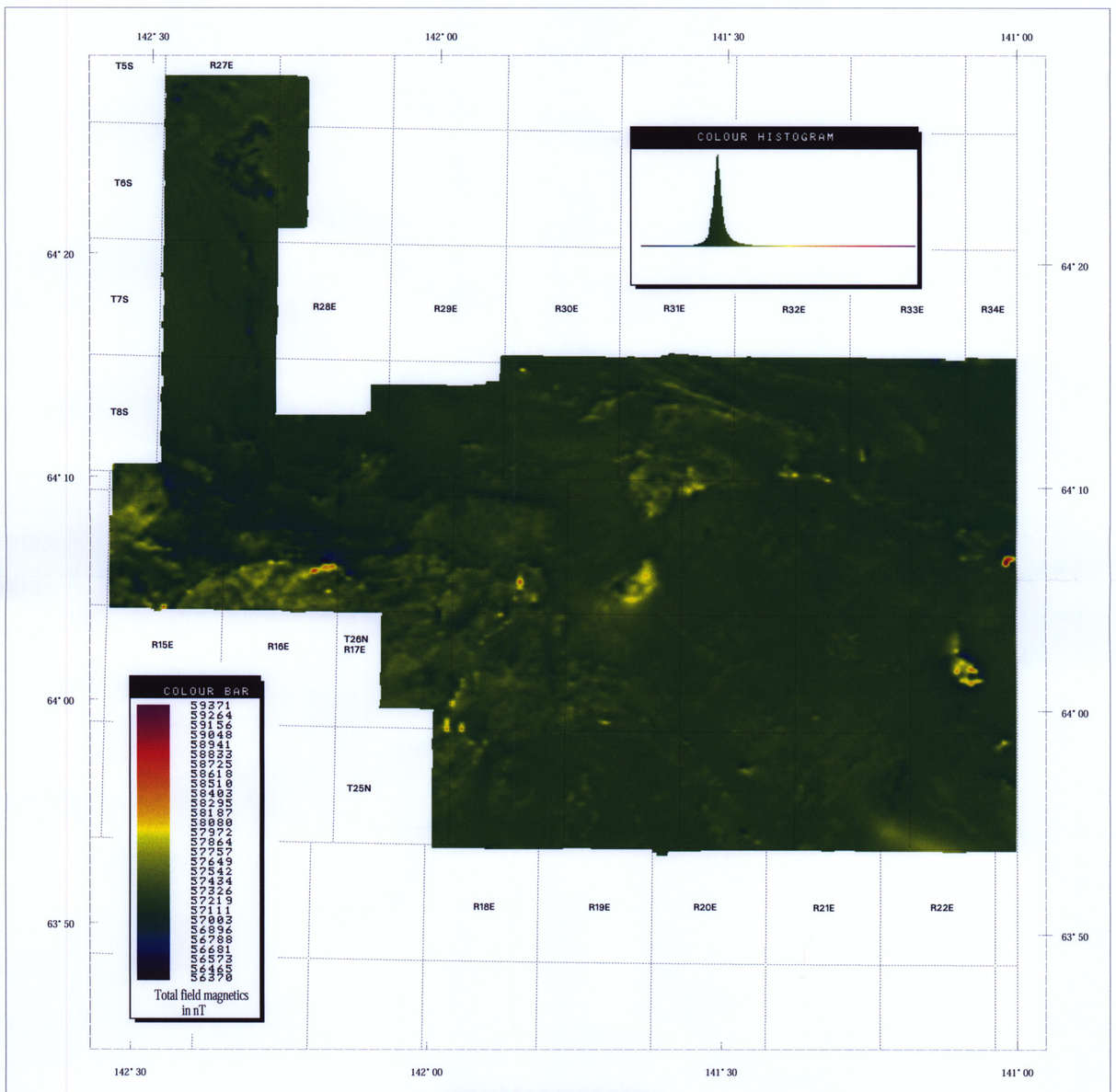
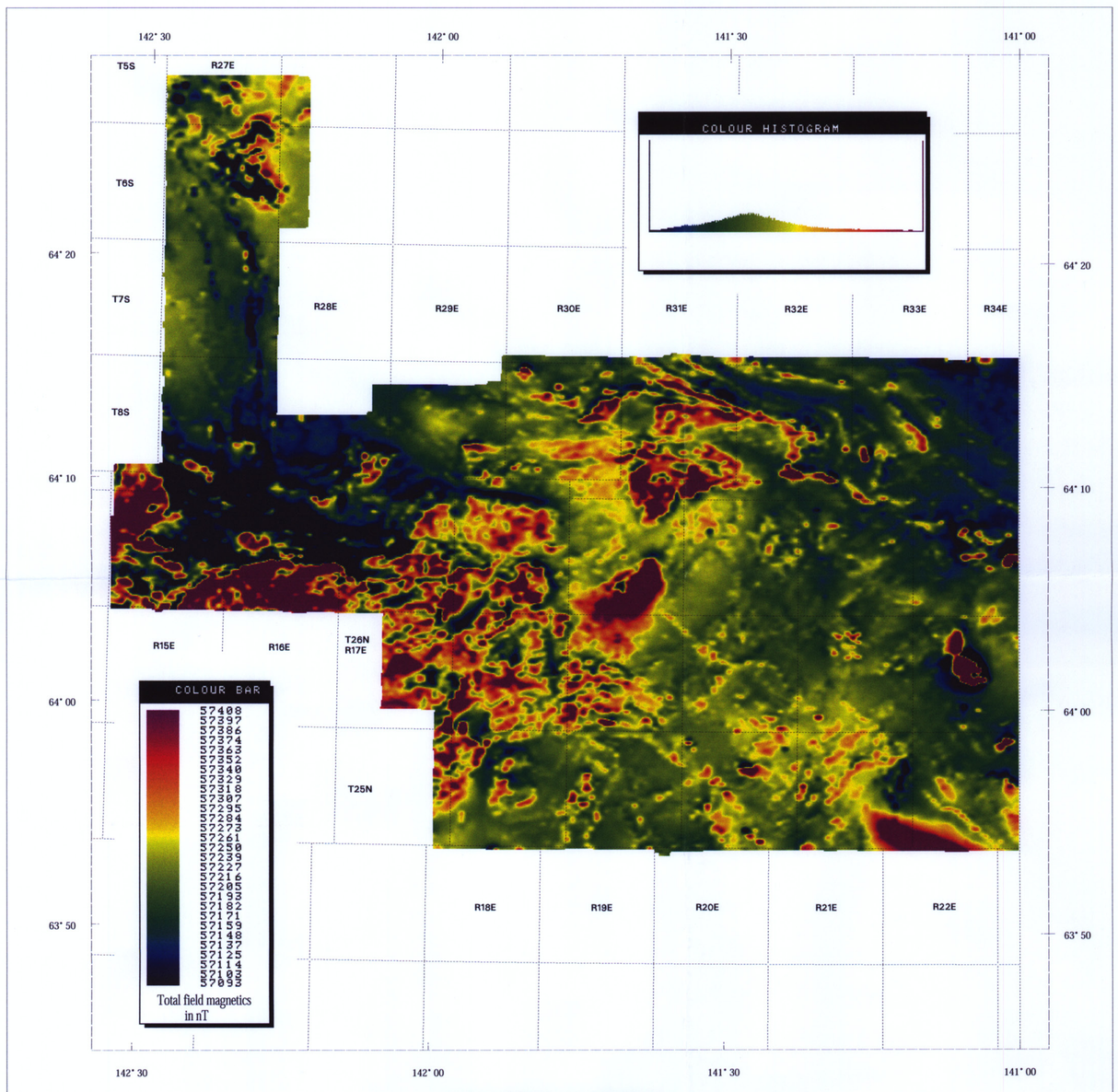
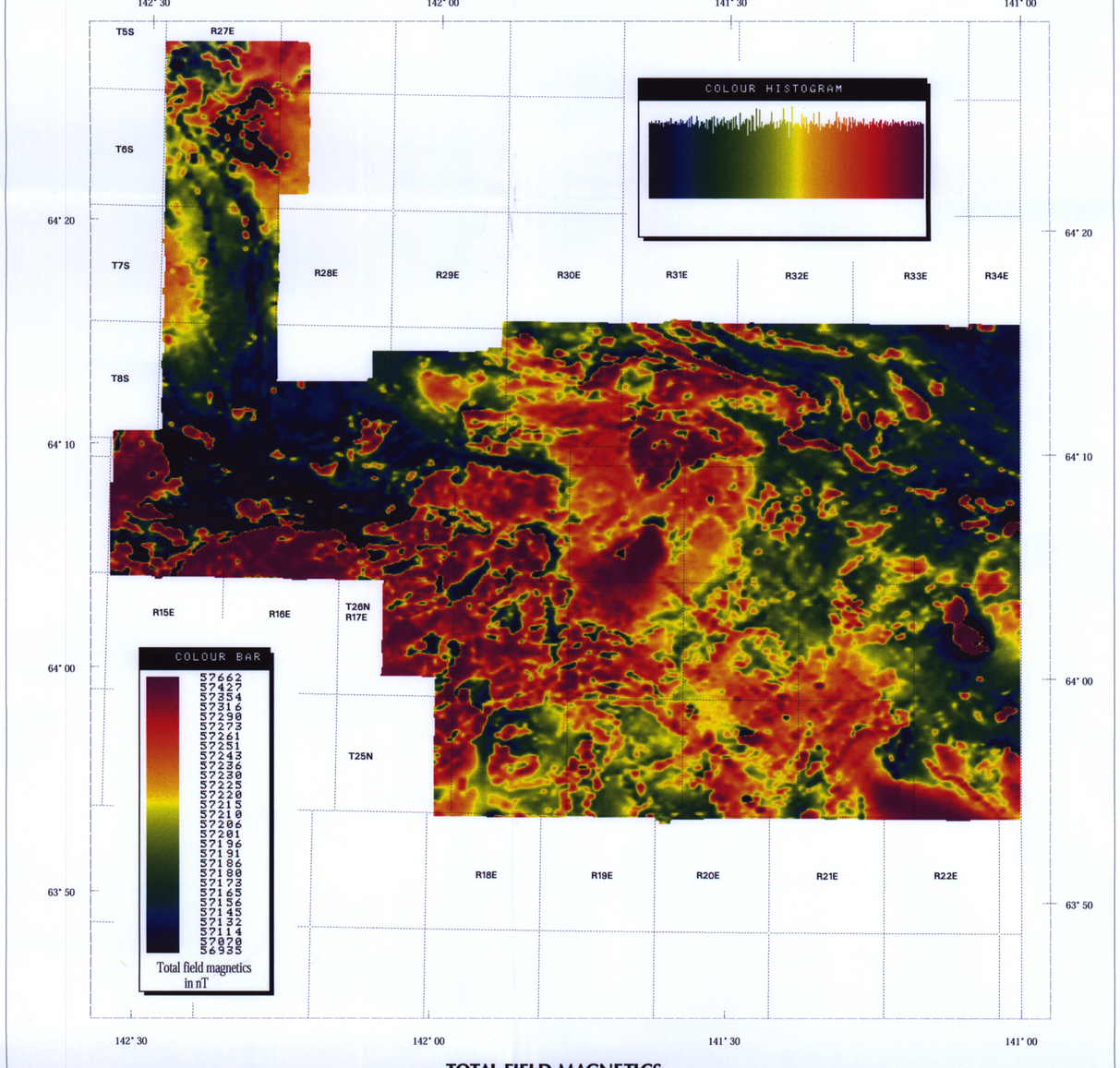


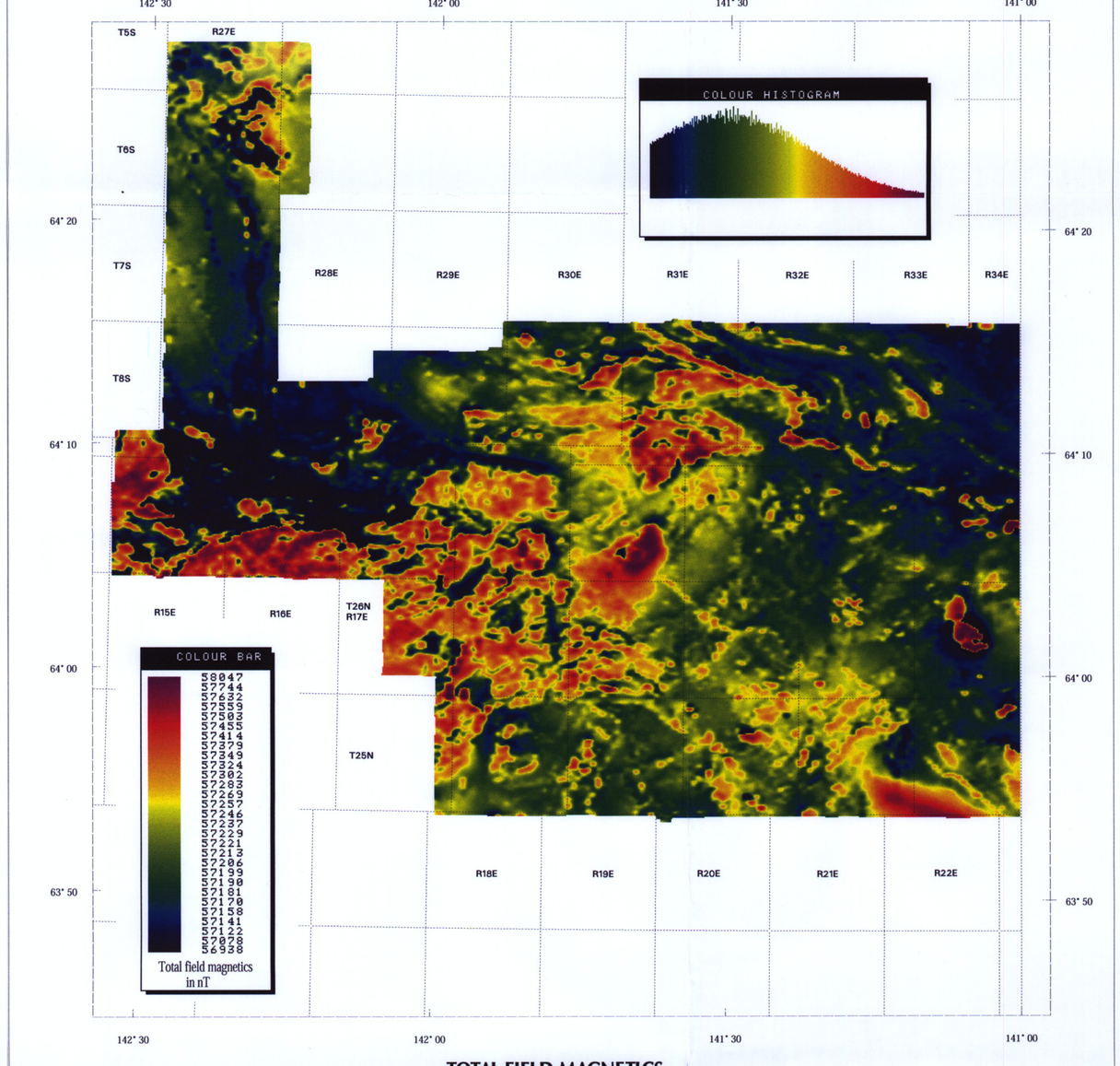

TOTAL FIELD MAGNETICS
LINEAR DISTRIBUTION COLOR SCHEME




TOTAL FIELD MAGNETICS
MODIFIED LINEAR COLOR SCHEME




TOTAL FIELD MAGNETICS
EQUAL AREA COLOR SCHEME




TOTAL FIELD MAGNETICS
GAUSSIAN COLOR SCHEME

Section grid from U. S. Geological Survey topographic bases: Eagle A-1, (1956), A-2 (1956), A-3 (1957), A-4 (1956), B-1 (1956), B-2 (1956), B-3 (1956), and B-4 (1956); Tanacross D-1 (1956) and D-2 (1956) Quadrangles, Alaska.

### SURVEY HISTORY

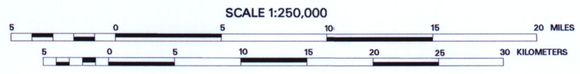
This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Surveys (DGGS), and Stevens Exploration and Management Corporation. Airborne geophysical data for the area were acquired by Geoterrex-Dighem, a division of CGG Canada Ltd., in 1998.

This map and other products from this survey are available from the Alaska Division of Geologic & Geophysical Surveys, 794 University Ave., Suite 200, Fairbanks, Alaska 99709.

### DESCRIPTIVE NOTES

Geophysical data were acquired with a DIGHEM Electromagnetic (EM) system and a Scintrex cesium magnetometer. Both were flown at a height of 100 feet. A Herz VLF system was flown at a height of 130 feet. In addition the survey recorded data from a radar altimeter, GPS navigation system, 50/60 Hz monitors, and video camera. Flights were performed with an AS350B-2 Squirrel helicopter 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 3 miles.

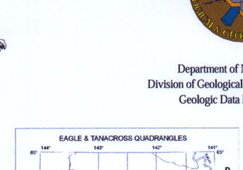
An Ashtec/Racal Real-Time Differential Global Positioning System (RT-DGPS) was used for both navigation and flight path recovery. The helicopter position was derived every 0.5 seconds using real-time differential positioning to a relative accuracy of less than 10 meters. Flight path positions were projected onto the Clarke 1866 (UTM zone 7) spheroid, 1927 North American datum using a central meridian (CM) of 141 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.



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

# COLOR SCHEME VARIATIONS OF THE TOTAL FIELD MAGNETICS FOR PART OF THE FORTYMILE MINING DISTRICT




### TOTAL FIELD MAGNETICS

The total field magnetic data were acquired with a sampling interval of 0.1 seconds, and 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 gradient, 1995, updated to September, 1998) 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.

### COLOR SCHEMES

Different color schemes shown above with histograms and corresponding color bars emphasize different aspects of the gridded data. The color schemes shown here were taken from the program I-Power Visions, which was produced by Geoterrex-Dighem. The linear color scheme on the upper left emphasizes only the extreme high and low values of the dataset. The linear color on the upper right is modified such that only five percent of the data is shown in purples and blues (high and low) and more detail can be seen in the midrange data. The equal points color scheme (bottom left) shows more detail about the data in the mid-range by allotting the same number of points to each color, thereby spreading middle values among more colors. The colors shown in the bottom right approaches the Gaussian (normal) distribution and shows more detail in the high and low values than the equal points scheme.



/files14/laurel/gp99/40mile/arnls /files14/laurel/gp99/40mile/plots

March 31, 1999