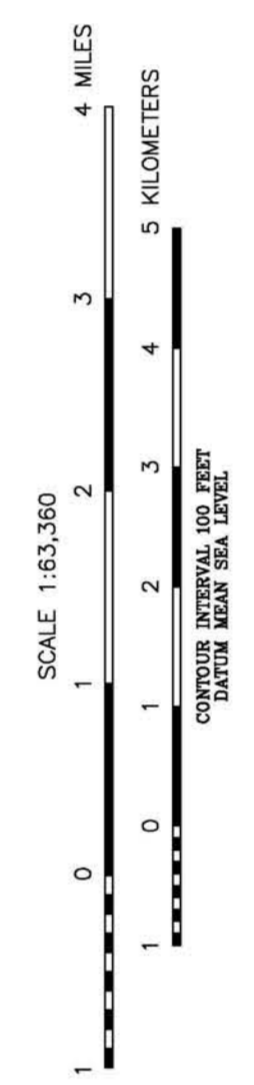


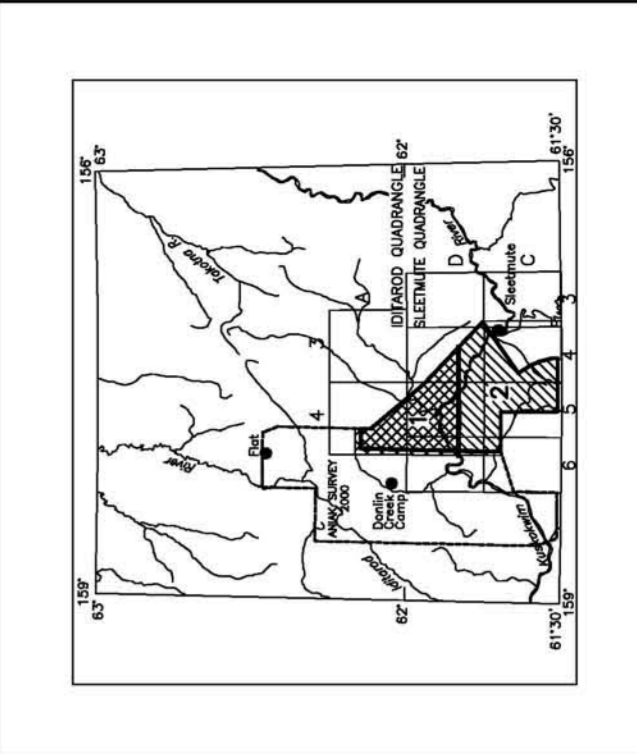
INT

54952.0
54950.1
54948.7
54947.8
54946.6
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54943.6
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54942.7
54942.5
54942.3
54942.1
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54941.7
54941.5
54941.3
54941.0
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54937.1
54936.8
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54936.4
54936.1
54935.8
54935.5
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54934.2
54934.0
54933.8
54933.6
54933.4
54933.1
54932.9
54928.1
54925.9
54923.8
54921.0
54917.2
54912.1
54904.6
54900.1

62°10' 62°05' 62°00' 61°55' 61°50' 157°40' 157°30' 157°20' 157°10'



LOCATION INDEX



TOTAL MAGNETIC FIELD OF THE SLEETMUTE AREA, SOUTHWESTERN ALASKA

PARTS OF IDITAROD AND SLEETMUTE QUADRANGLES

2003

DESCRIPTIVE NOTES

The geophysical data acquired with a DIGIKEY Electromagnetic (EM) system and a Sinterex cesium magnetometer. Both were flown at a height of 100 feet. In addition to the survey, recorded data, 160 Hz monitors and video camera. Flights were performed with an AS350B-2 Squirrel helicopter at a mean terrain altitude of 1000 feet. The flight lines were spaced at a mile, with flight lines perpendicular to the survey flight lines with a spacing of a quarter of a mile. The instrument used for the flight line directions, attitude, and spacing used for the Aniak survey (2000) were similar to the current survey.

An Ashtech GG24 NAVSTAR / GLONASS Global Positioning System was used for navigation. The flight lines were flown using a post-flight differential positioning to a relative accuracy of better than 5 m. Flight path data were collected using a Fugro Airborne datum (UTM zone 4) spheroid, 1927 North American datum using a central meridian (CM) of 159°, a north datum shift of 100 m, and a scale factor of 0.999 963 4. Positional accuracy of the presented data is better than 10 m with respect to the UTM grid.

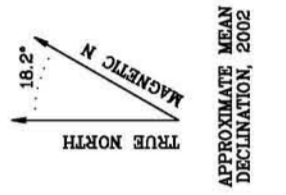
TOTAL MAGNETIC FIELD

The total magnetic field data were acquired with a sampling interval of 0.1 seconds, and were reduced to magnetic north. The data were the digitally recorded base station magnetic data, (2) leveled to the tie 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.

Adams, H., 1979, A new method of interpolation and smooth curve fitting, *Journal 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 and Geophysical Surveys (DGGS), and Stevens Exploration Management Corp. (SEMCO), and published by the U.S. Geological Survey. Funding for the project was provided by the U.S. Department of the Interior, Bureau of Land Management, Alaska Division, and the State of Alaska. The map and other products from this survey are available by mail order or in person from DGGS, 794 University Ave., Suite 200, Fairbanks, Alaska, 99709. Some products are also available from the U.S. Geological Survey's Mineral Information Center, 100 Sawilko Road, Douglas, Alaska, 99824.



VERTICAL DATUM: NAVSAR83