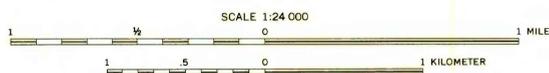


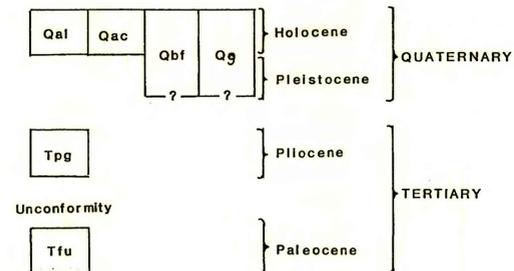


Base from U. S. Geological Survey

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 Corral Creek to less than a few meters under flood plains of tributaries. Unit 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 gravity and slope wash. As much as 10 m (33 ft) thick, but generally less than 5 m (16 ft). Color and texture of colluvium reflect 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 rock called buchite, which forms linings of chimneys and veins in porcellanite. As much as 6 m (20 ft) thick, but generally less than 3 m (10 ft)
- Qg Sand and gravel, undivided (Holocene to Pleistocene)**—Light-brown to light-gray, well-stratified to poorly stratified, and well-sorted to poorly sorted sand and gravel. Thickness as much as 10 m (33 ft), but generally less than 5 m (16 ft). Unit generally limited to altitudes below 762 m (2,500 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 10 m (33 ft), but generally less than 3 m (10 ft). Unit generally limited to altitudes between 965 m (3,100 ft) and 762 m (2,500 ft). May contain some Pleistocene sand and gravel
- Tfu Tongue River Member (Collier and Knechtel, 1939) of Fort Union Formation (Paleocene)**—Yellowish- or light-brown shale and sandstone containing numerous lignite beds. Estimated thickness more than 250 m (820 ft)

- w Water
- Contact—Dashed where approximately located
- Channel—Ice-marginal meltwater channel

REFERENCES

- Collier, A.J., and Knechtel, M.N., 1939, The coal resources of McCone County, Montana: U.S. Geological Survey Bulletin 905, 80 p.
- Parker, F.S., 1936, The Richey-Lambert coal field, Richland and Dawson Counties, Montana: U.S. Geological Survey Bulletin 847-C, 174 p.

JOHNSON COULEE EAST 88-610	BROOKWAY NE 88-631	YOUNGQUIST MINE 88-627	CIRCLE 88-630	WOODWORTH HILL 88-626	OLSON COULEE NORTH 88-620	JOHNSON RESERVOIR NW 88-613	JOHNSON RESERVOIR NE 88-611
BEAUTY CREEK 88-636	BROOKWAY 88-623	CIRCLE SW 88-629	QUICK RESERVOIR 88-616	MOUNT ANTelope 88-610	OLSON COULEE SOUTH 88-621	DEER CREEK CHURCH 88-628	JOHNSON RESERVOIR 88-609
BERRY SCHOOL 88-632	WATKINS 88-621	BIG SHEEP MOUNTAIN NW 88-622	BEARHACK CREEK 88-634	DIAMOND BUTTE NW 88-607	UNION SCHOOL 88-617	LINDSEY 88-614	WOODROW 88-625
HEITZ SCHOOL 88-608	WATKINS SE 88-624	BIG SHEEP Mtn 88-626	BECKER DAM 88-633	NORTH COULEE 88-619	DIAMOND BUTTE 88-635	LINDSEY 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

GEOLOGIC MAP OF THE OLSON COULEE NORTH
QUADRANGLE, DAWSON COUNTY, MONTANA

By

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

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.