Montana Bureau of Mines and Geology
Open File No. 438

Preliminary Geologic Map of the Zortman 30' x 60' Quadrangle, Central Montana

Karen W. Porter and Edith M. Wilde

2001

(map and text revised 11/2011)

To view a full scale version of this map, click here.

For the text files with the map information, click here.

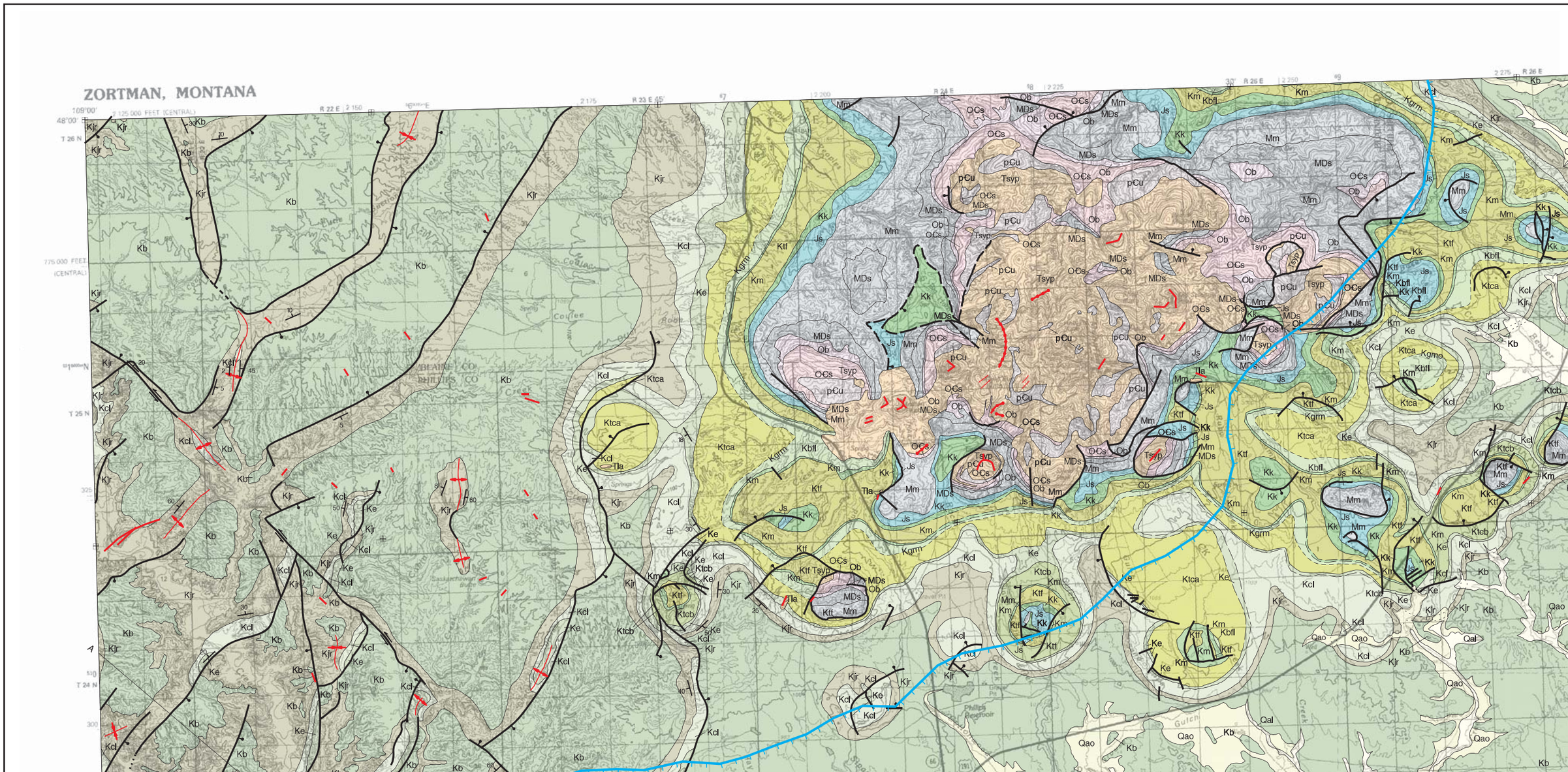
Digital data link

Note— This map was originally published at a scale of 1;100,000 but the page sizes have been modified to fit average printer capabilities (8½ x 14; legal size paper). There is 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.

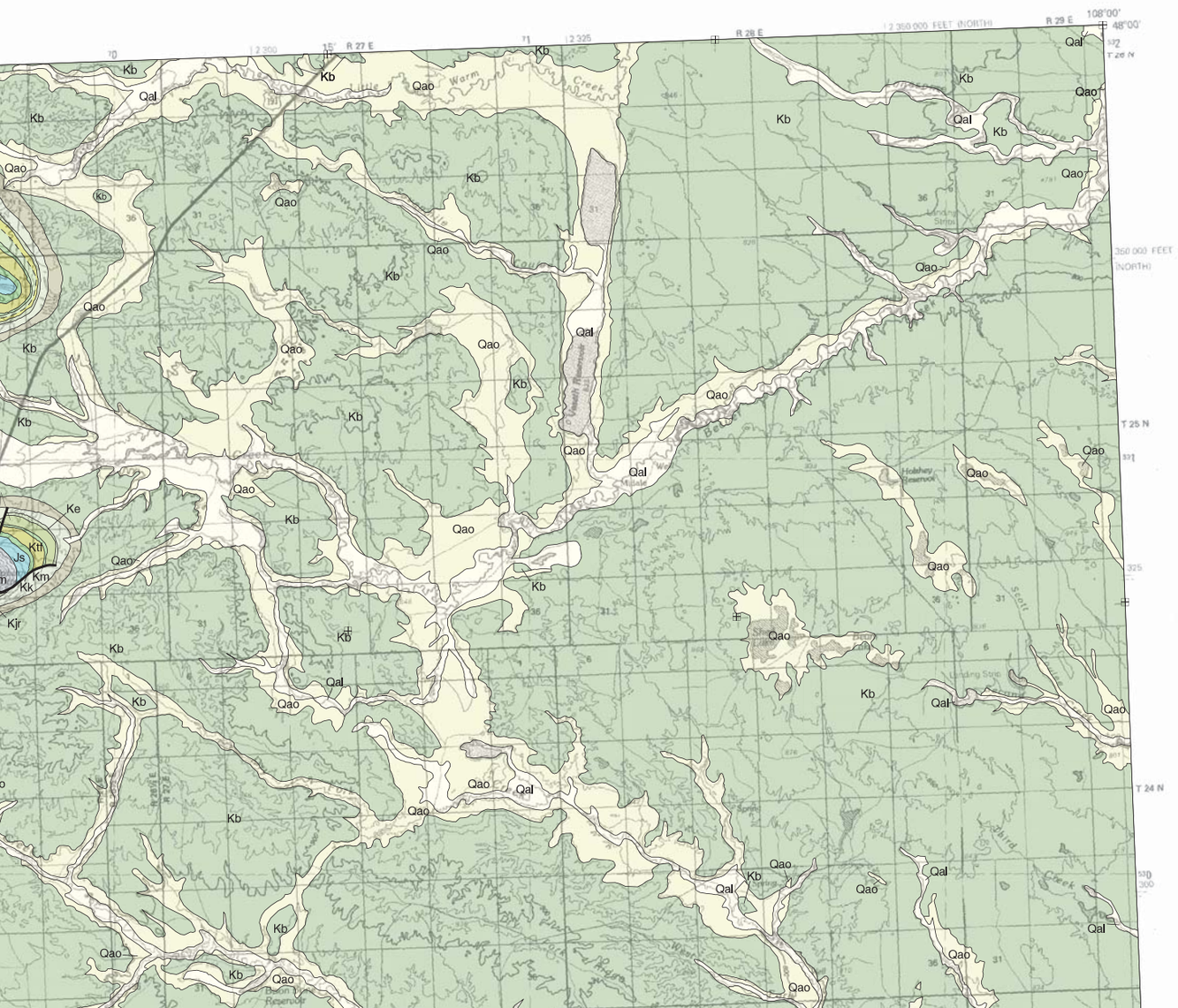
Phone: 406-496-4167

Email: pubsales@mbmg.mtech.edu

Open File MBMG 438, Plate 1 of 1
Geologic Map, Zortman 30'x60' Quadrangle



MONTANA BUREAU OF MINES AND GEOLOGY
A Department of Montana Tech of The University of Montana



MAP UNITS

Qal	Alluvium of modern channels and flood plains
Qao	Alluvium, older, undivided
Tla	Lamprophyre
Tsyp	Syenite porphyry
Khc	Hell Creek Formation
Kfh	Fox Hills Formation
Kb	Bearpaw Shale
Kjr	Judith River Formation
Kcl	Claggett Shale
Ke	Eagle Formation
Ktc	Telegraph Creek Formation
Ktcb	Telegraph Creek Formation through Belle Fourche Formation, undivided
Ktca	Telegraph Creek Formation through Carlile Formation, undivided
Kgrm	Greenhorn Formation and Mosby Sandstone Member of Belle Fourche Shale
Kbfl	Lower member of Belle Fourche Shale, informal
Km	Mowry Shale
Ktf	Thermopolis Formation and Fall River Sandstone, undivided
Kk	Kootenai Formation
Js	Sedimentary rocks, undivided
Mm	Madison Group, undivided
MDs	Sedimentary rocks, undivided
Ob	Bighorn Dolomite
O-Cs	Sedimentary rocks, undivided
p-Cu	Precambrian rocks, undivided

CHARLES M. RUSSELL NATIONAL WI
MISSOURI RIVER
KNOX RIDGE
PHILLIPS CO
FERGUS
Kencall Bottoms
Manning Bottoms
White Bottoms
Big Sage Reservoir
Sagebrush Reservoir
Kb
Kcl
Kjr
Ke
Ktc
Qal
Qao
Tial
T 23 N
T 22 N
T 21 N
200 000 FEET (NORTH)

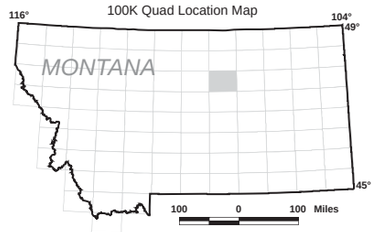
Extent of glaciation

N

Partial support has been provided by the STATEMAP component of the National Cooperative Geologic Mapping Program of the U.S.Geological Survey under Contract Number 01-HQ-AG-0096

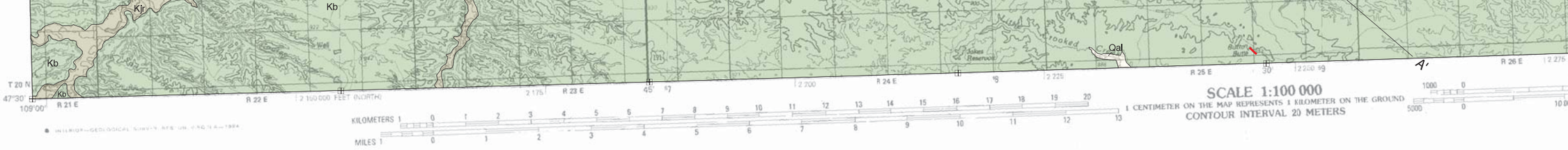
GIS production: Ken Sandau and Paul Thale, MBMG
Map layout: Susan Smith, MBMG

100K Quad Location Map



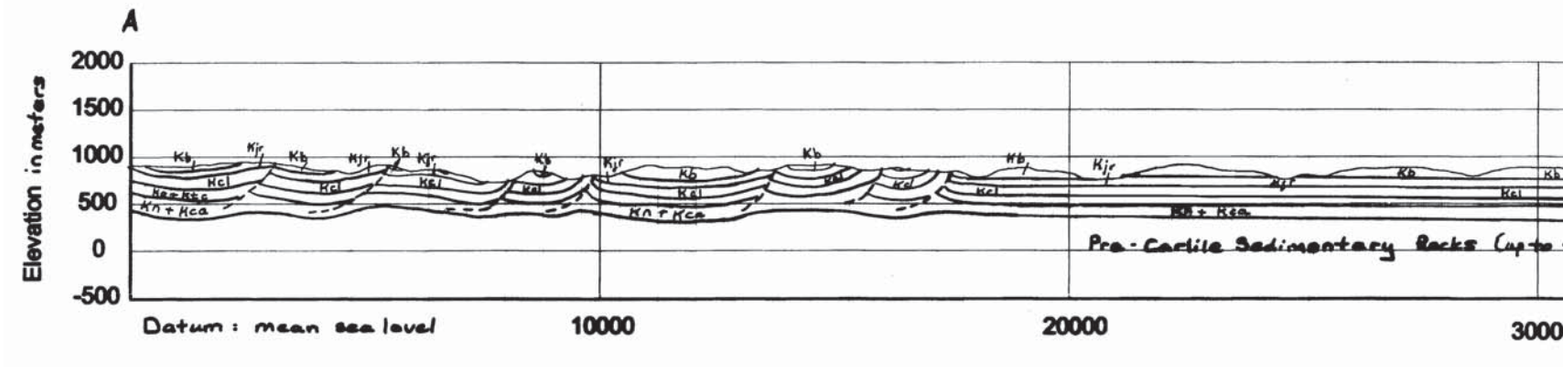
Quad index

ROCKY BOY	DODSON	MALTA
WINIFRED	ZORTMAN	FORT PECK LAKE WEST
LEWISTOWN	WINNETT	SAND



Zortman Cross

Vertical exagge



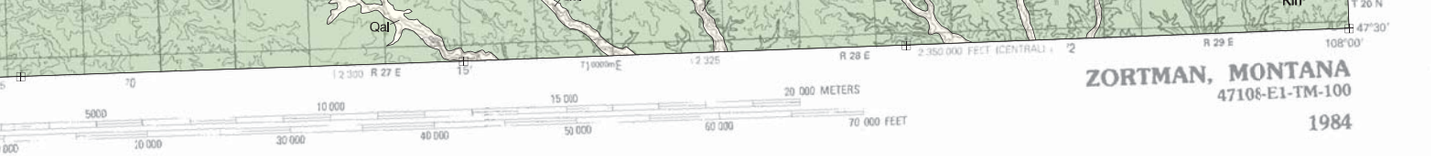
Distance in

Montana Bureau of Mines and Geology
Open File 438

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

Karen W. Porter and Edith M. Wilde

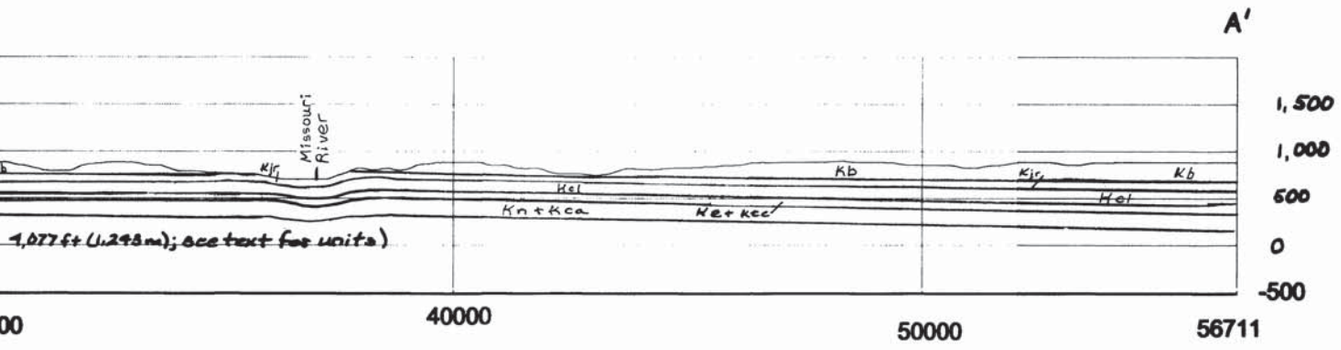
2001



LEWISTOWN	WINNETT	SAND SPRINGS

s Section A-A'

geration x 2.0



Unit Thickness, meters (ft/3.28)

Kb	1,300'	396 m; only lower part exposed
Kjr	380'	116 m
Kel	500'	152 m
Ke + Ktc	450'	137 m
Kn + Kca	630'	192 m

See text for unit names and descriptions.
Surficial deposits not shown.

in meters

Maps may be obtained from
Publications Office
Montana Bureau of Mines and Geology
1300 West Park Street, Butte, Montana 59701-8997
Phone: (406) 496-4167 Fax: (406) 496-4451
http://www.mbmg.mtech.edu