

Preliminary Geologic Map of the Plentywood 30' x 60'
Quadrangle, Northeast Montana

Robert N. Bergantino

and

Edith M. Wilde

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PLENTYWOOD 30' x 60' QUADRANGLE

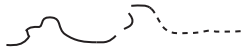
DESCRIPTION AND AGE OF MAP UNITS

Symbol	Age	Description
Qal	Holocene	Alluvium; deposits of gravel, sand, silt or clay on flood plains
Qgi	Pleistocene	Glacial ice-contact deposits; kames, kame terraces, eskers
Qg	Pleistocene	Glacial drift; generally till but may include glacial lake deposits and outwash deposits; thickness as much as 50 meters (150 feet) near the axis of the preglacial valley of the Missouri River; formation shown principally in the area east of the last major ice advance.
Qac	Quaternary	Alluvium-colluvium; includes deposits in alluvial fans, on alluvial terraces and in glacial outwash channels
Tf	Miocene-Pliocene	Flaxville Formation; thickness up to about 30 meters (100 feet), generally less than 10 meters (30 feet); probably includes sands and gravels of Pleistocene age
Tfsb	Paleocene	Fort Union Formation, Sentinel Butte Member The contact between the Sentinel Butte Member and the underlying Tongue River Member was derived from test wells drilled in Divide and Williams Counties, North Dakota (see Hanson, 1967). The contact is shown as approximate.
Tftr	Paleocene	Fort Union Formation, Tongue River Member The Tongue River Member has been extensively evaluated for coal resources especially on the Fort Peck Indian Reservation, consequently its contact with the Lebo Member is better delimited than that between the Lebo and Tullock members. Nevertheless, the Tongue River-Lebo contact is shown as approximate. The Tongue River Member is about 250 meters (800 feet) thick.
Tfld	Paleocene	Fort Union Formation, Ludlow Member The approximate contact between the Ludlow Member and the overlying Tongue River Member was derived from test wells completed by the North Dakota Geological Survey (see Hanson, 1967).
Tfle	Paleocene	Fort Union Formation, Lebo Member In 1939, Collier and Knechtel mapped the Tullock and Lebo members in the McCone County portion of the Wolf Point 30' x 60' quadrangle, about 35 miles southwest of the southwest corner of the Plentywood 30' x 60' quadrangle. These members have not been mapped in this 30' x 60' quadrangle. Their contact on this map was derived from a few measurements of their thickness and from structure contours on the top of the Bearpaw Shale and base of the Tongue River Member. The contact between these members is shown as approximate. The Lebo Member is about 100 meters (300 feet) thick.
Tft	Paleocene	Fort Union Formation, Tullock Member For contact with the Lebo Member, see Lebo. The Tullock Member is about 60 meters (200 feet) thick.
W		Water body; includes reservoirs and rivers. NOTE: in the eastern area of the map, most of the numerous small water bodies in the Qg unit are not labeled.

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PLENTYWOOD 30' x 60' QUADRANGLE

MAP SYMBOLS



Contact; dashed where approximate, dotted where concealed



Approximate axis of latest pre-diversion (pre-glacial) Missouri River



Significant break between two levels of alluvium-colluvium

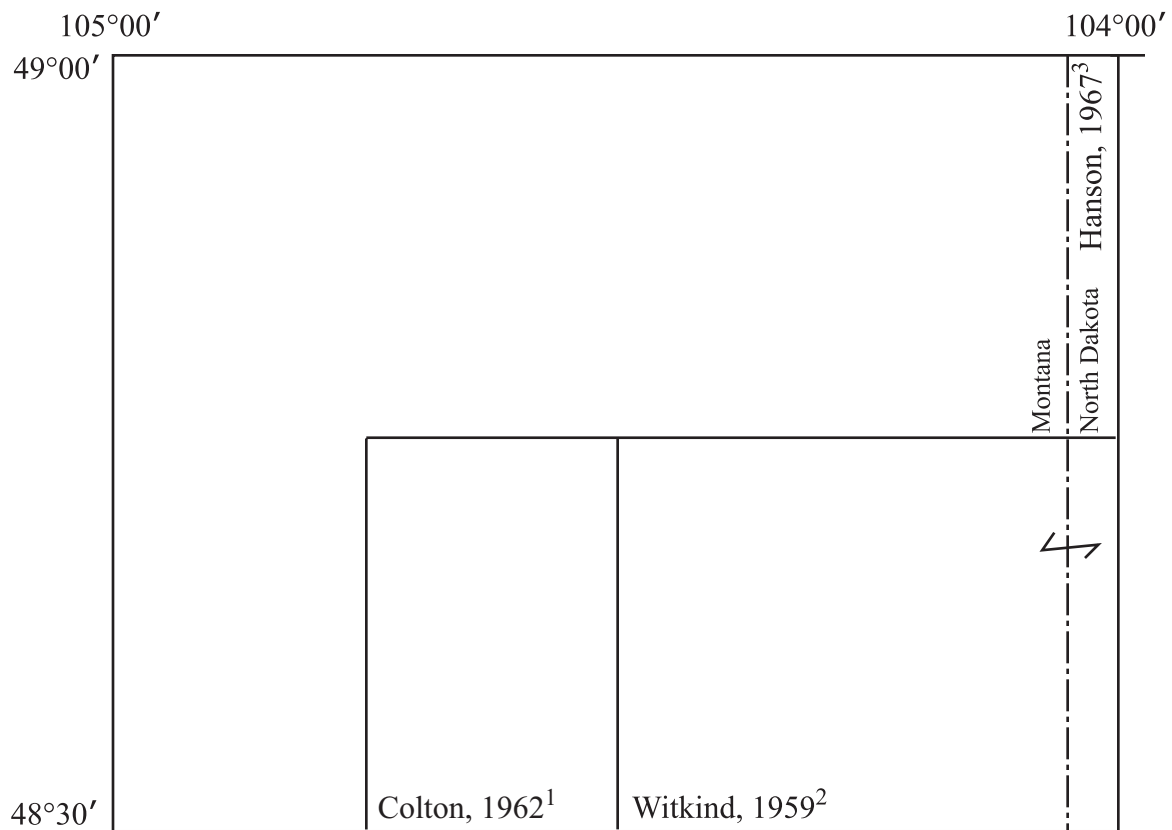
(Tf)

Geologic symbol of inferred buried formation

SOURCES OF GEOLOGIC MAP DATA

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