

Montana Bureau of Mines and Geology
Open File No. 571

Geologic Map of the Choteau
30' x 60' Quadrangle, North Central Montana

Mapped and compiled by
Richard B. Berg

2008

To view a full scale version of this map, [click here](#).

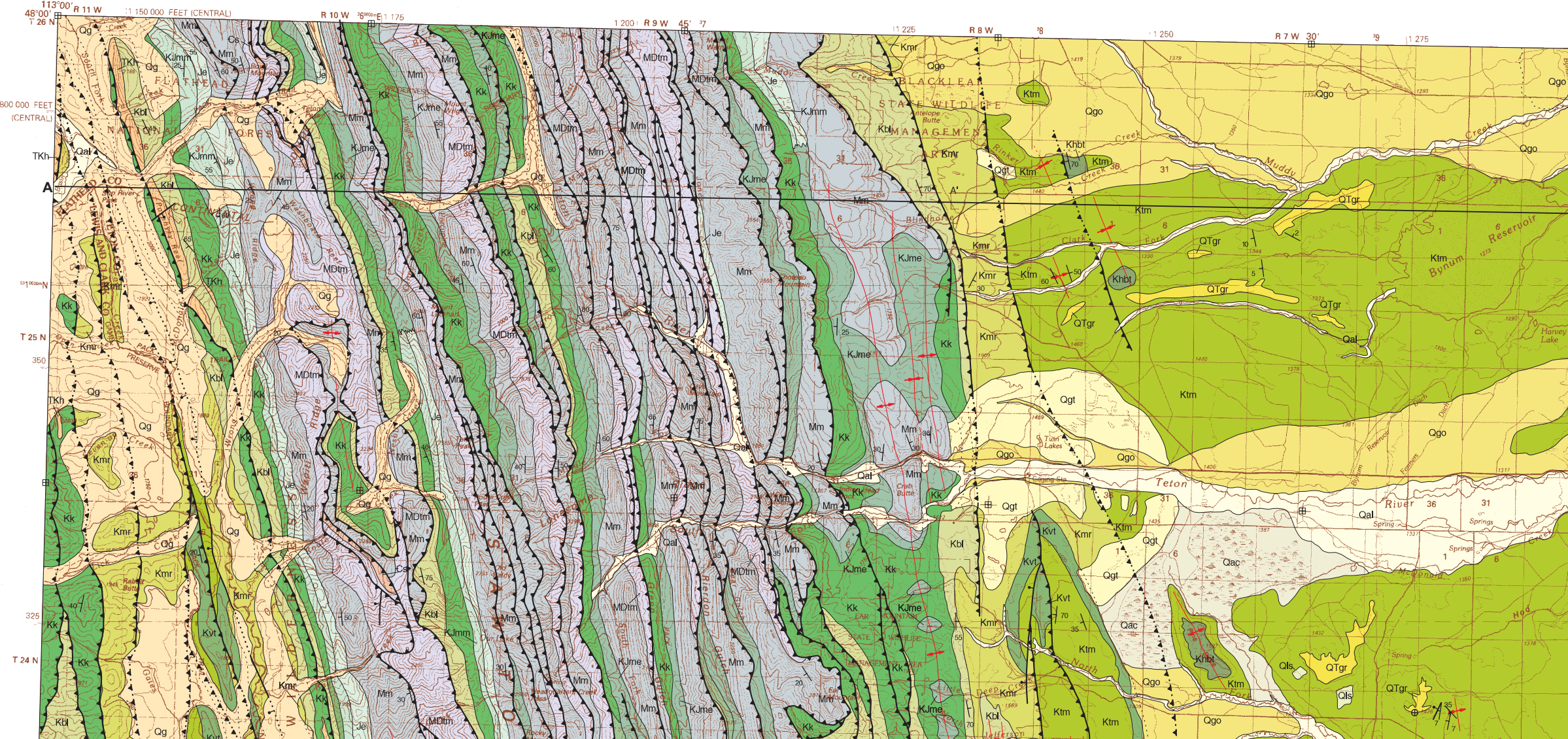
For the text files with the map information, [click here](#).

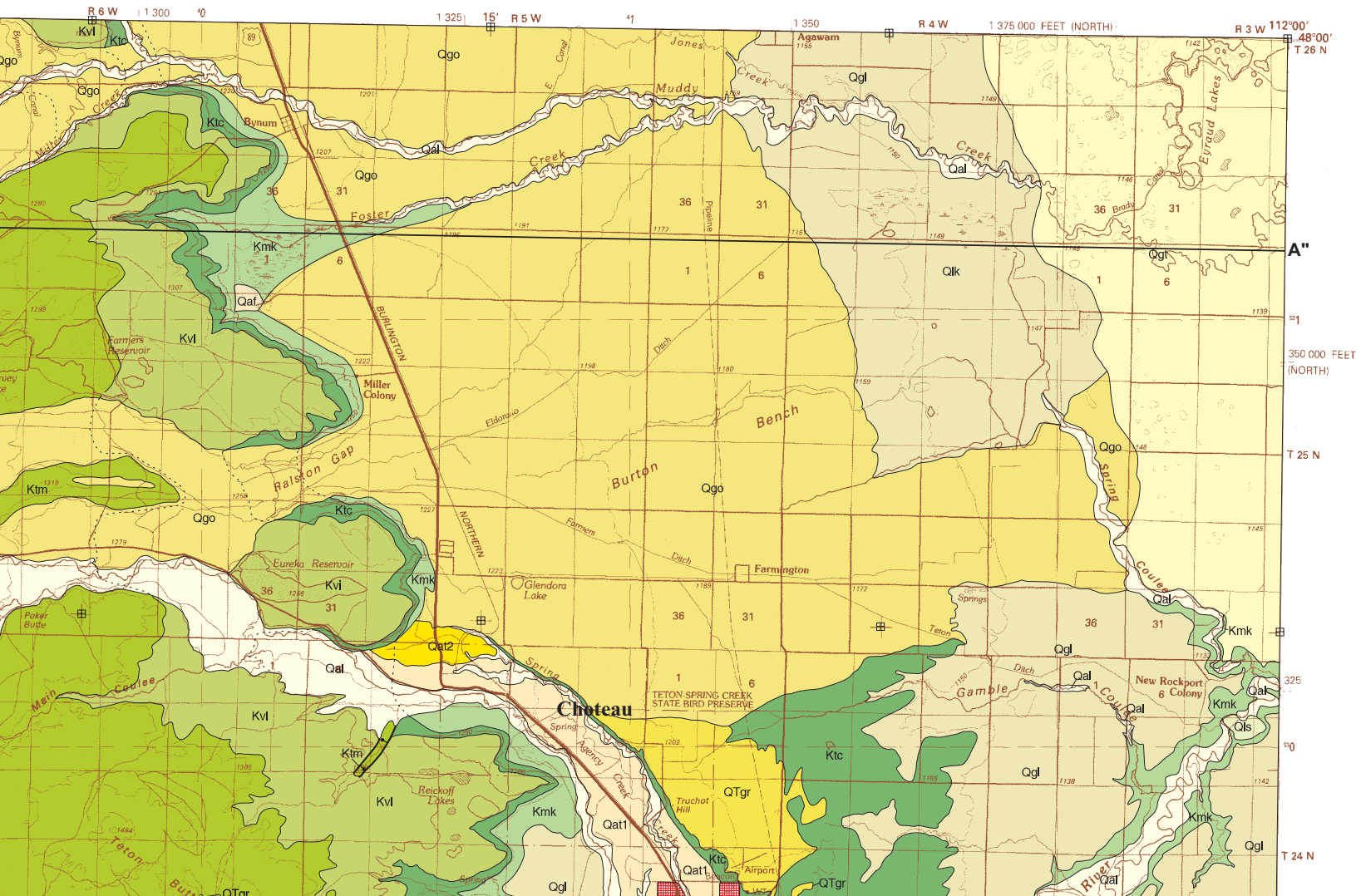
Note— This map was originally published at a scale of 1;100,000 but the page sizes have been modified to fit the average printer capabilities (8½ x 14; legal size paper). There is a an eighth inch overlap on these pages. A full sized colored print of this map can be ordered from the **MBMG Publication Sales Office, 1300 West Park Street, Butte, MT, 59701-8997**.

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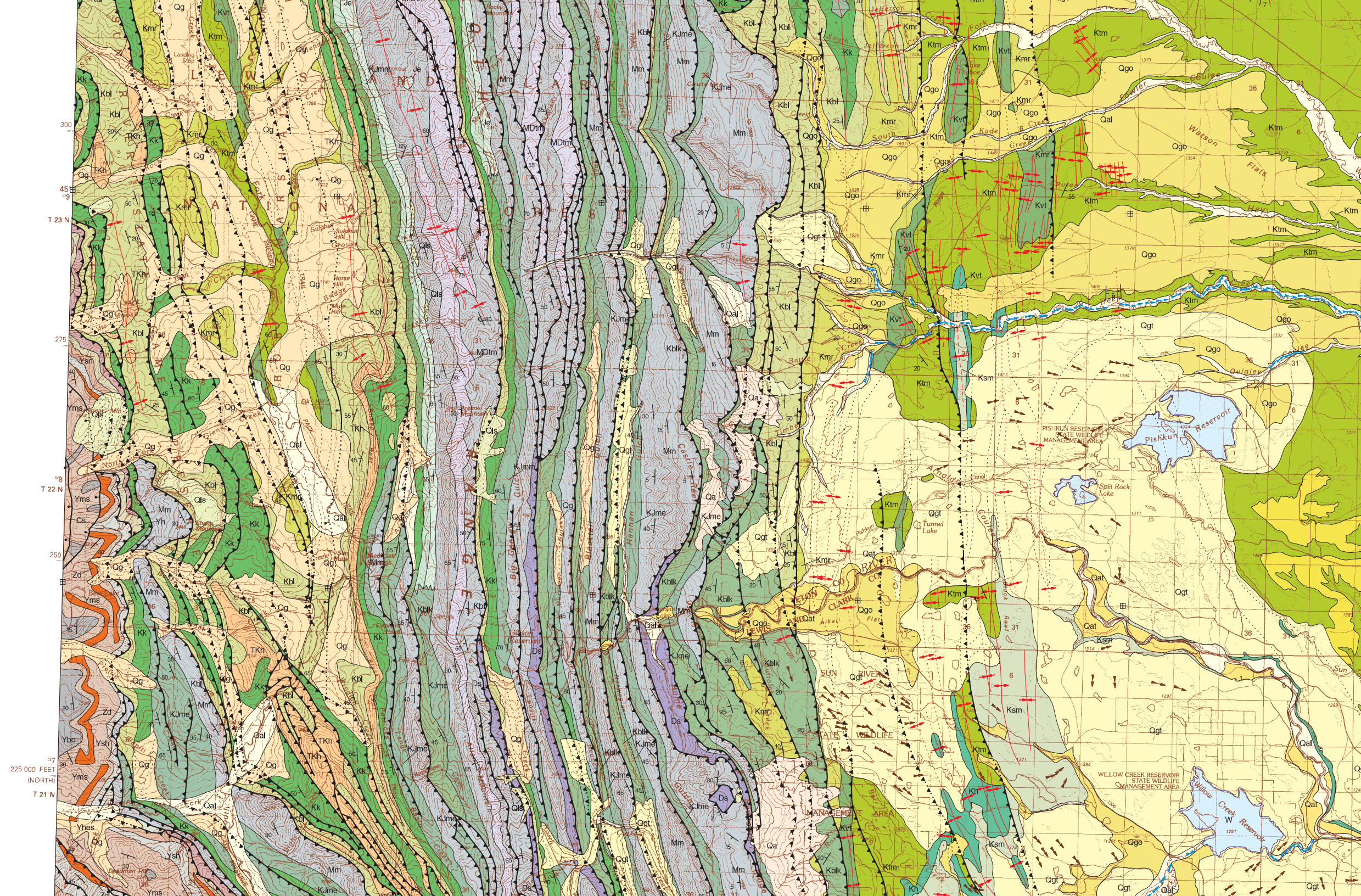
Open File MBMG 571, Plate 1 of 1
Geologic Map of the Choteau 30'x60' Quadrangle

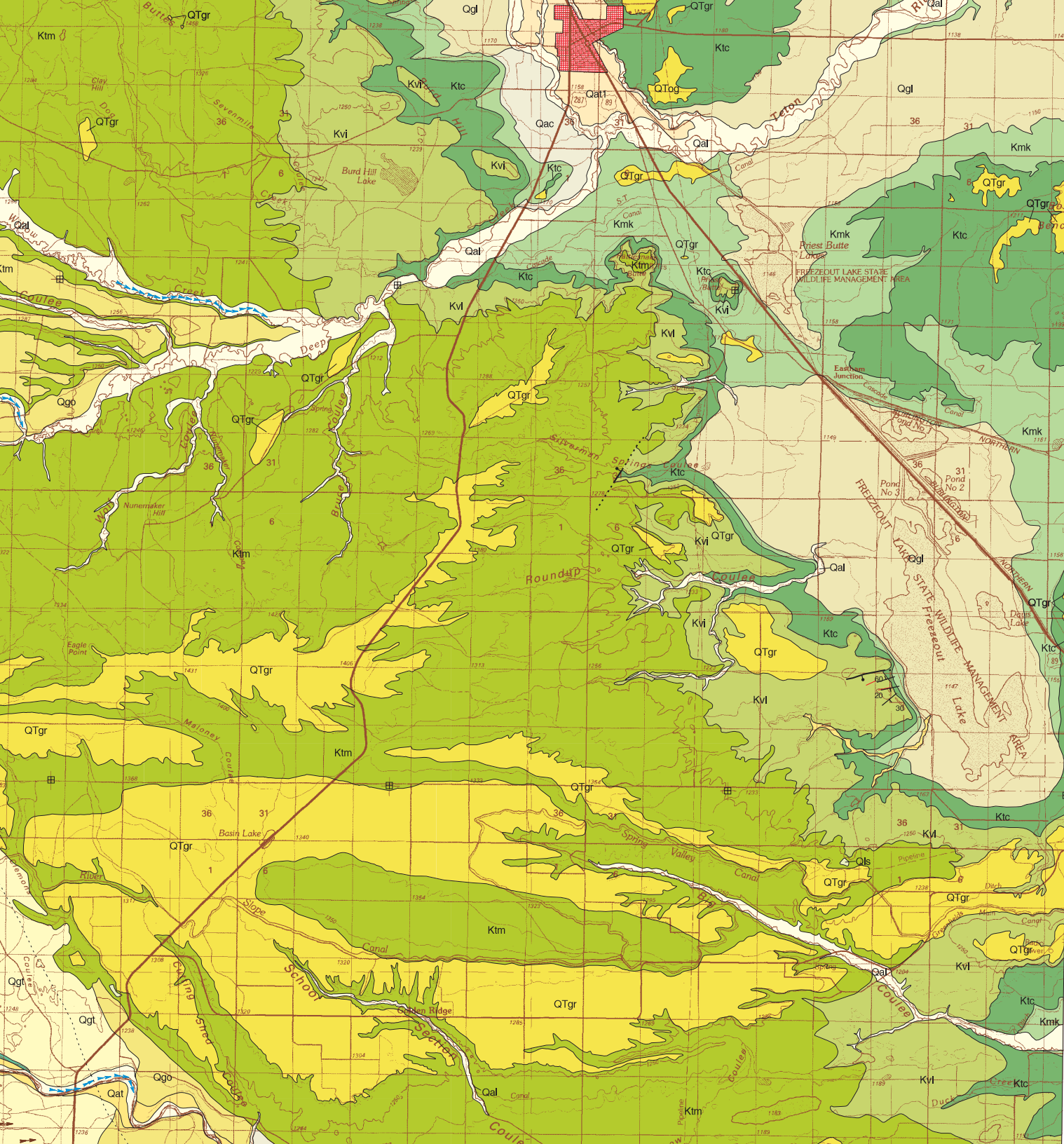




MAP UNITS

Qal	Alluvium of modern channels and flood plains
Qac	Alluvium and colluvium, undivided
Qa	Avalanche deposit
Qaf	Alluvial fan deposit
Qls	Landslide deposit
Qat	Alluvium of alluvial terrace
Qat1	Alluvium of youngest alluvial terrace
Qat2	Alluvium of second youngest alluvial terrace
Qgl	Glacial lake deposit
Qgo	Glacial outwash deposit
Qg	Glacial deposit, undivided
Qgt	Glacial till
QTgr	Gravel
TKh	Hypabyssal intrusive or flows
Ksm	St. Mary River Formation
Khbt	Horsethief Formation and Bearpaw-Horsethief transition unit
Kh	Horsethief Formation
Ktm	Two Medicine Formation
Kvi	Virgelle Formation
Kvt	Virgelle and Telegraph Creek Formations, undivided
Ktc	Telegraph Creek Formation
Kmr	Marias River Formation
Kmk	Kevin Member of Marias River Formation
Kbl	Blackleaf Formation
Kblk	Blackleaf and Kootenai Formations, undivided
Kk	Kootenai Formation



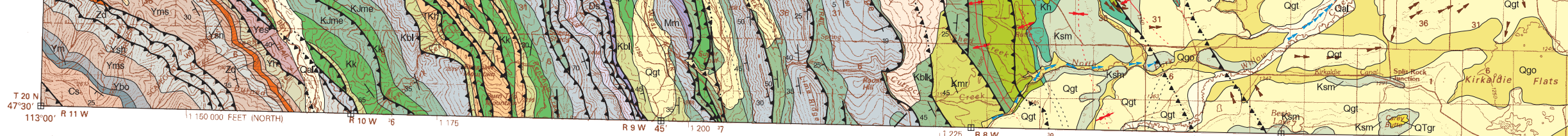


- Kk Kootenai Formation
- KJme Mount Pablo Formation, Morrison Formation, and Ellis Group, undivided
- KJmm Mount Pablo Formation and Morrison Formation, undivided
- Je Ellis Group, undivided
- Mm Madison Group, undivided
- MDtm Three Forks Formation, Jefferson Dolomite and Maywood Formation
- Ds Sedimentary rocks, undivided
- Cs Sedimentary rocks, undivided
- Zd Diorite sills and dikes, undivided
- Ym McNamara Formation
- Ybo Bonner Formation
- Yms Mount Shields Formation
- Ysh Shepard Formation
- Ysn Snowslip Formation
- Yh Helena Formation
- Yhes Helena, Empire, and Spokane Formations, undivided
- Yes Empire and Spokane Formations, undivided
- W Water
- Chateau Chateau

For a more detailed description of the map units and symbols, please refer to the text accompanying this map.

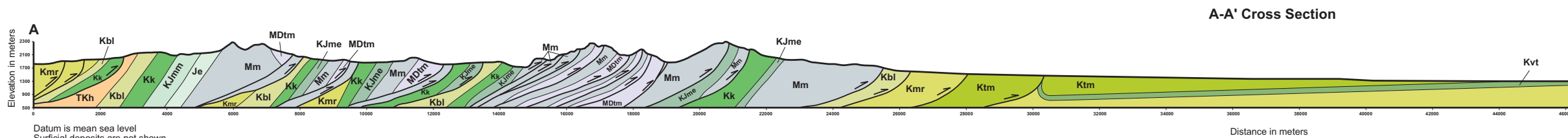
MAP SYMBOLS

- Contact** – Approximately located. Dotted where concealed beneath glacial deposits or alluvium.
- Normal Fault** – Bar and ball on downthrown side.
- Thrust Fault** – Sawteeth on upper plate. Dotted where concealed.
- Anticline** – Trace of axial plane. Dotted where trace is concealed.
- Syncline** – Trace of axial plane. Dotted where trace is concealed.
- Strike and dip of inclined beds**
- Horizontal beds**



Base from U.S. Geological Survey
Choteau 30' x 60' topographic quadrangle
Map date: 1984
Projection: UTM zone 12; 1927 NAD

UTM Grid Declination 1°07' West
1980 Magnetic North Declination 17.5° East



- Cross Section Units**
- TKh Hypabyssal Intrusive or flows
 - Ktm Two Medicine Formation
 - Kvt Virgelle and Telegraph Creek Formations, undivided
 - Kmr Marias River Formation
 - Kbl Blackleaf Formation
 - Kk Kootenai Formation
 - KJme Mount Pablo Formation, Morrison Formation, and Ellis Group, undivided
 - KJmm Mount Pablo Formation, and Morrison Formation, undivided
 - Je Ellis Group, undivided
 - Mm Madison Group, undivided
 - MDtm Three Forks Formation, Jefferson Dolomite and Maywood Formation

7.5' quadrangle index

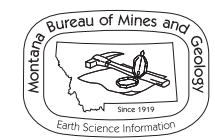
113°00'00"	52°30'	45'	37°30'	30'	22°30'	15'	7°30'	112°00'00"	48°00'00"
Porphyry Reef	Mount Wright	Cave Mtn	Twin Lakes	Bynum Reservoir	Bynum	Agawam South	Eyraud Lakes		
Gates Park	Our Lakes	Ear Mtn	Lake Theboe	Watson Flats	Teton Buttes	Choteau	Choteau SE		
Glenn Creek	Arsenic Mountain	Castle Reef	Split Rock Lake	Pishkun Reservoir	Nunemaker Hill	Sevenmile Hill	Freezeout Lake		
Pretty Prairie	Patricks Basin	Sawtooth Ridge	Barr Creek	Split Rock Junction	Gilman	Golden Ridge	Lowry		
113°00'00"	52°30'	45'	37°30'	30'	22°30'	15'	7°30'	112°00'00"	48°00'00"



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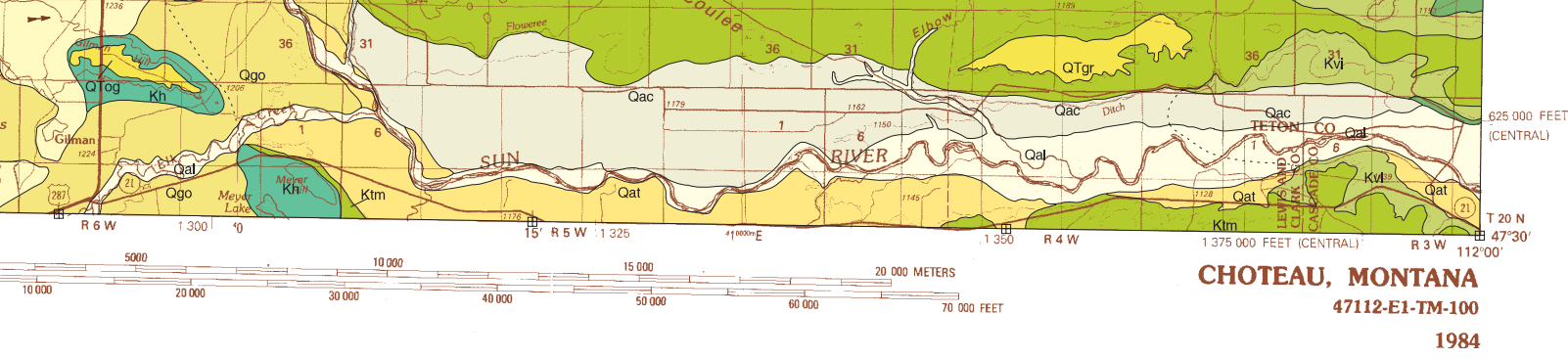
2008



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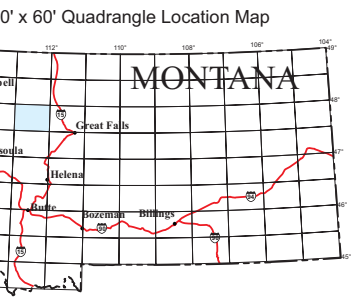
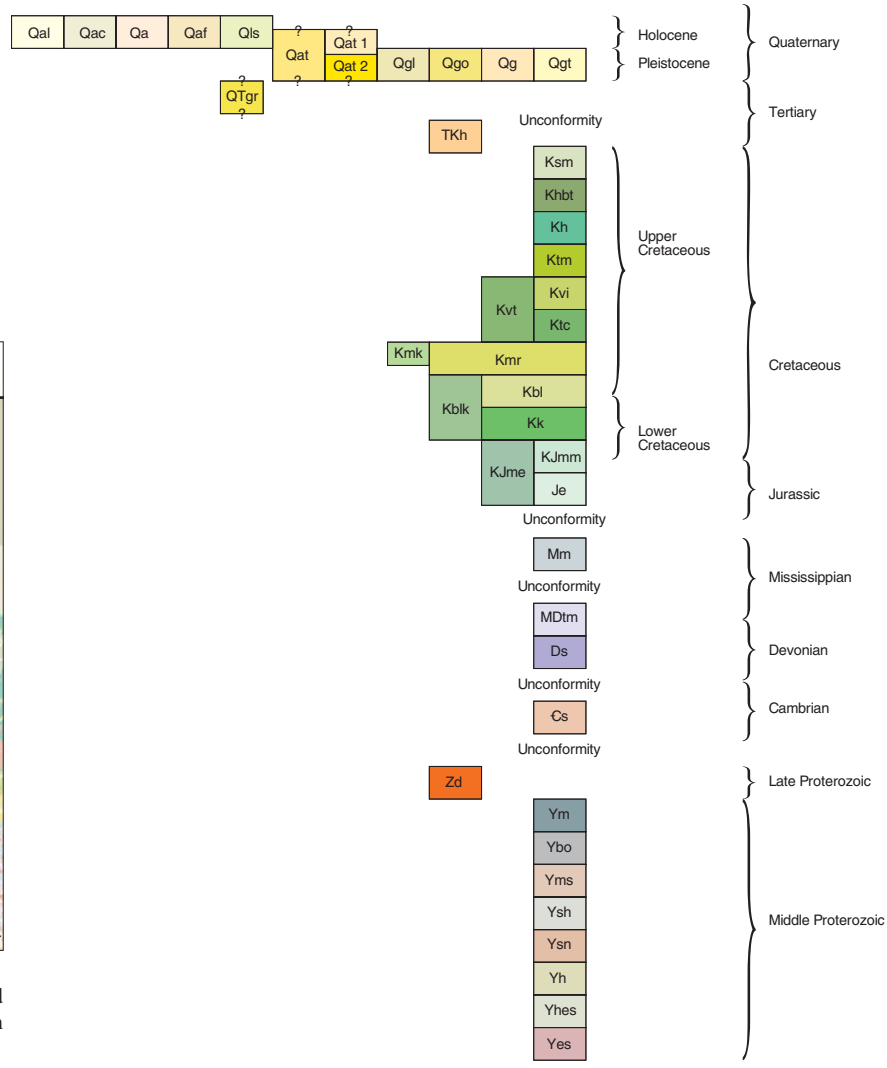
GIS production: Ken Sandau and Paul Thale, MBMG. Map layout: Susan Smith, MBMG



Drumlin and linear features on bedrock attributed to glacial movement

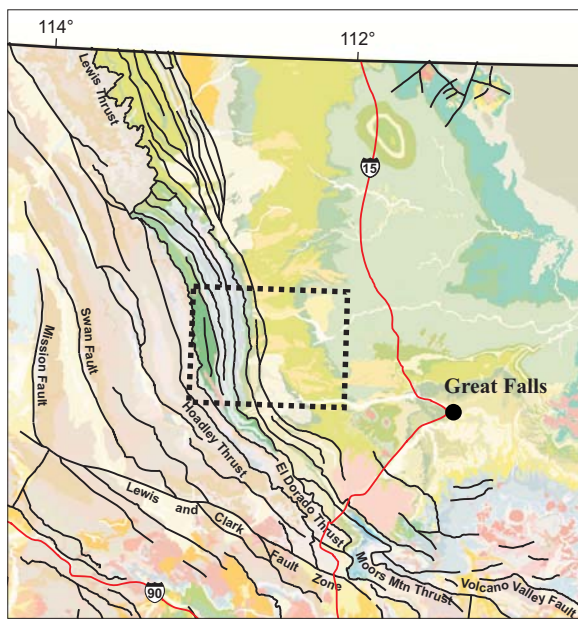
Melt-water channel

Correlation Chart for Choteau 30' x 60' quadrangle



30' x 60' quadrangle index

HUNGRY HORSE RESERVOIR	VALIER	CONRAD
SWAN PEAK	CHOTEAU	GREAT FALLS NORTH
SEELEY LAKE	DEARBORN RIVER	GREAT FALLS SOUTH



Regional faults
Dashed outline is Choteau 30' x 60' quadrangle. Colors on generalized geologic map base (Vuke and others, 2007) are not consistent with those on the 1:100,000-scale map of the Choteau quadrangle.