U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Prepared in cooperation with the
MONTANA BUREAU OF MINES AND GEOLOGY

OPEN-FILE REPORT 88-622

BASE BY U. S. GEOLOGICAL SURVEY

Geology mapped in 1980 and 1981

SCALE 1:24 000

1 ½ 0 1 MILE

1 .5 0 1 KILOMETER

CORRELATION OF MAP UNITS

Qal, Qac, Qbf	Holocene	QUATERNARY
	Pleistocene (?)	
Tpg	Pliocene	TERTIARY
Unconformity		
Tfu	Paleocene	

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 (16 ft) thick under the flood plains of Pasture and Tusler Creeks to less than 3 m (10 ft) under flood plains and 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 poorly 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). 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 to hard, dense porcellanite and, locally, black, vesicular, glassy, scoriaceous buchite, which forms linings of chimneys and veins in porcellanite. Clinker is as much as 6 m (20 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 to poorly sorted sand and gravel. Thickness as much as 10 m (33 ft), but generally less than 3 m (10 ft). Unit generally limited to altitudes between 945 m (3,080 ft) and 762 m (2,440 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 and gray shale and sandstone containing numerous lignite beds. Estimated thickness of unit more than 145 m (476 ft)

w **Water**

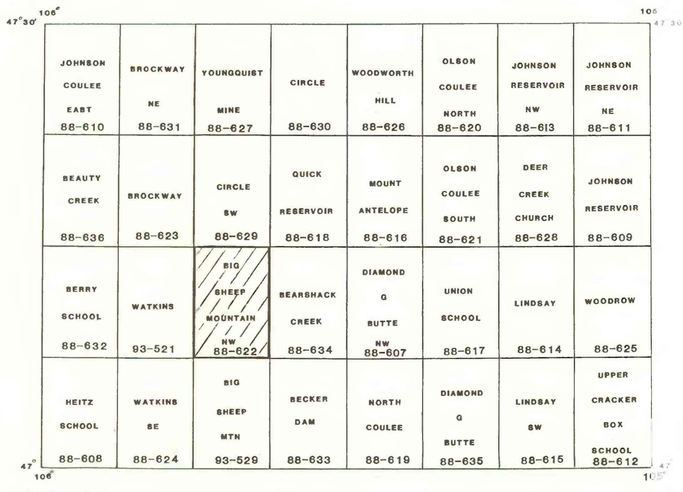
—— **Contact**--Dashed where approximately located

Abandoned coal mine

Gravel pit

REFERENCE

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



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

GEOLOGIC MAP OF THE BIG SHEEP MOUNTAIN NW QUADRANGLE, McCONE AND PRAIRIE COUNTIES, MONTANA

By

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1994