

From State of Alaska, Geological Survey, 1984, 1:50,000, Contour Interval, 20 Feet.

DESCRIPTIVE NOTES

The geophysical data were acquired with a DIGEM[®] Electromagnetic (EM) system and a Scintrex cesium magnetometer. Both were flown at a height of 100 feet. In addition the survey recorded data from a radar altimeter, GPS navigation system, 50/80 Hz moisture and video camera. Flights were performed with an AS300B-2 Squirrel helicopter at a mean terrain clearance of 200 feet along NAD83 (340°) survey flight lines with a spacing of a quarter of a mile. Tie lines were flown perpendicular to the flight lines at intervals of approximately 3 miles. The blank regions indicate an area where the survey aircraft had to detour around populated areas.

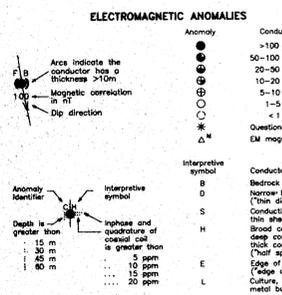
An Ahtatch G024 NAVSTAR / GLOMSS Global Positioning System was used for navigation. The helicopter position was derived every 0.5 seconds using post-flight differential positioning to a relative accuracy of better than 5 m. Flight path positions were projected onto the Clarke 1866 (UTM zone 5) spheroid, 1927 North American datum using a central meridian (CM) of 159° 30' north, constant of 0, and an east constant of 500,000. Positional accuracy of the presented data is better than 10 m with respect to the UTM grid.

ELECTROMAGNETICS

To determine the location of EM anomalies or their boundaries, the DIGEM[®] EM system measured inphase and quadrature components at three frequencies. Two vertical coplanar coils operated at 900 and 5500 Hz while three horizontal coplanar coils operated at 900, 2000, and 5500 Hz. EM data were sampled at 0.1 second intervals. The EM system responds to bedrock conductors, conductive overburden, and cultural features. The type of conductor is indicated on the aeromagnetic map by the interpretive symbol attached to each EM anomaly. Data from the inphase and quadrature responses, together with conductive and magnetic patterns and topography, the power line monitor and the flight track video were examined to locate cultural sources.



ANIAP and IDITAROD SURVEY AREA



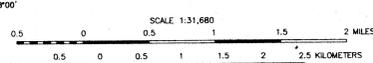
TOTAL MAGNETIC FIELD AND DETAILED ELECTROMAGNETIC ANOMALIES OF PARTS OF THE ANIAP AND IDITAROD MINING DISTRICTS, SOUTHWESTERN ALASKA

PARTS OF QUADRANGLE A-4 AND A-5
2000

TOTAL MAGNETIC FIELD

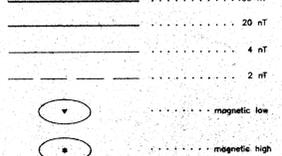
The total magnetic field data were acquired with a sampling interval of 0.1 seconds, and were (1) corrected for diurnal variations by subtraction of the digitally recorded base station magnetic data, (2) leveled to the tie line data, and (3) interpolated onto a regular 100 m grid using a modified Akima (1970) technique. The regional variation (or IGRF gradient, 2000, updated to May 2000) was removed from the leveled magnetic data.

Akima, H., 1970. A new method of interpolation and smooth curve fitting based on local procedures. *Journal of the Association of Computing Machinery*, v. 17, no. 4, p. 588-592.

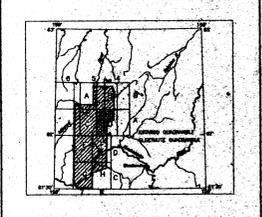


SCALE 1:31,680
CONTOUR INTERVAL 100 FEET
DATUM: MEAN SEA LEVEL

MAGNETIC CONTOUR INTERVAL



LOCATION INDEX FOR SCALE 1:51,680



SURVEY HISTORY

This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys (DGG&S), and Stevens Exploration Management Corp. (SEMCO), Division of Geological & Geophysical Surveys. Airborne geophysical data for the area were acquired by Fugro Airborne Surveys in 2000. Funding for the project was provided by the U.S. Department of Interior, Bureau of Land Management (BLM). Laurel Burns was the contract manager for DGG&S.

This map and other products from this survey are available by mail order or in person from DGG&S, 701 University Ave., Suite 200, Fairbanks, Alaska, 99708. Some products are also available in person only at the BLM's Bureau Mineral Information Center, 100 Spenko Road, Douglas, Alaska, 99824.