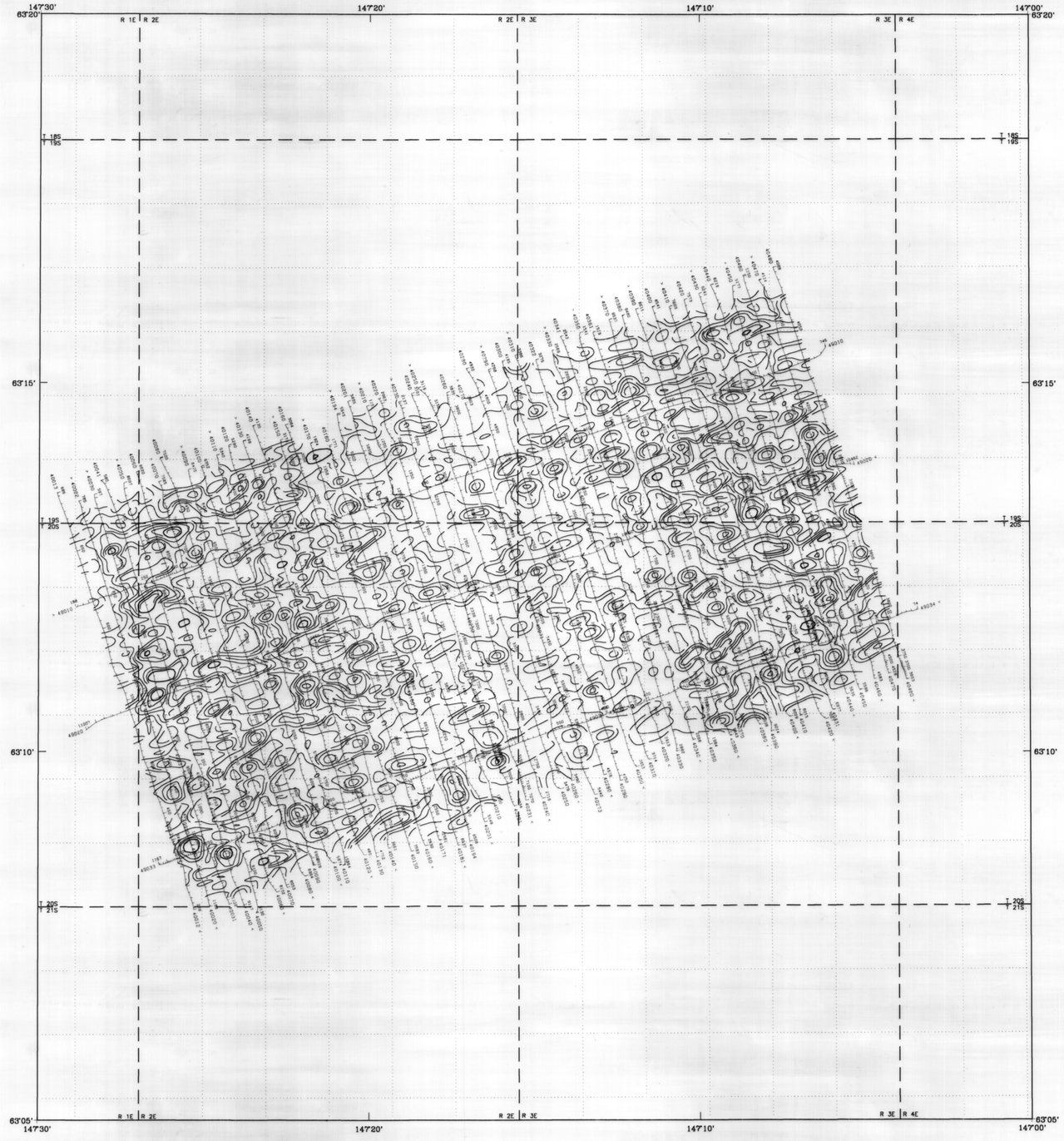
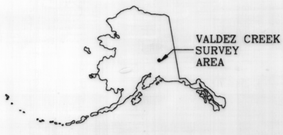


Section outlines from U.S. Geological Survey topographic bases: Healy A-1 (1949); Healy B-1 (1950); Quadrangles, Alaska



SCALE 1:63,360

1 0 1 2 3 4 MILES

1 0 1 2 3 4 5 KILOMETERS

APPROXIMATE MEAN DECLINATION, 1949

FILTERED TOTAL FIELD VLF OF THE VALDEZ CREEK MINING DISTRICT

1994

DESCRIPTIVE NOTES

The geophysical data were acquired with a DIGHEM^V 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 147, 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.

FILTERED VLF

The Herz Industries Totem 2A-VLF system recorded the total and vertical quadrature EM field at a sample interval of 0.1 seconds. Filtered total field data from the transmitter station at Annapolis, Maryland (NSS-21.4 kHz) were interpolated onto a regular 100 m grid using a modified Akima (1970) technique.

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.

VLF CONTOURS

Contours in percent

10

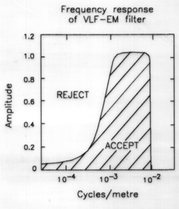
2

1

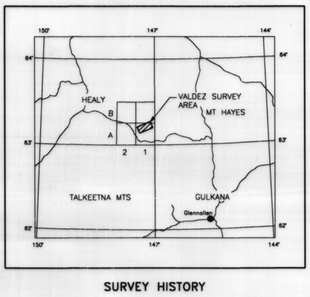
STATION

NSS Annapolis (Md.) - 21.4 kHz

Frequency response of VLF-EM filter



LOCATION INDEX



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 Surveys & Processing, Inc. in 1993. Other products from this survey are available from the Alaska Division of Geological & Geophysical Surveys, 794 University Ave., Suite 200, Fairbanks, Alaska, 99709.