud Springs Ranch quadrangle
 - FSB**
 - Kle** LEWIS SHALE (UPPER CRETACEOUS)—Dark-gray soft shale. Upper 1-15 ft (0.3-5 m) usually light gray limy siltstone composing a fossil soil marking the Tertiary-Cretaceous unconformity. Thickness 200-350 ft (60-110 m)
 - Kal** ALMOND FORMATION (UPPER CRETACEOUS)—Gray very fine grained sandstone and interbedded gray shale, gray siltstone, gray, black, and brown carbonaceous shale, and coal. Thickness 750-825 ft (230-250 m)
 - Kec** ERICSON FORMATION (UPPER CRETACEOUS):
Canyon Creek zone of Smith (1961)—Gray very fine to very coarse grained salt and pepper subangular crossbedded sandstone and sparse thin gray siltstone and gray shale. Thickness 325-375 ft (100-115 m)
Rusty zone of Smith (1961)—Gray very fine grained to medium grained partly hematitic siltstone and gray occasionally carbonaceous shale. The upper and lower contacts are poorly defined; it appears to intertongue in places with the Canyon Creek zone and Trail zone. Thickness 225-250 ft (70-75 m)
 - Ker** Trail zone of Smith (1961)—Gray very fine grained to coarse-grained salt and pepper subangular partly hematitic crossbedded sandstone. Thickness 250-375 ft (75-115 m)
 - Ket** ROCK SPRINGS FORMATION (UPPER CRETACEOUS)—Dark-gray shale and interbedded gray very fine grained sandstone and gray siltstone. Thickness 1500-1625 ft (457-495 m)
 - Krsu** Upper part of Rock Springs Formation—Above the base of the Brooks Sandstone Tongue of Smith (1961)
 - Krsm** McCourt Sandstone Tongue of Smith (1961)
 - Krsk** Brooks Sandstone Tongue of Smith (1961)
 - Krsb** Black Butte Shale Tongue of Hale (1950)
 - Krsc** Chimney Rock Sandstone Tongue of Hale (1950)
 - Other unmapped tongues of shale in the composite stratigraphic section.
 - Kbl** BLAIR FORMATION (UPPER CRETACEOUS)—Gray soft shale and sparse thin interbedded gray very fine grained calcareous sandstone and gray calcareous siltstone. Thickness 1350-1550 ft (410-470 m) (subsurface). The upper 1000 ft (310 m) are exposed in the Mud Springs Ranch quadrangle

- CONTACT—Dashed where approximately located
- STRATIGRAPHIC MARKER BED—Consists of fossil soil horizons *FSA* and *FSB*, and unlabeled sandstone beds in the Fort Union Formation, sandstones *AA*, *A*, *B*, *D*, *E*, *F*, and *G* in the Almond Formation, and unlabeled sandstone beds in the Rock Springs and Blair Formations
- FAULT—Showing direction and amount of dip, and displacement, in feet. U, upthrown side; D, downthrown side
- STRIKE AND DIP OF BEDS
- COAL BED—Showing name of bed and thickness, in feet, measured at triangle. Dashed where approximately located. One foot equals 0.3048 meter
- CLINKERED COAL BED
- Skelly Oil Co. Harris 1 TD 5249
- DRY HOLE—Showing operator and lease names, and total depth (TD) in feet
- VERTEBRATE FOSSIL LOCALITY
- MESOZOIC INVERTEBRATE FOSSIL LOCALITY—Showing USGS Denver catalog number
- LINE OF MEASURED STRATIGRAPHIC SECTION—Showing field reference number
- LINE OF CROSS SECTION—Shown in figure 4

Base from U.S. Geological Survey, 1968
10,000-foot grid based on Wyoming coordinate system, west central zone
1000-meter Universal Transverse Mercator grid ticks, zone 12, shown in blue



Geology mapped by Henry W. Roehrer, 1975, assisted by Walter J. Mocker

GEOLOGIC MAP OF THE MUD SPRINGS RANCH QUADRANGLE, SWEETWATER COUNTY, WYOMING