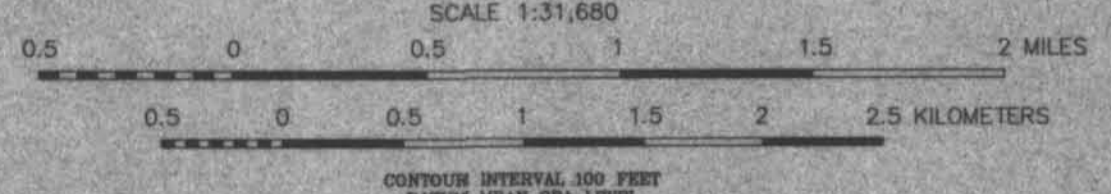


Base from U.S. Geological Survey Mineral B-6, 1984, 1:50,000, UTM projection, Alaska.



LOCATION INDEX FOR SCALE 1:31,680



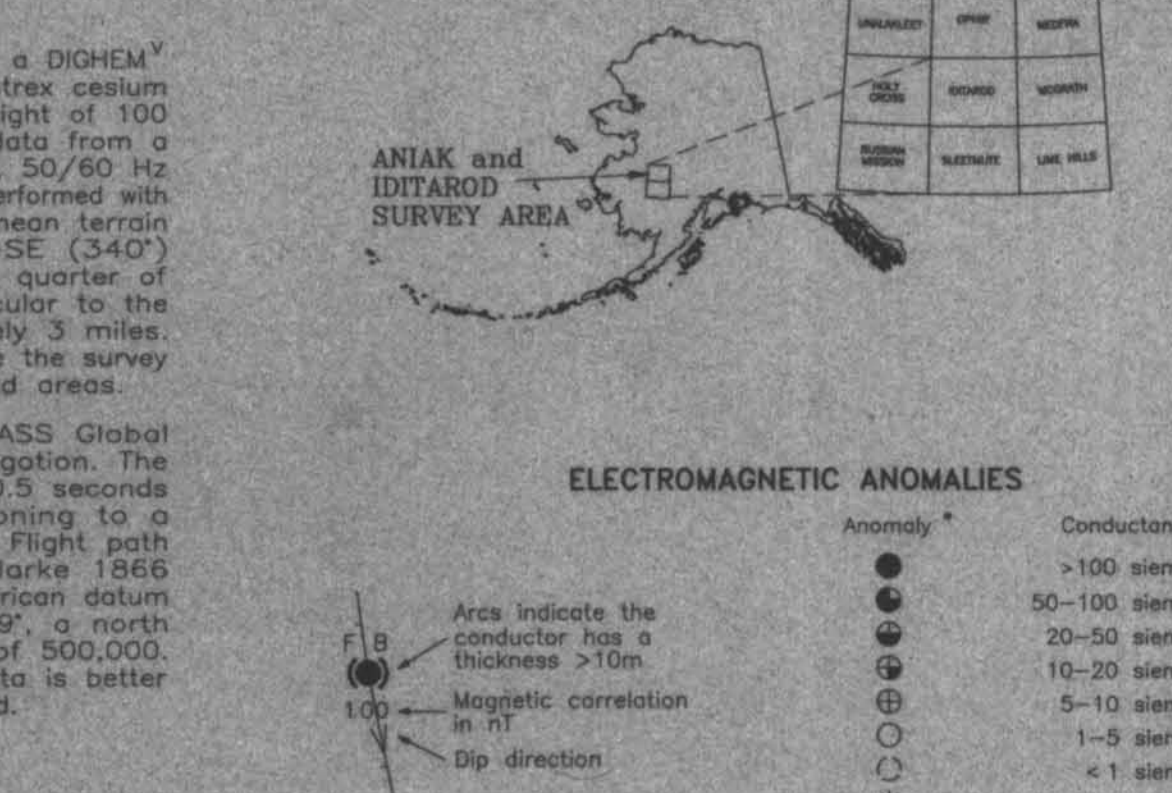
# TOTAL MAGNETIC FIELD AND DETAILED ELECTROMAGNETIC ANOMALIES OF PARTS OF THE ANIAK AND IDITAROD MINING DISTRICTS, SOUTHWESTERN ALASKA

PARTS OF IDITAROD B-5  
AND B-6 QUADRANGLES  
2000

**DESCRIPTIVE NOTES**

The geophysical data were acquired with a DIGHEM™ 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 rotor altimeter, GPS navigation system, 50/60 Hz monitors and video camera. Flights were performed with an AS350B-2 Squirrel helicopter at a mean terrain clearance of 200 feet along NW-SE (340°) survey flight lines with a spacing of a quarter of a mile. The 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.

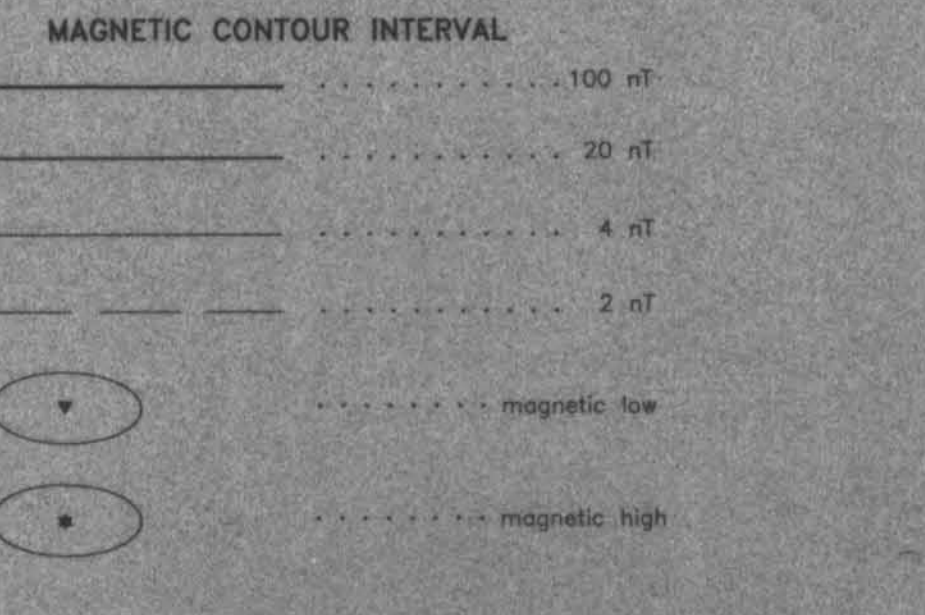
An Ashtech G24 NAVSTAR / GLONASS Global Positioning System was used for navigation. The helicopter position was derived every 0.3 seconds using post-flight differential positioning to a relative accuracy of better than 3 m. Flight path positions were projected onto the Clarke 1866 UTM zone 4J spheroid, 1927 North American datum, using a central meridian (CM) of 159° a north constant of 0 and a east constant of 500,000. Positional accuracy of the presented data is better than 10 m with respect to the UTM grid.



**TOTAL MAGNETIC FIELD**

The total magnetic field data were acquired with a sampling interval of 0.3 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 Aluma (1970) technique. The regional variation (or IGRF gradient, 2000, updated to May 2000) was removed from the leveled magnetic data.

Aluma, 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. 589-602.



**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 (DGGGS), and Stevens Exploration Management Corp. 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 DGGGS.

This map and other products from the survey are available by mail order or in person from 2005, 704 University Ave., Suite 200, Fairbanks, Alaska, 99709. Some products are also available in person only at the BLM's Alaska Mineral Information Center, 100 Saville Road, Douglas, Alaska, 99824.