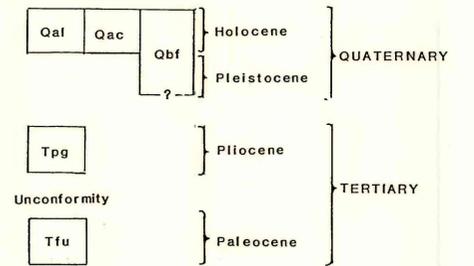


Base from U. S. Geological Survey

Geology mapped in 1980 and 1981



CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

- Qal Alluvium (Holocene)**—Light-brown and gray, well-stratified and well-sorted clay, silt, sand, and gravel. As much as 6 m (20 ft) thick under the flood plain of Upper Sevenmile Creek to less than a few meters under flood plains of smaller streams. Unit is limited to areas characterized by meander or braided patterns on aerial photographs. Surface of unit may be subject to occasional flooding
- Qac Alluvium and colluvium (Holocene)**—Light-brown and gray, poorly sorted and well-stratified clay, silt, sand, and gravel deposited by slope wash gravity. As much as 10 m (33 ft) thick, but generally less than 5 m (16 ft). The color and texture of the colluvium reflect the parent material upslope. May interfinger with alluvium; includes alluvial fans and much windblown clay, silt, and sand. Soil profiles range from well-developed to poorly developed
- Qbf Baked and fused bedrock (clinker) (Holocene to Pleistocene)**—Red to orange, baked shale, sandstone and siltstone of the Fort Union Formation that was heat-metamorphosed by combustion of lignite. Hard, dense, metamorphosed sediments are known as porcellanite; locally, sediments fused and melted to form black, vesicular, glassy, scoriaceous buchite, which forms linings of chimneys and veins in porcellanite. As much as 8 m (26 ft) thick, but generally less than 3 m (10 ft)
- Tpg Sand and gravel, undivided (Pliocene)**—Light-brown to light-gray, well-stratified and well-sorted sand and gravel. Thickness is as much as 18 m (60 ft), but generally averages 6 m (20 ft). Unit generally limited to altitudes between 878 m (2,880 ft) and 792 m (2,600 ft). May contain some Pleistocene sand and gravel
- Tfu Tongue River Member (Collier and Knechtel, 1939) of Fort Union Formation (Paleocene)**—Yellowish- and light-brown shale and sandstone containing numerous lignite beds. Estimated thickness remaining in this quadrangle is less than 100 m (330 ft)

- W Water**
- Contact**—Dashed where approximately located
- Strike and dip**—In degrees
- Lineament**—Possibly indicates location of a fault

REFERENCE

Collier, A.J., and Knechtel, M.N., 1939, The coal resources of McCone County, Montana: U.S. Geological Survey Bulletin 905, 80 p.

JOHNSON COULEE EAST 88-610	BROCKWAY NE 88-631	YOUNGQUIST MINE 88-627	CIRCLE 88-630	WOODWORTH HILL 88-626	OLSON COULEE NORTH 88-620	JOHNSON RESERVOIR NW 88-615	JOHNSON RESERVOIR NE 88-611
BEAUTY CREEK 88-626	BROCKWAY SW 88-623	CIRCLE 88-629	QUICK RESERVOIR 88-618	MOUNT ANTELOPE 88-616	OLSON COULEE SOUTH 88-621	DEER CREEK CHURCH 88-628	JOHNSON RESERVOIR 88-609
BERRY SCHOOL 88-632	WATKINS NORTH 88-621	SHEEP MOUNTAIN 88-622	BEARHACK CREEK 88-634	DIAMOND SUTTE 88-607	UNION SCHOOL 88-617	LINSBAY 88-614	WOODROW 88-625
HEITZ SCHOOL 88-608	WATKINS SE 88-624	SHEEP MTH 88-629	BECKER DAM 88-633	NORTH COULEE 88-619	DIAMOND SUTTE 88-636	LINSBAY SW 88-615	UPPER CRACKER BOX SCHOOL 88-612

INDEX TO QUADRANGLES IN THE CIRCLE 30' x 60' QUADRANGLE. MAPPED QUADRANGLE SHOWN BY STRIPES; NUMBERS ARE OPEN-FILE NUMBERS

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards or with the North American stratigraphic code. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

GEOLOGIC MAP OF THE WOODROW QUADRANGLE, DAWSON COUNTY, MONTANA

By

R.B. Colton, J.P. McGraw, and S.L. Durst