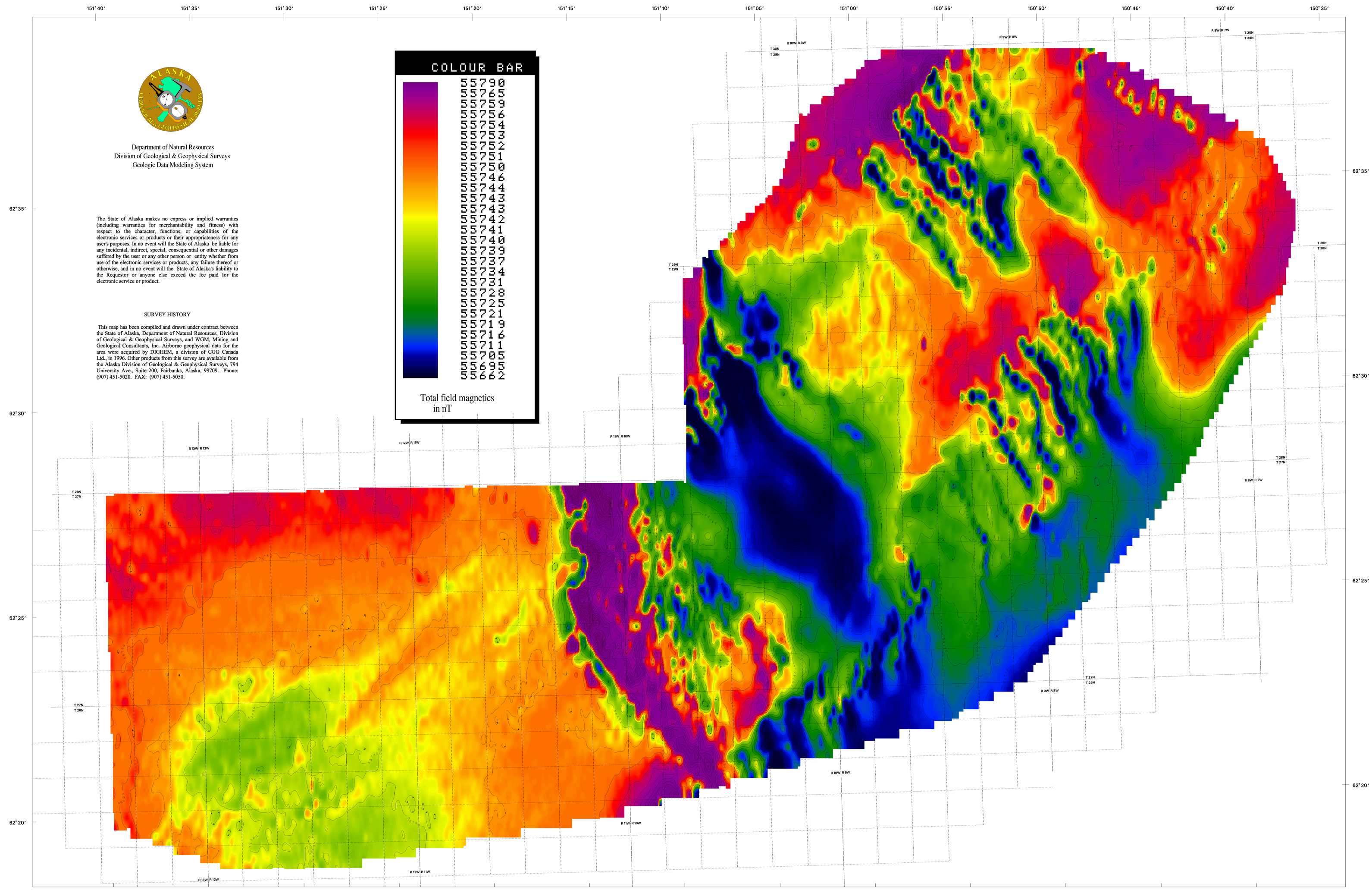


Department of Natural Resources
Division of Geological & Geophysical Surveys
Geologic Data Modeling System

The State of Alaska makes no express or implied warranties (including warranties for merchantability and fitness) with respect to the character, functions, or capabilities of the electronic services or products or their appropriateness for any user's purposes. In no event will the State of Alaska be liable for any incidental, indirect, special, consequential or other damages suffered by the user or any other person or entity whether from use of the electronic services or products, any failure thereof or otherwise, and in no event will the State of Alaska's liability to the Requestor or anyone else exceed the fee paid for the electronic service or product.

SURVEY HISTORY

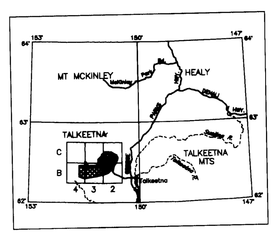
This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys, and WGM, Mining and Geological Consultants, Inc. Airborne geophysical data for the area were acquired by DIGHEM, a division of CGG Canada Ltd., in 1996. Other products from this survey are available from the Alaska Division of Geological & Geophysical Surveys, 794 University Ave., Suite 200, Fairbanks, Alaska, 99709. Phone: (907) 451-5020. FAX: (907) 451-5050.

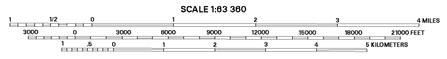
Section outlines from U.S. Geological Survey topographic bases: Talkeetna B-3, B-4, 1954; C-3, C-4, 1958; Quadrangles, Alaska

TOTAL FIELD MAGNETICS

The total field magnetic data were acquired with a sampling interval of 0.1 seconds. The magnetic data 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, 1985 updated to October 1996) 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. 589-602.





TOTAL FIELD MAGNETICS OF THE PETERSVILLE MINING DISTRICT, ALASKA

1998

DESCRIPTIVE NOTES

Geophysical data were acquired with a DIGHEM Electromagnetic (EM) system, a Scintrex cesium CS2 magnetometer, and a Herz VLF system installed in an AS350B-1 Squirrel helicopter. In addition, the survey recorded data from a radar altimeter, GPS navigation system, 50/60 Hz monitors, and video camera. Flights were performed at a mean terrain clearance of 200 feet along 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 three miles.

A Sercel Real-Time Differential Global Positioning System (RT-DGPS) was used for both navigation and flight path recovery. The helicopter position was derived every 0.5 seconds using both real-time and post-processing differential positioning to a relative accuracy of better than 10 m. Flight path positions were projected onto the Clarke 1866 (UTM) spheroid, 1927 North American datum using a Central Meridian (CM) of 153 degrees, a 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.

amlc: /files11/laurel/jgp97/peters/amlc/?pet.aml plot: /files11/laurel/jgp97/peters/plots/pecri97-6.gra

April 13, 1999