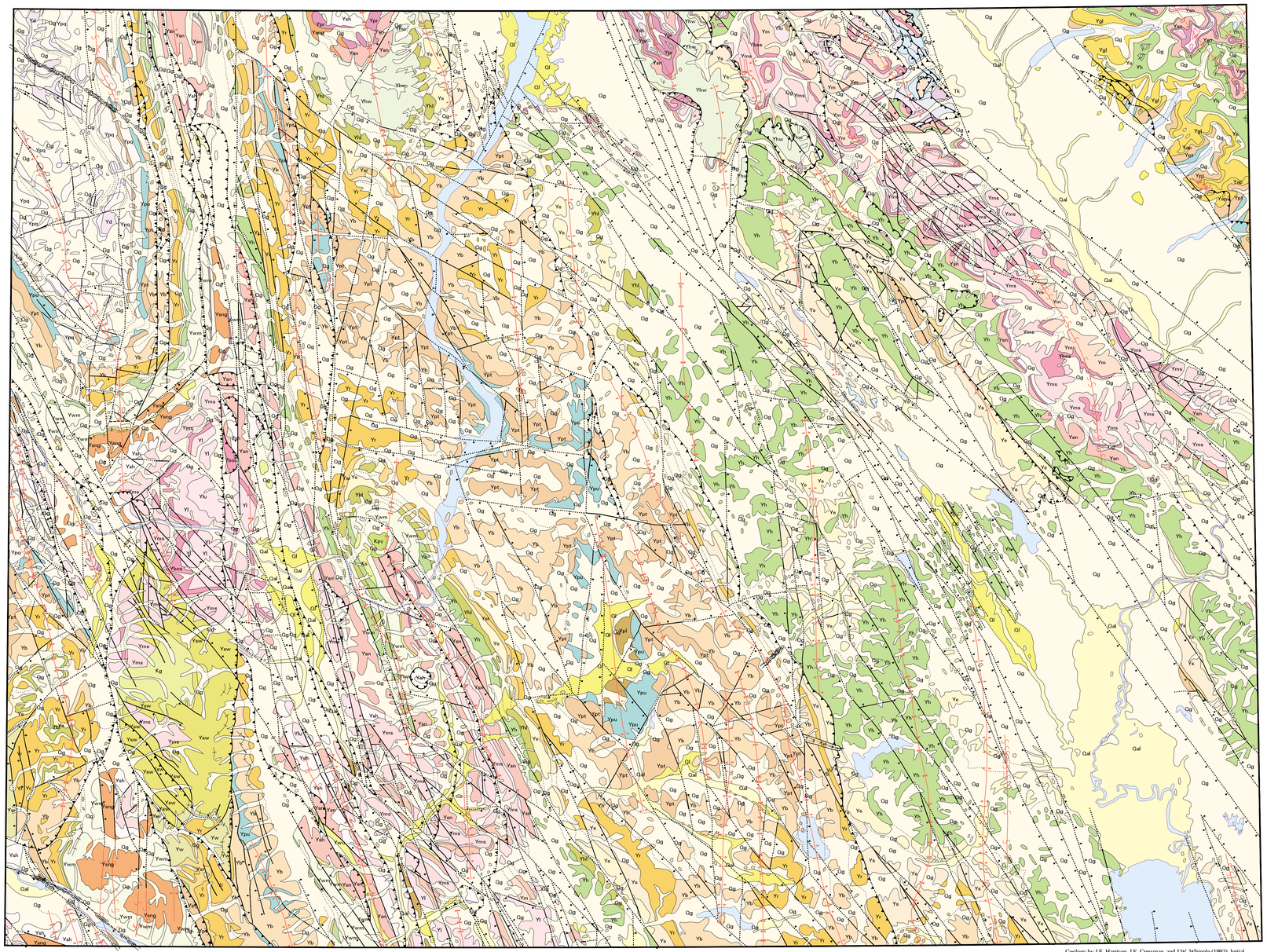
U.S. Department of the Interior
U.S. Geological Survey

Miscellaneous Investigations Series Map I-2267
Database, version 1.0



map projection: Transverse Mercator

Geology by J.E. Harrison, J.E. Cressman, and J.W. Whipple (1992). Initial digitizing by EROS Data Center (pre-1994). Digital database by H.Z. Kayser (Information Systems Support, Inc.), P.D. Derkey (USGS), assisted by R.J. Miller (USGS). Database approved for publication October 5, 2000.

Geologic and Structure Maps of the Kalispell 1° x 2° Quadrangle, Montana, and Alberta and British Columbia: A Digital Database

By

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Digital database by

Helen Z. Kayser, Pamela D. Derkey, and EROS Data Center

2000

(map originally published in 1992)

Scale 1:250000

0 5 10 15 20 25 30 35
Kilometers

0 5 10 15 20 25 30 35
Miles

Explanation

DESCRIPTION OF MAP UNITS

- Qal - Alluvial deposits (Holocene)
- Qs - Landslide deposits (Holocene)
- Qg - Glacial and fluvioglacial deposits (Pleistocene)
- Ql - Lake sediments (Pleistocene)
- Tk - Kishenehn Formation (Oligocene)
- Kg - Felsic plutons (Cretaceous)
- Ks - Syenite (Cretaceous)
- Kpy - Pyroxenite (Cretaceous)
- Jf - Fernie Formation (Jurassic)
- Mz - Mesozoic sedimentary rocks, undivided
- PPr - Rocky Mountain Formation (Permian and Pennsylvanian?)
- Mu - Mississippian sedimentary rocks, undivided
- Du - Devonian sedimentary rocks, undivided
- Cu - Middle Cambrian sedimentary rocks, undivided
- Dcu - Devonian and Middle Cambrian sedimentary rocks, undivided
- ZYd - Mafic sills (Late and Middle Proterozoic)

Libby Formation (Middle Proterozoic)

- Ylu - Upper part
- Yl - Libby Formation, undivided
- Ym - McNamara Formation (Middle Proterozoic)
- Ybo - Bonner Quartzite (Middle Proterzoic)
- Ybos - Siltite facies

Mount Shields Formation (Middle Proterozoic)

- Ymsu - Upper part
- Yms - Mount Shields Formation, undivided
- Ysh - Shepard Formation (Middle Proterozoic)
- Ypr - Purcell Lava (Middle Proterozoic)

Snowslip Formation (Middle Proterozoic)

- Ysn - Red and green facies
- Ysng - Green facies

Wallace Formation (Middle Proterozoic)

- Ywu - Upper member
- Ywm - Middle member
- Ywl - Lower member
- Yw - Upper, middle, lower members, undivided
- Ysw - Shepard, Snowslip, and Wallace Formations, undivided (Middle Proterozoic)
- Yh - Main body of the Helena Formation (Middle Proterozoic)
- Yhl - Lower member
- Yhw - Main body of the Helena Formation and middle member of the Wallace Formation, undivided (Middle Proterozoic)
- Ye - Empire Formation (Middle Proterozoic)
- Ysr - St. Regis Formation (Middle Proterozoic)
- Yr - Revett Formation (Middle Proterozoic)
- Ys - Spokane Formation (Middle Proterozoic)
- Ygl - Grinnell Formation (Middle Proterozoic)
- Yb - Burke Formation (Middle Proterozoic)
- Yu - Unnamed formation (Middle Proterozoic)
- Yap - Appekunny Formation (Middle Proterozoic)
- Yd - Mafic sills (Middle Proterozoic)

Prichard Formation (Middle Proterozoic)

- Ypt - Transition member
- Ypu - Upper member
- Ypq - Quartzite member
- Ypa - Argillite member
- Ypl - Lower part

- Contact; dotted where concealed.
- Fault, unknown offset; dotted where concealed, .
- High-angle fault, known offset; dotted where concealed. Ball and bar on downthrown side.
- Strike-slip fault; dotted where concealed. Arrows shown direction of apparent strike slip.
- Right-lateral strike-slip fault with vertical motion; dotted where concealed. Ball and bar on downthrown side.
- Thrust fault; dotted where concealed. Sawteeth on upper plate.
- Backslid thrust fault. Thrust fault with later normal movement. Dotted where concealed. Sawteeth on upper plate; tics point in direction of backsliding.
- Anticline
- Syncline
- Terrace or monoclinal fold
- Overturned anticline
- Overturned syncline
- Td - Dikes (Tertiary?); dotted where concealed.
- ZYd - Mafic sills (Late and Middle Proterozoic); dotted where concealed.
- Yla - Basalt; dotted where concealed.
- Ypr - Purcell Lava (Middle Proterozoic); dotted where concealed.
- Yd - Mafic sills (Middle Proterozoic); dotted where concealed.

References

Harrison, J.E., Cressman, E.R., and Whipple, J.W., 1992, Geologic and structure maps of the Kalispell 1° by 2° quadrangle, Montana, and Alberta and British Columbia: U.S. Geological Survey Miscellaneous Investigations Map I-2267.

Index map showing Kalispell quadrangle

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Digital files are available on World Wide Web at http://geopubs.wr.usgs.gov/i-map/i2267

The digital database is not meant to be used or displayed at any scale larger than 1:250,000 (e.g., 1:100,000 or 1:24,000).