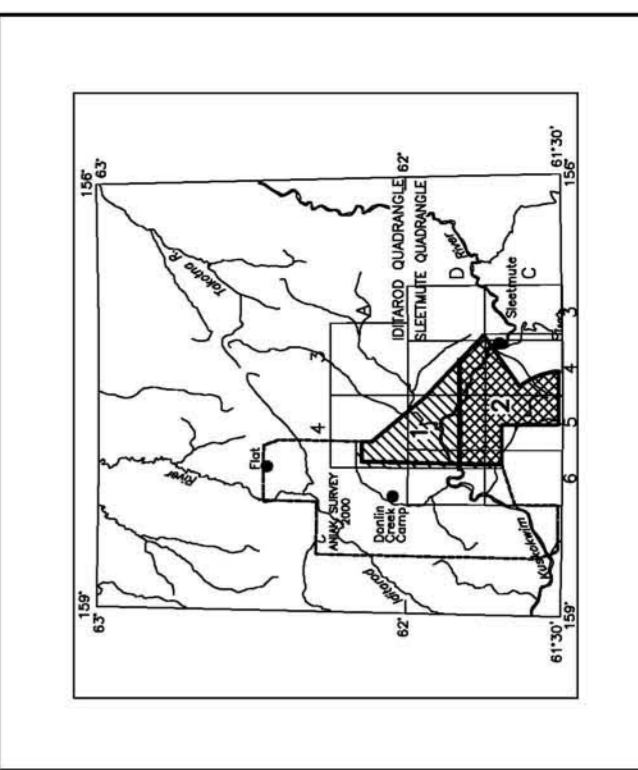


LOCATION INDEX



TOTAL MAGNETIC FIELD AND ELECTROMAGNETIC ANOMALIES OF THE SLEETMUTE AREA, SOUTHWESTERN ALASKA PARTS OF IDITAROD AND SLEETMUTE QUADRANGLES 2003

DESCRIPTIVE NOTES

The geophysical data were acquired with a DIGHEM[®] Electromagnetic (EM) system and a Sinterex cesium magnetometer. Both were flown at a height of 100 meters. The Sinterex magnetometer was equipped with a radar altimeter, GPS navigation system, 50/50 Hz monitors and video camera. Flights were performed with a survey flight lines with a spacing of a quarter of a mile. The flight lines were oriented along NW-SE (340°) and NE-SW (160°) directions. The instrument and flight line direction (2000) were similar to the current survey. An Ashtech G024 NAVSTAR / GLONASS Global Positioning System was used for navigation. The helicopter position was derived every 0.5 seconds and the flight path was recorded every 0.5 seconds. The relative accuracy of better than 5 m. Flight path positions were projected onto the Clarke 1866 projection. The map uses a central meridian (CM) of 159°, a north-south constant of 0 and an east constant of 500,000. The map is projected into the UTM grid. The map is better than 10 m with respect to the UTM grid.

ELECTROMAGNETIC ANOMALIES

- Anomaly
- >50 siemens
 - <50 siemens
 - * Questionable anomaly
 - △ Weak conductivity associated with an EM magnetic response

ELECTROMAGNETICS

To determine the location of EM anomalies or their boundaries, the DIGHEM[®] EM system measured inphase and quadrature components of five frequencies. Two vertical magnetic field components were measured at three horizontal coplanar-coil pairs operated at 800, 7200, and 36,000 Hz. EM data were sampled at 0.1 second intervals. The flight track video were examined to determine the location of anomalies that are included or classified by conductance.

TOTAL MAGNETIC FIELD

The total magnetic field data were acquired with a sampling interval of 0.1 seconds and were corrected for magnetic declination. The data were the digitally recorded base station magnetic data, (2) leveled to the line data, and (3) interpolated to a 100 m grid. The regional variation (or IGRF (1970) technique. The regional variation (or IGRF gradient, 2000, updated to September 2002) was removed from the leveled magnetic data.

Aviation based on local ground surface elevation of 1000 feet. Aerial photograph courtesy of the Alaska Department of Computing Machinery, v. 17, no. 4, p. 988-992.

MAGNETIC CONTOUR INTERVAL

.....	100 nT
.....	20 nT
.....	4 nT
.....	2 nT
.....	magnetic low
.....	magnetic high

SURVEY HISTORY

This map has been compiled from an earlier edition between the State of Alaska Department of Natural Resources, Division of Geological & Geophysical Surveys (DGGGS), and Stevens Exploration Management Corp. (SEMCO). The data were collected by SEMCO in 2002 and processed by Fugro Airborne Surveys in 2002. Funding for the project was provided by the Management (BLM). The Ahtak survey data shown along the western edge of the current map were collected by Fugro Airborne Surveys in 2002, by BLM, and published by DGGGS. The Ahtak survey was the contract manager for DGGGS.

This map and other products from this survey are available in hard copy form from the Alaska Department of Natural Resources, Division of Geological & Geophysical Surveys, Suite 200, Fairbanks, Alaska, 99709. Some products are also available in person only at the BLM's Bureau of Land Management, 100 Sawako Road, Douglas, Alaska, 99824.