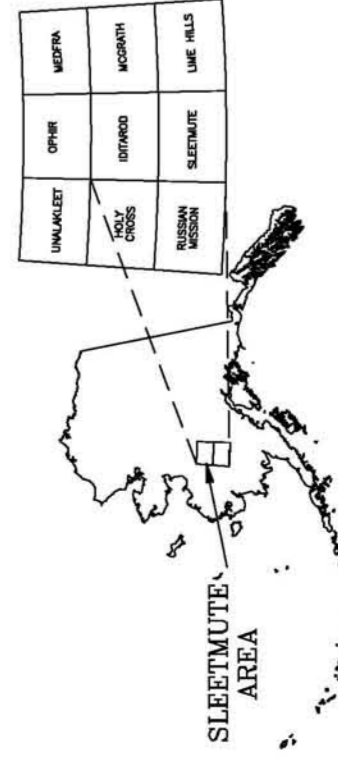


COLOR SHADOW TOTAL MAGNETIC FIELD OF THE SLEETMUTE AREA, SOUTHWESTERN ALASKA

PARTS OF IDITAROD AND SLEETMUTE QUADRANGLES

2003
Sun Azimuth: 340 degrees
Inclination: 30 degrees



DESCRIPTIVE NOTES

The geophysical data were acquired with a DIGHEM V Electromagnetic (EM) system and a Sinterex cesium magnetometer. Both were flown at a height of 100 meters. Data were collected using a Sinterex radar altimeter, GPS navigation system, 50/50 Hz monitors, and video camera. Flights were performed with a Sinterex aircraft. 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°) flight lines at intervals of approximately 3 miles. The instrumentation and flight line direction (2000) were similar to the current survey.

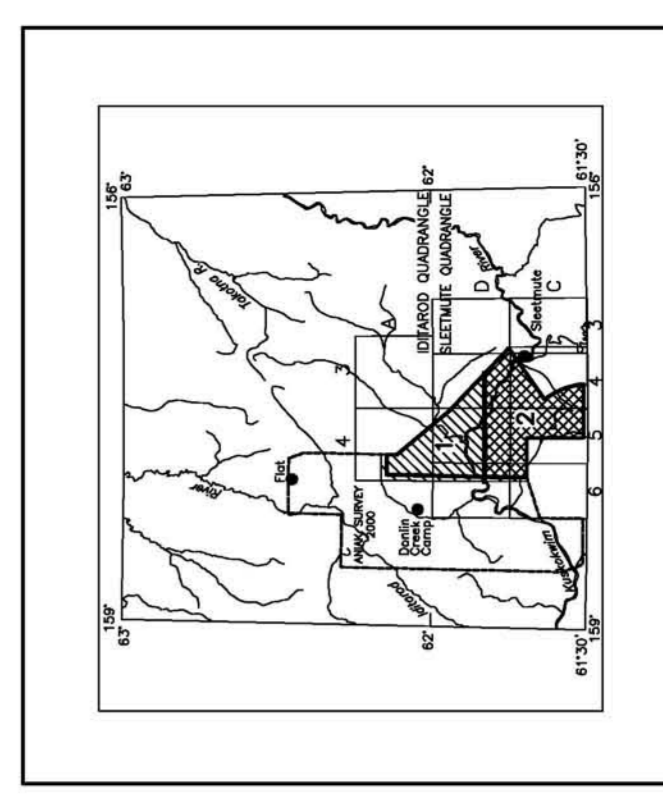
An Ashtech G024 NAVSTAR / GLONASS Global Positioning System was used for navigation. The helicopter position was derived every 0.5 seconds and the ground station position was derived every 1.0 seconds. The relative accuracy of better than 5 m. Flight path positions were projected onto the Clarke 1866 datum. The datum was derived from a north-south constant of 0 and an east constant of 500,000. The datum is similar to the UTM datum. The datum 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 0.1 seconds, and were (1) corrected for diurnal variations by subtraction of the mean value, (2) leveled to the tie line data, and (3) interpolated onto a regular 100 m grid using a modified Akima gradient, 2000, updated to September, 2002) was removed from the leveled magnetic data.

Moore, H., 1970. A new method of interpolation and smooth curve fitting. *Journal of Geophysical Research*, v. 75, no. 24, p. 589-602.

LOCATION INDEX



SURVEY HISTORY

This map has been compiled from earlier published maps of the State of Alaska. The Department of Natural Resources, Division of Geological & Geophysical Surveys (DGGGS), and Stevens Exploration Management Corp. (SEM) conducted the survey in 2002. The data were collected and processed by Fugro Airborne Surveys in 2002. The data were processed by the U.S. Geological Survey (USGS) for the project. The Alaska survey data shown along the western edge of the current survey were derived from a survey conducted by the USGS in 2000, updated to September, 2002) was removed from the leveled magnetic data.

The map and other products from this survey are available in digital format from the Alaska Division of Geological & Geophysical Surveys, 100 Seward Road, Douglas, Alaska, 99824. Some products are also available in person only at the BLM's Bureau of Land Management, 100 Seward Road, Douglas, Alaska, 99824.