WYOMING STATE GEOLOGICAL SURVEY
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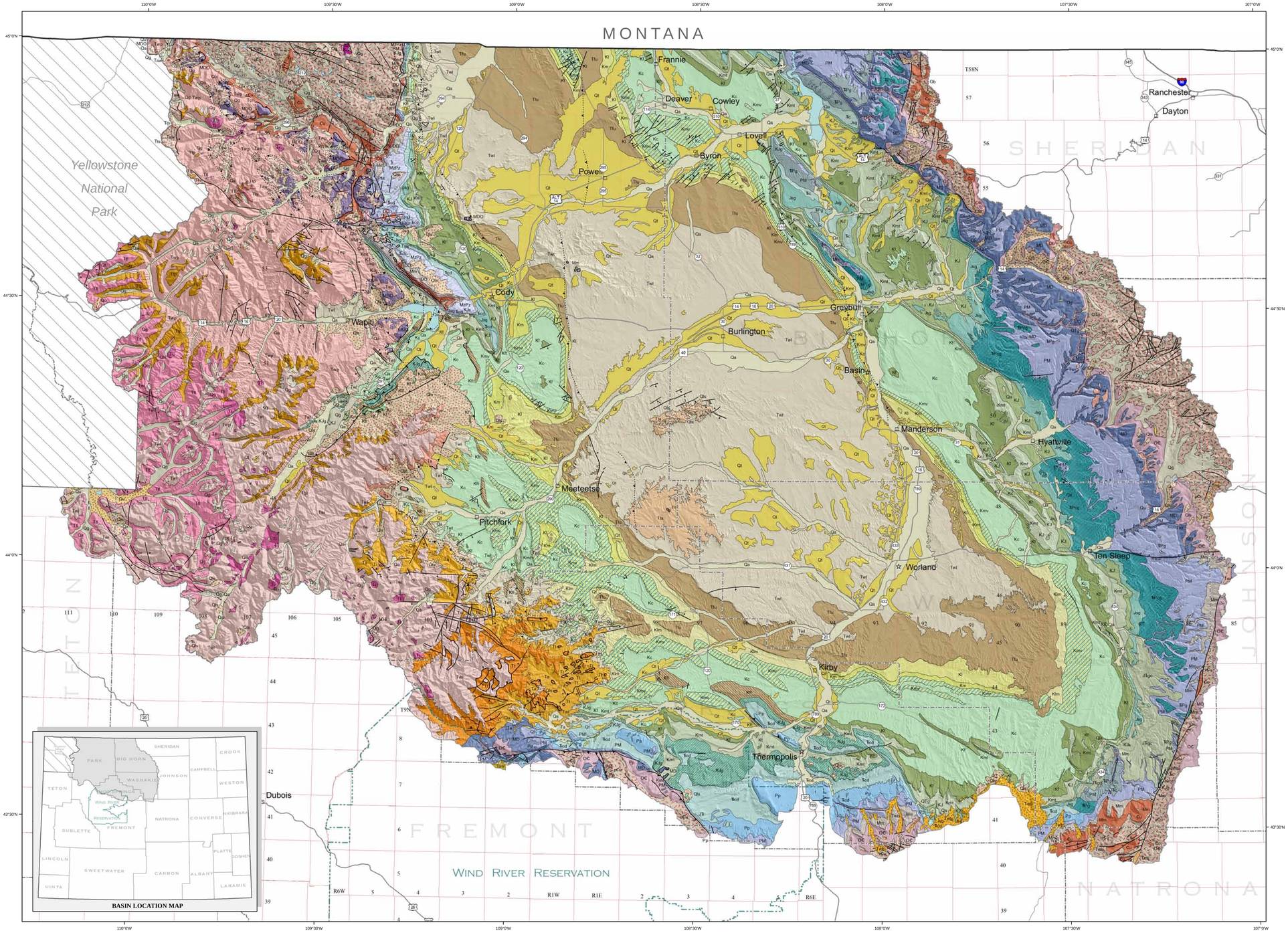
Geology - Interpreting the past - providing for the future

GEOLOGIC MAP OF THE BIGHORN BASIN, WYOMING



BASIN LOCATION MAP

Map Projection: Lambert Conformal Conic
False Easting: 500000, False Northing: 200000
Central Meridian: -107.5 degrees West
Standard Parallel 1: 41 degrees North
Standard Parallel 2: 45 degrees North
Latitude of Origin: 41 degrees North
Linear Unit: Meter
Horizontal Datum: North American Datum of 1983 (NAD 83)
Ellipsoid: Geodetic Reference System 80

Magnetic Declination = 11° 1' E
at center of map
(Feb. 12, 2013)

Scale 1:350,000

0 10 20 30 40 50 Miles

0 20 40 60 80 Kilometers

Geology modified from Love and Christiansen (1985)

Digital cartography and layout by Tomas Gracias, Phyllis A. Ranz, and Robin W. Lyons

Edited by Suzanne C. Luhr

EXPLANATION

MAP SYMBOLS

- **Formation contact**
- **Normal fault**—Dotted where concealed; ball and bar on downthrown block; no designation on fault trace indicates undetermined motion
- **Thrust fault**—Dotted where concealed; sawteeth on upthrown (tectonically higher) block
- County seat
- City or town
- Lake or reservoir
- U.S. highway
- State highway
- County or other road
- Wind River Reservation boundary
- County boundary
- State boundary

GEOLOGIC UNITS

(Geology enlarged from 1:500,000 scale to improve readability)

CENOZOIC

Quaternary

- Qa — Alluvium and colluvium
- Qt — Gravel, pediment, and fan deposits
- Qg — Glacial deposits
- Landslide deposits
- Surficial deposits, undifferentiated

Quaternary and Tertiary

- QTg — Terrace gravel

Tertiary

- Thr — Huckleberry Ridge Tuff of Yellowstone Group
- Tml — Lower Miocene rocks
- Twr — White River Formation
- Ti — Intrusive igneous rocks
- Absaroka Volcanic Supergroup
  - Thorofare Creek Group
    - Twi — Wiggins Formation
    - Tti — Two Ocean and Langford Formations–in places may include Trout Peak Trachyandesite of Sunlight Group
    - Tt — Tepee Trail Formation
    - Ta — Aycross Formation
    - Thorofare Creek and Sunlight Groups–includes Two Ocean and Langford Formations, Trout Peak Trachyandesite, and Wapiti Formation
  - Ts — Sunlight Group–includes Trout Peak Trachyandesite, Wapiti Formation, Crescent Hill Basalt, and Mount Wallace Formation
  - Ttp — Trout Peak Trachyandesite
  - Twp — Wapiti Formation
  - Washburn Group–includes Sepulcher, Lamar River, and Cathedral Cliffs Formations
- Tw — Wagon Bed Formation
- Tta — Tatman Formation
- Twf — Willwood Formation
- Tim — Indian Meadows Formation
- Tcr — Crandall Conglomerate
- Ttu — Fort Union Formation

MESOZOIC

Cretaceous

- Ki — Intrusive igneous rocks
- Kl — Lance Formation
- Klm — Lance Formation, Fox Hills Sandstone, Meeteetse Formation, and Bearpaw and Lewis Shales
- Km — Meeteetse Formation
- Kmv — Mesaverde Formation
- Kc — Cody Shale
- Kf — Frontier Formation
- Kft — Frontier Formation, Mowry Shale, Muddy Sandstone and Thermopolis Shale
- Kmt — Mowry Shale, Muddy Sandstone, and Thermopolis Shale

Cretaceous and Jurassic

- KJ — Cloverly and Morrison Formations
- KJs — Cloverly, Morrison, and Sundance Formations
- KJg — Cloverly, Morrison, Sundance and Gypsum Spring Formations

Jurassic

- Js — Sundance Formation
- Jsg — Sundance and Gypsum Spring Formations

Jurassic and Triassic

- JTs — Sundance and Gypsum Spring Formations, and Nugget Sandstone
- JTsgc — Gypsum Spring Formation, Nugget Sandstone, and Chugwater Formation

Triassic

- Tkc — Chugwater Formation or Group
- Tkcd — Chugwater and Dinwoody Formations

MESOZOIC AND PALEOZOIC

- TPkg — Chugwater and Goose Egg Formations
- TePg — Goose Egg Formation
- MzPz — Mesozoic and Paleozoic rocks, undifferentiated

PALEOZOIC

Permian

- Pp — Phosphoria Formation and related rocks

Permian, Pennsylvanian, and Mississippian

- PM — Tensleep Sandstone and Amsden Formation

Mississippian

- Mm — Madison Limestone or Group

Mississippian and Devonian

- MD — Madison Limestone and Darby Formation

Mississippian, Devonian, and Ordovician

- MDO — Madison Limestone, Darby or Three Forks, Jefferson, and Beartooth Butte Formations, and Bighorn Dolomite

Mississippian and Ordovician

- MO — Madison Limestone and Bighorn Dolomite

Devonian and Ordovician

- DO — Three Forks, Jefferson, and Beartooth Butte Formations and Bighorn Dolomite

Ordovician

- Ob — Bighorn Dolomite

Ordovician and Cambrian

- OC — Bighorn Dolomite, Gallatin Limestone, Gros Ventre Formation, and Flathead Sandstone

Cambrian

- Cu — Gallatin Limestone, Gros Ventre Formation and equivalents, and Flathead Sandstone

PRECAMBRIAN

- pCu — Precambrian rocks, undifferentiated

DATA REFERENCES

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