UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Slides showing preliminary mosaic aeromagnetic and complete Bouguer gravity anomaly maps of the Dillon 1^{o} x 2^{o} quadrangle, Montana and Idaho

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Discussion

This report consists of two 35-mm slides of geophysical data from the Dillon 1^{o} x 2^{o} quadrangle, Montana and Idaho. Slide 1 shows a preliminary mosaic aeromagnetic anomaly map and slide 2 shows a complete Bouguer gravity anomaly map. The maps are being prepared for publication as part of a package of reports making up the Dillon Conterminous United States Mineral Resource Assessment Program (CUSMAP) Folio.

Survey and map specifications for the aeromagnetic anomaly maps are listed in figure 1. The gravity anomaly map at a contour interval of 5 milligals was prepared by merging data from two sources. Solid contour lines represent data from 1,900 gravity stations established by the U.S. Geological Survey; dashed contour lines are from a map by Burfeind (1967, 1969), slightly modified to fit the Geological Survey data.

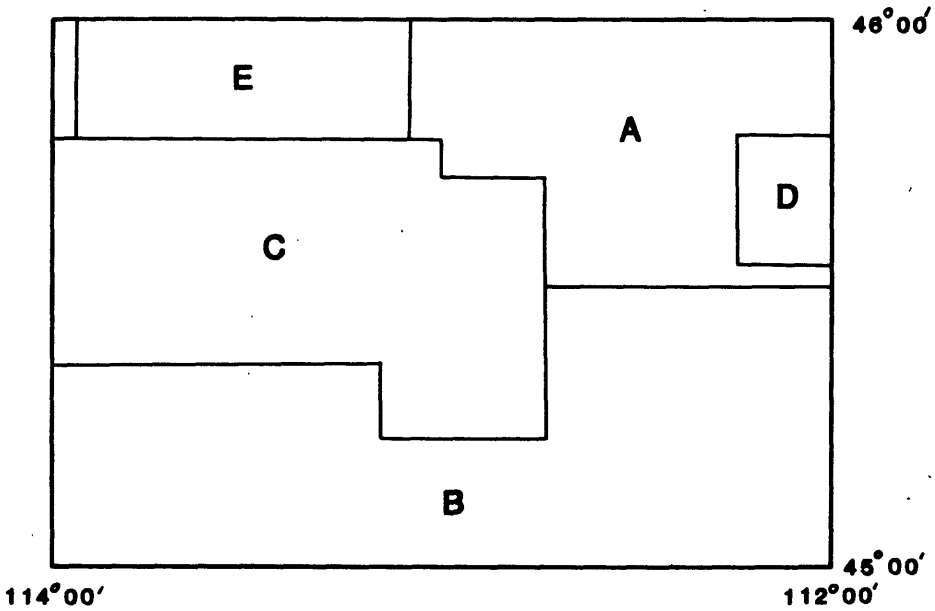

Figure 1.--Index map showing sources of total-intensity aeromagnetic surveys of the Dillon $1^{o} \times 2^{o}$ quadrangle, Montana and Idaho.

A. Johnson and others (1965): Flight elevation, 10,500 ft barometric; flight line spacing 2 mi; flight direction, east-west; no reference field removed; contour intervals, 20 and 100 gammas.

B. U.S. Geological Survey (1975): Flight elevation, 9,000 ft barometric; flight line spacing, 2 mi; flight direction, east-west; updated IGRF 75 removed; contour interval, 10 gammas.

C. U.S. Geological Survey (1979): Flight elevation, 12,000 ft barometric; flight line spacing, 2 mi; flight direction, east-west; updated IGRF 75 removed; contour intervals, 10, 20 and 100 gammas.

D. U.S. Geological Survey (1981a): Flight elevation, 1,000 ft above ground; flight line spacing, 0.5 mi; flight direction, east-west; updated IGRF 75 removed; contour interval, 20 gammas.

E. U.S. Geological Survey (1981b): Flight elevation, 1,000 ft above ground; flight line spacing, 0.5 mi; flight direction, east-west; updated IGRF 75 removed; contour interval, 20 gammas.

References

Burfeind, W. J., 1967, A gravity investigation of the Tobacco Root Mountains, Jefferson Basin, Boulder batholith, and adjacent areas of southwestern Montana: Bloomington, Indiana University, Ph.D. thesis, 90 p. (Map is at scale 1:250,000.)

_____ 1969, Gravity investigations of selected batholiths and basins of southwestern Montana: EOS, v. 50, no. 10, p. 536. (Page-size map is included.)

Johnson, R. W., Jr., Henderson, J. R., and Tyson, N. S., 1965, Aeromagnetic map of the Boulder Batholith area, southwestern Montana: U.S. Geological Survey Geophysical Investigations Map GP-538, scale 1:250,000.

U.S. Geological Survey, 1975, Aeromagnetic map of southwestern Montana and east-central Idaho: U.S. Geological Survey Open-File Report 75-655, scale 1:250,000.

U.S. Geological Survey, 1979, Aeromagnetic map of the Pioneer-Beaverhead area, Montana: U.S Geological Survey Open-File Report 79-758, scale 1:250,000.

U.S. Geological Survey, 1981a, Aeromagnetic map of the Tobacco Roots area, Montana: U.S. Geological Survey Open-File Report 81-777, scale 1:50,000.

U.S. Geological Survey, 1981b, Aeromagnetic map of the Sapphire/Anaconda Mountains area, Montana: U.S. Geological Survey Open-File Report 81-1160, scale 1:62,500.