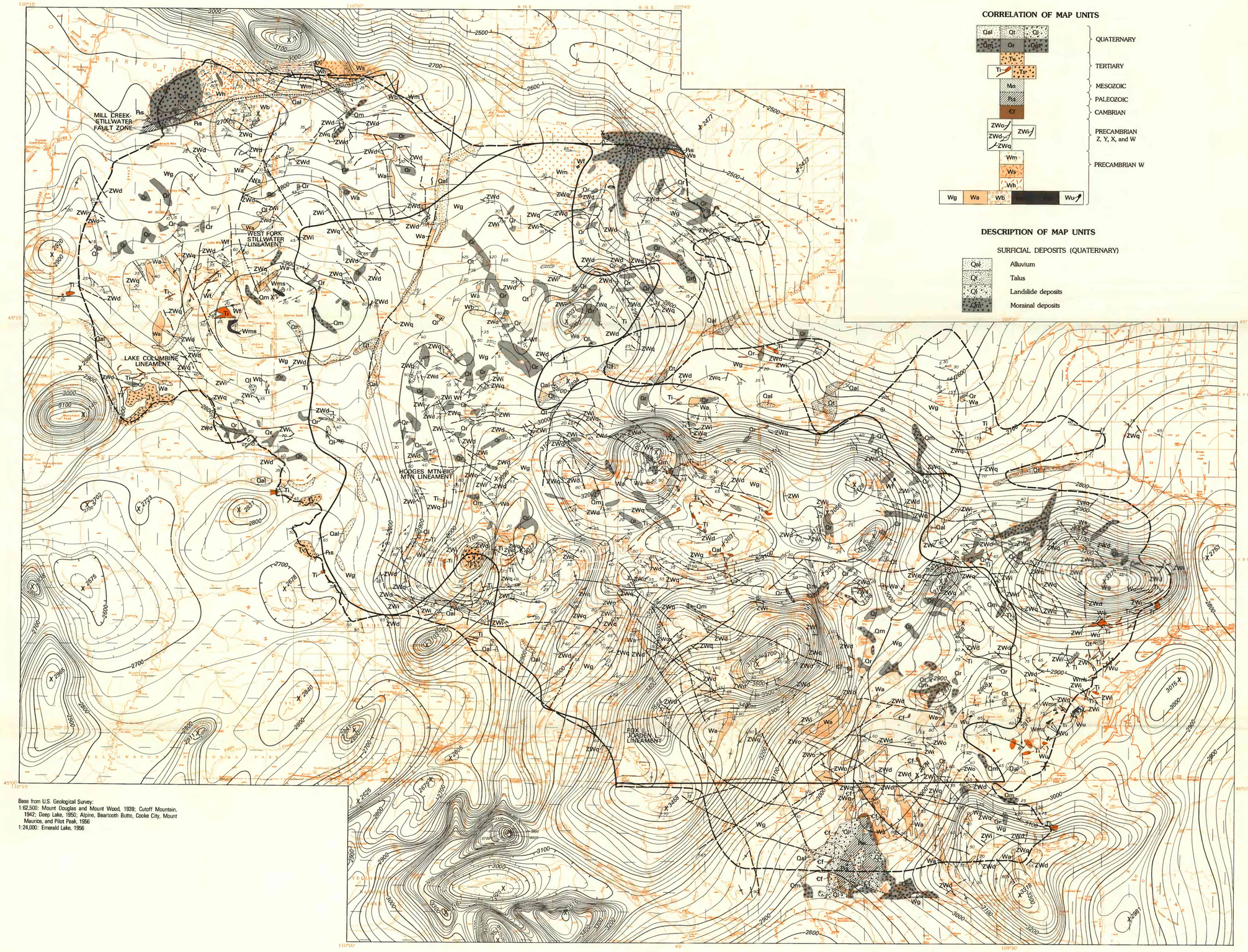
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 1391–F
PLATE 1



CORRELATION OF MAP UNITS

DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS (QUATERNARY)

- Qal — Alluvium
- Qt — Talus
- Ql — Landslide deposits
- Qm — Morainal deposits
- Qr — Rock glacier
- Qgr — Glacial till
- Tv — VOLCANIC ROCKS (TERTIARY)—May include some intrusive rocks

INTRUSIVE ROCKS (TERTIARY)

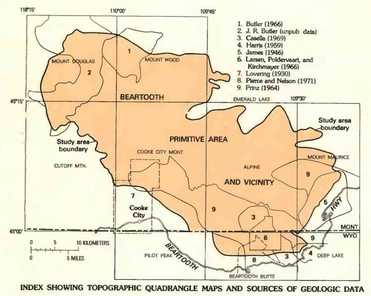
- Ti — Dike or plug
- Ts — Syenite
- Mes — SEDIMENTARY ROCKS (MESOZOIC)
- Pzs — SEDIMENTARY ROCKS (PALEOZOIC)
- Cf — FLATHEAD SANDSTONE (CAMBRIAN)

MAFIC DIKES (PRECAMBRIAN Z, Y, X AND W)

- ZWo — Alkalic olivine dolerite dikes
- ZWd — Metadolerite dikes
- ZWq — Quartz dolerite dikes
- ZWi — Dikes of uncertain or unknown affinities
- Wm — QUARTZ MONZONITE (PRECAMBRIAN W)
- Ws — STILLWATER COMPLEX (PRECAMBRIAN W)
- Wh — HORNFELS (PRECAMBRIAN W)
- Wg — GRANITIC GNEISS (PRECAMBRIAN W)
- Wa — AMPHIBOLITE AND HORNBLENDE GNEISS (PRECAMBRIAN W)
- Wb — BIOTITE SCHIST (PRECAMBRIAN W)
- Wms — SILICEOUS METASEDIMENTARY ROCKS (PRECAMBRIAN W)
- Wf — FELDSPATHIZED GNEISS (PRECAMBRIAN W)
- Wu — ULTRAMAFIC ROCKS (PRECAMBRIAN W)

- Contact—Dotted where concealed
- U/D — Fault—Dashed where approximately located; dotted where concealed. U, upthrown side; D, downthrown side
- Thrust fault—Dotted where concealed. Sawteeth on upper plate
- Lineament—Dotted where concealed
- 70 — Strike and dip of beds
- Strike and dip of foliation
  - ⊕ Horizontal
  - 20 Inclined
  - Vertical
- 30 — Strike and dip of large-scale layering
- 10 — Direction and plunge of lineation
- 30 — Strike and dip of shear zone
- 60 — Strike and dip of fracture zone
- 40 — Dike—Showing dip. Dashed where approximately located; dotted where concealed
- 55 — Alteration zone—Showing dip
- x — Prospect
- Adit
- 2700 — Magnetic contours—Showing total intensity of Earth's magnetic field, in gammas, relative to arbitrary datum. Hachured to indicate closed areas of lower magnetic intensity. Dashed where data are incomplete. Contour interval 20 gammas
- X3090 — Location of measured maximum or minimum intensity within closed high or closed low
- Flight path—Showing location and spacing of area
- Boundary of area studied
- Boundary of Beartooth Primitive Area

Base from U.S. Geological Survey:
1:62,500: Mount Douglas and Mount Wood, 1939; Cutoff Mountain, 1942; Deep Lake, 1950; Alpine, Beartooth Butte, Cooke City, Mount Maurice, and Pilot Peak, 1956
1:24,000: Emerald Lake, 1956



INDEX SHOWING TOPOGRAPHIC QUADRANGLE MAPS AND SOURCES OF GEOLOGIC DATA

SCALE 1:125 000

2 0 2 4 6 8 10 12 14 16 KILOMETERS
2 0 2 4 6 8 MILES

NATIONAL GEODETIC VERTICAL DATUM OF 1929

APPROXIMATE MEAN DECLINATION, 1978

Geology mapped by F. S. Simons, 1970–72, K. L. Wier, 1970, and T. J. Armbrustmacher, 1971–72, assisted by D. K. Riley and R. H. Schneider, 1970, and G. K. Lee and M. B. Sawyer, 1971–72

Aeromagnetic survey flown in 1969 at 4,100 m (13,500 ft) barometric elevation; flightline spacing approximately 1.6 km (1 mile).

GEOLOGIC AND TOTAL INTENSITY AEROMAGNETIC MAP OF THE BEARTOOTH PRIMITIVE AREA AND VICINITY, CARBON, PARK, STILLWATER, AND SWEET GRASS COUNTIES, MONTANA, AND PARK COUNTY, WYOMING

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