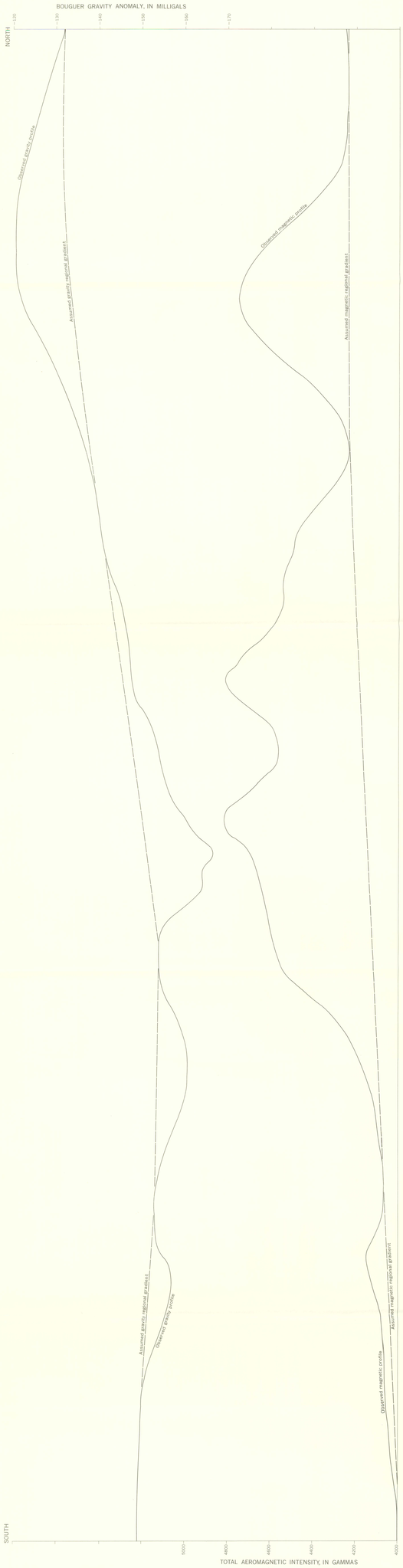
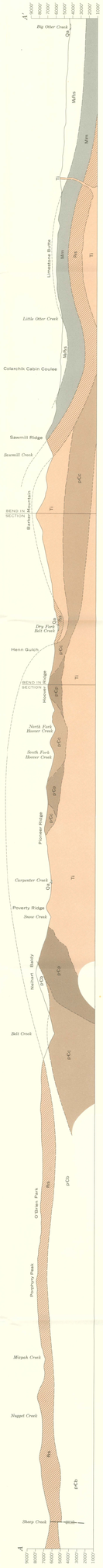
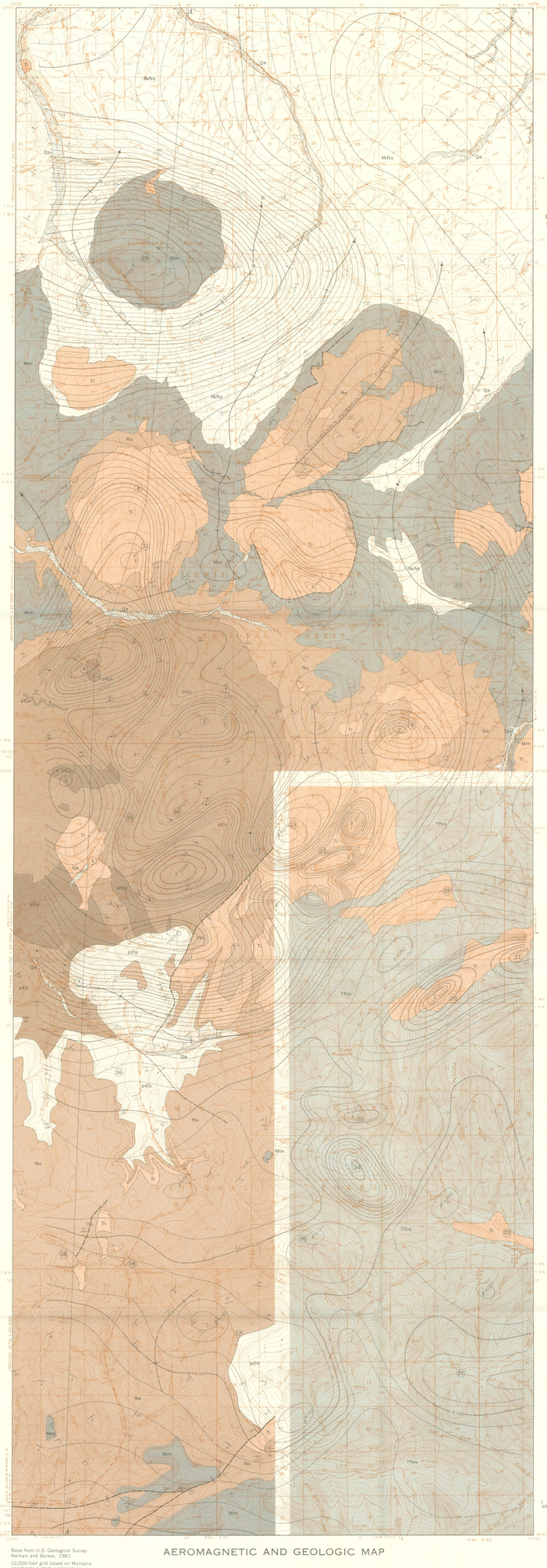






Base from U.S. Geological Survey Neihart and Barker, 1961
10,000-foot grid based on Montana coordinate system, central zone

AEROMAGNETIC AND GEOLOGIC MAP

EXPLANATION

Qa — Quaternary alluvium

UNCONFORMITY

Ti — Tertiary intrusives
Includes rocks of felsic (rhyolite and granite porphyries), intermediate (quartz monzonite and quartz latite porphyries), and mafic (shoshonite, minette, keraxnite, and vogesite) composition

MzPzs — Mesozoic and Paleozoic sedimentary rocks undivided
Includes rocks of Cretaceous, Jurassic and Mississippian age

UNCONFORMITY

Mm — Mississippian Madison Group

UNCONFORMITY

Pzs — Paleozoic sedimentary rocks undivided
Includes rocks of Devonian and Cambrian age

UNCONFORMITY

pCb — Precambrian Belt Supergroup
Includes metasedimentary rocks; Greyson Shale, Newland Limestone, Chamberlain Shale, and Neihart Quartzite

UNCONFORMITY

TPzis — Tertiary and Paleozoic igneous and sedimentary rocks undivided

pCc — Precambrian metamorphic crystalline rocks
Includes both para-gneiss and orthogneiss

pCp — Precambrian Pinto Diorite

Contact
Dashed where approximately located; short dashed where inferred

Fault
Dashed where approximately located; U, upthrown side; D, downthrown side

Anticline
Showing trace of axial plane and direction of plunge of axis. Dashed where approximately located

Syncline
Showing trace of axial plane and direction of plunge of axis. Dashed where approximately located

Horizontal — Inclined — Overturned
Strike and dip of beds

Inclined — Vertical
Strike and dip of foliation

(21) Locality discussed in text

4400
Magnetic contours
Showing total intensity magnetic field of the earth in gammas minus 54,000 gammas. Hachured to indicate closed areas of lower magnetic intensity. Dashed where data are incomplete. Contour interval 20, 100, and 200 gammas

4400
Measured maximum or minimum intensity within closed high or closed low

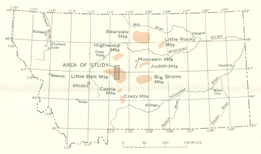
Flight path
Showing location and spacing of data. Survey flown at 9,000 feet barometric elevation above sea level

-160
Gravity contours
Hachured to indicate closed area of low gravity. Interval 2 milligals

Gravity station

BARKER	
I. J. Witkind	
NEIHART	
W. R. Keefer	W. H. Weed

Geology by I. J. Witkind (1971) for Barker quadrangle; by W. R. Keefer, 1964, 1967, and 1969, for west half of Neihart quadrangle; by W. H. Weed (1899b) for east half of Neihart quadrangle.
Aeromagnetic survey by U.S. Geological Survey, 1968.
Gravity survey by M. D. Kleinkopf, 1968–69.



INDEX MAP OF MONTANA SHOWING AREA OF THIS STUDY AND LACCOLITHIC AND VOLCANIC MOUNTAIN GROUPS (SHADED AREAS) IN CENTRAL MONTANA

SCALE 1:62 500

CONTOUR INTERVAL 80 FEET
DATUM IS MEAN SEA LEVEL

BOUGUER GRAVITY AND GEOLOGIC MAP

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1972—G71273

AEROMAGNETIC, BOUGUER GRAVITY, AND GENERALIZED GEOLOGIC MAPS OF THE CENTRAL PART OF THE LITTLE BELT MOUNTAINS, MONTANA

By
M. D. Kleinkopf, I. J. Witkind, and W. R. Keefer

1972

For sale by the U.S. Geological Survey, price 75 cents
Explanatory pamphlet accompanies map