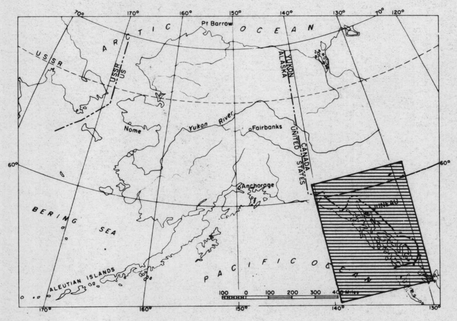
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN-FILE REPORT
79-1694



Location of southeastern Alaska.

MAP SYMBOLS

Magnetic contours, numbers are gammas x 100.

Hachured contours indicate magnetic lows.

ACKNOWLEDGEMENTS

This map was compiled under the direction of J.E. Case and Andrew Griscom, U.S. Geological Survey.

This map is a compilation of the available aeromagnetic data from southeastern Alaska; no attempt has been made to establish a common datum or to resolve boundary differences between adjacent surveys. The map is intended to show large scale magnetic anomaly patterns and to aid in regional geologic interpretations. Anyone interested in the detailed magnetic data for a particular area is referred to the original data.

SOURCES AND EXPLANATION OF DATA

1. Brew, David A., Johnson, Bruce R., Grybeck, Donald, Griscom, Andrew, Barnes, David, Kimball, Arthur, Still, Jan C., and Rataj, Jeanne L., 1978, Mineral resources of the Glacier Bay National Monument wilderness study area, Alaska: U.S. Geol. Survey open-file report 78-494, scale 1:125,000, contour interval 5 and 10 gammas.

   Contour interval: 100 gammas; heavy numbered contours are 500 gammas; numbers are hundreds of gammas.
   Datum: arbitrary, IGRF removed.
   Flight line spacing and direction: 1 mile northeast-southwest over the Fairweather Range and Glacier Bay area, and 1 mile northwest-southeast over the coastal area.
   Flight elevation: 5,000 feet above sea level over the northwest coastal area; 15,000 feet above sea level over the Fairweather Range; 8,000 feet above sea level over the Glacier Bay area.
   Type of magnetometer:
   Surveyed by: LKB Resources, Inc., Huntingdon Valley, Pa. 19006.
   Year flown: 1976.
   Digital data: available.

2. U.S. Geological Survey, 1979, Aeromagnetic map of Yakobi and Chichagof Islands, Alaska: U.S. Geol. Survey open-file report 79-529, scale 1:250,000, contour interval 20 gammas.

   Contour interval: 100 gammas; heavy numbered contours are 500 gammas; numbers are hundreds of gammas.
   Datum: 56,000 gammas = zero datum, IGRF removed (1975), updated to 1978.
   Flight line spacing and direction: ½ mile and 1 mile northeast-southwest with 10 mile northwest-southeast tie lines.
   Flight elevation: 1000 feet above ground level.
   Type of magnetometer: G-803 proton.
   Surveyed by: LKB Resources, Inc., Huntingdon Valley, Pa. 19006.
   Year flown: 1978.
   Digital data: available.

3. Brew, David, Grybeck, Donald, Johnson, Bruce L., Jachens, Robert C., Nutt, Constance J., Barnes, David F., Kimball, Arthur L., Still, Jan C., and Rataj, Jeanne L., 1977, Mineral resources of the Tracy Arm-Fords Terror wilderness study area and vicinity, Alaska: U.S. Geol. Survey open-file report 77-649, scale 1:125,000, contour interval 10 gammas.

   Contour interval: 100 gammas; heavy numbered contours are 500 gammas; numbers are hundreds of gammas.
   Datum: 57,291.06 gammas (Sumdum quadrangle), and 57,515.78 gammas (Taku quadrangle), IGRF removed (1965), updated to 1973.
   Flight line spacing and direction: 1 mile northeast-southwest.
   Flight elevation: 6,000 feet above sea level.
   Type of magnetometer: G-803 proton.
   Surveyed by: GeoMetrics, Sunnyvale, Ca.
   Year flown: 1973.
   Digital data: available.

4. U.S. Geological Survey, 1979, Aeromagnetic map of the Petersburg area, Alaska: U.S. Geol. Survey open-file report 79-832, scale 1:250,000, contour interval 20 gammas.

   Contour interval: 100 gammas; heavy numbered contours are 500 gammas; numbers are hundreds of gammas.
   Datum: 56,000 gammas = zero datum, IGRF removed (1975), updated to 1978.
   Flight line spacing and direction: 1 mile northeast-southwest with approximately 30 mile northwest-southeast tie lines.
   Flight elevation: 1,000 feet above ground level.
   Type of magnetometer: fluxgate.
   Surveyed by: LKB Resources, Inc., Huntingdon Valley, Pa. 19006.
   Year flown: 1978.
   Digital data: available

5. U.S. Geological Survey, 1976, Aeromagnetic maps of Granite Fiords wilderness study area, Ketchikan and Bradfield Canal quadrangles, southeastern Alaska: U.S. Geol. Survey open-file report 76-558, scale 1:63,360, contour interval 10 gammas.

   and Berg, Henry C., Elliott, Raymond L., Smith, James G., Pittman, Tom L., and Kimball, Arthur L., with a section on aeromagnetic data by Andrew Griscom, 1977, Mineral Resources of the Granite Fiords wilderness study area, Alaska: U.S Geol. Survey Bull. 1403, scale 1:125,000, contour interval 10 gammas.

   Contour interval: 100 gammas; heavy numbered contours are 500 gammas; numbers are hundreds of gammas.
   Datum: arbitrary, IGRF removed (1965), updated to 1972.
   Flight line spacing and direction: 1 mile northeast-southwest with variable tie lines.
   Flight elevation: 6,000 feet above ground level.
   Type of magnetometer:
   Surveyed by: Acro Service, Philadelphia, Pa. 19135.
   Year flown: 1972.
   Digital data: available.

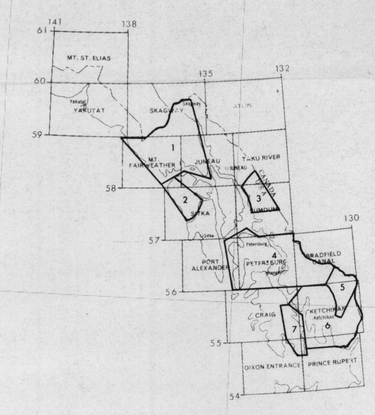
6. U.S. Geological Survey, 1977, Aeromagentic map of the Ketchikan, Prince Rupert, and northeastern Craig quadrangles, Alaska: U.S. Geol. Survey open-file report 77-359, scale 1:250,000, contour interval 10 gammas.

   and U.S. Geological Survey, 1979, Aeromagnetic maps of parts of the Ketchikan, Prince Rupert, and Craig quadrangles, southeastern Alaska: U.S. Geol. Survey open-file report 79-937, scale 1:63,360, contour interval 10 gammas.

   Contour interval: 100 gammas; heavy numbered contours are 500 gammas; numbers are hundreds of gammas.
   Datum: arbitrary, IGRF removed (1965), updated to 1976.
   Flight line spacing and direction: 1 mile northeast-southwest with variable tie lines.
   Flight elevation: 6,000 feet above sea level.
   Type of magnetometer: fluxgate.
   Surveyed by: LKB Resources, Inc., Huntingdon Valley, Pa. 19006.
   Year flown: 1976.
   Digital data: available.

7. Rossman, D.L., Henderson, J.R., Jr., and Walton, M.S., Jr., 1956, Reconnaissance total intensity aeromagnetic map of the southern part of Prince of Wales Island, Alaska: U.S. Geol. Survey Geophysical Investigations Map GP-135, scale 1:125,000, contour interval 100 gammas.

   Contour interval: 100 gammas; heavy numbered contours are 500 gammas; numbers are hundreds of gammas.
   Datum: arbitrary.
   Flight line spacing and direction: 1 mile northeast-southwest.
   Flight elevation: 500 to 2000 feet above ground level.
   Type of magnetometer: AN/ASQ-3A.
   Surveyed by: U.S. Navy.
   Year flown: 1945.
   Digital data: not available.



Index map showing sources of aeromagnetic data.

PRELIMINARY AEROMAGNETIC MAP OF SOUTHEASTERN ALASKA

COMPILED BY JOHN DECKER 1979

SCALE 1:1 000 000

25 0 25 50 75 100 MILES

25 0 25 50 75 100 KILOMETERS

Base map from National Atlas of the United States of America, U.S. Geological Survey, 1970.

This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.