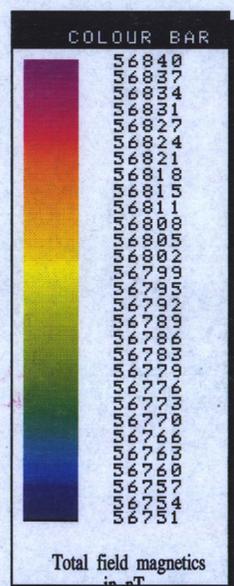
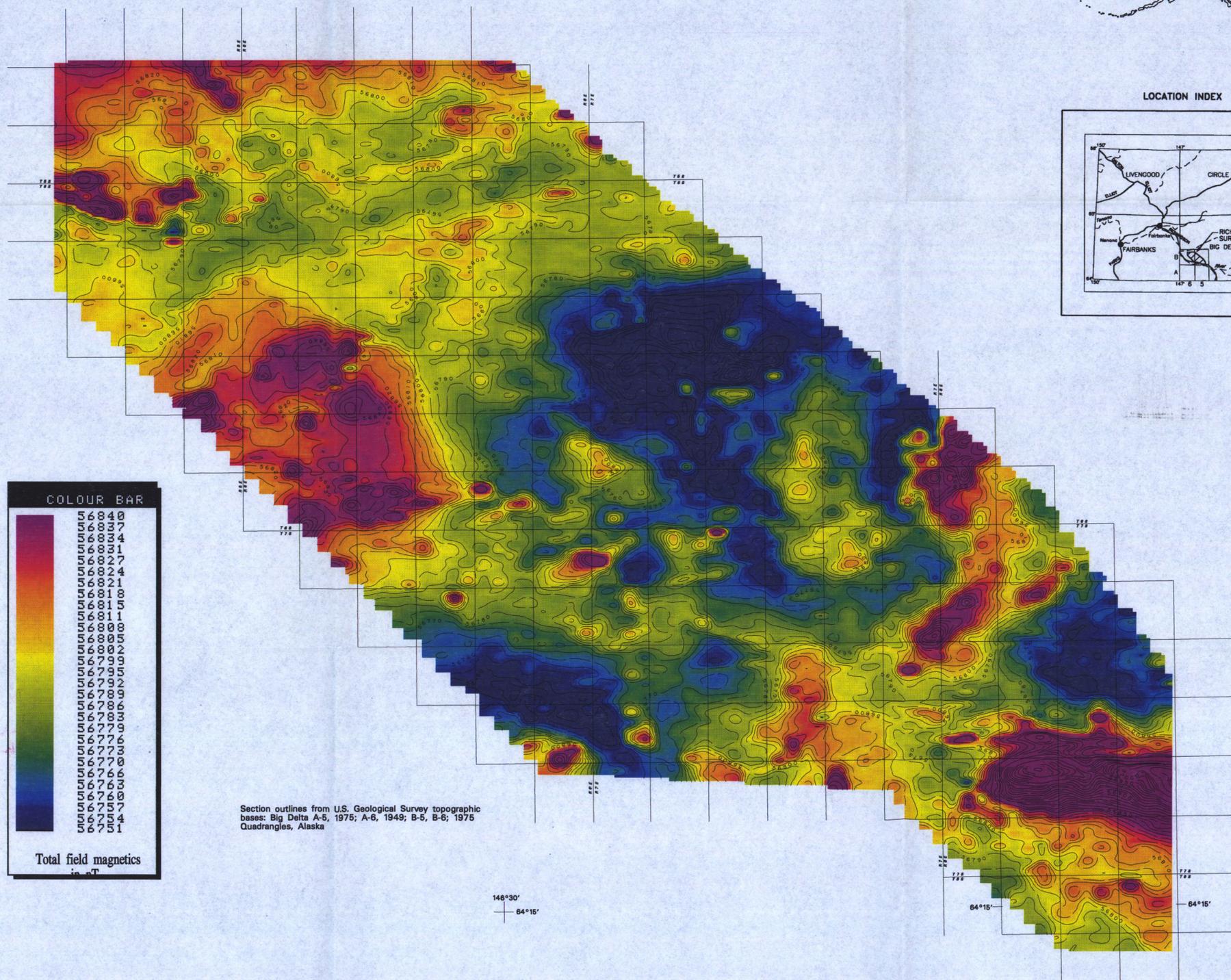
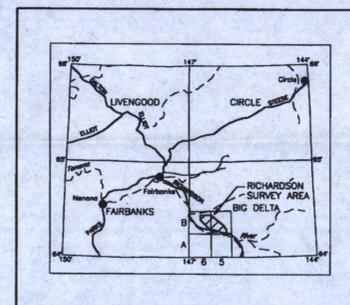


148°30'  
64°30'

64°30'  
148°00'



LOCATION INDEX



Section outlines from U.S. Geological Survey topographic bases: Big Delta A-5, 1975; A-6, 1949; B-5, B-6; 1975 Quadrangles, Alaska

148°30'  
64°15'

64°15'  
148°00'

NOTE: Most of the data lie within the range shown on the color bar. A few extreme low and high values (in black and purple respectively) do not show up on the color bar. They range from about 56710 to about 57120 nT for the Richardson aeromagnetic map. The values can be seen in Report of Investigations RI 95-9, the map that shows the aeromagnetic contour lines. Other colored versions are available on request.

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 less than 10 m. Flight path positions were projected onto the Clarke 1866 (UTM) spheroid, 1927 North American datum using a Central Meridian (CM) of 147 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.

TOTAL FIELD MAGNETICS

The magnetic total field contours were produced using digitally recorded data from a Scintrex cesium CS2 magnetometer, 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) levelled to the tie line data, and (3) interpolated onto a regular 100 m grid using a modified Akima (1970) technique. The regional variation (IGRF gradient, 1985, updated to August, 1994) was removed from the levelled magnetic data.

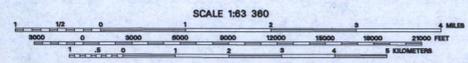
Akima, H., 1970, A new method of interpolation and smooth curve fitting based on local procedures: Journal of the Association of Computing Machinery, v. 17, no. 4, p. 589-602.

TOTAL FIELD MAGNETICS OF THE RICHARDSON MINING DISTRICT  
IGRF REMOVED; MODIFICATION 1 (CONTOUR LINES ADDED; COLORS SHOW DETAIL IN HIGH AND LOW VALUES)

1995



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



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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 was acquired by DIGHEM, a division of CGG Canada Ltd., in 1994. Other products from this survey are available from the Alaska Division of Geological & Geophysical Surveys, 734 University Ave., Suite 200, Fairbanks, Alaska, 99709.