

Base from U.S. Geological Survey Big Delta D-3, 1958; D-4, 1958; Quadrangles, Alaska

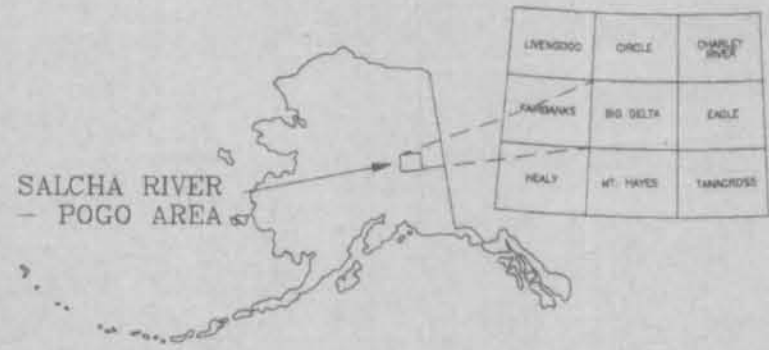
DESCRIPTIVE NOTES

The geophysical data were acquired with a DIGHEM<sup>TM</sup> Electromagnetic (EM) system, Explorem 80-820 gamma-ray spectrometer and a Scintrex cesium magnetometer. The EM and magnetic sensors were flown at a height of 100 feet. The gamma-ray spectrometer was flown at a height of 200 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 NW-SE (340°) survey flight lines with a spacing of a quarter of a mile. The lines were flown perpendicular to the flight lines at intervals of approximately 3 miles.

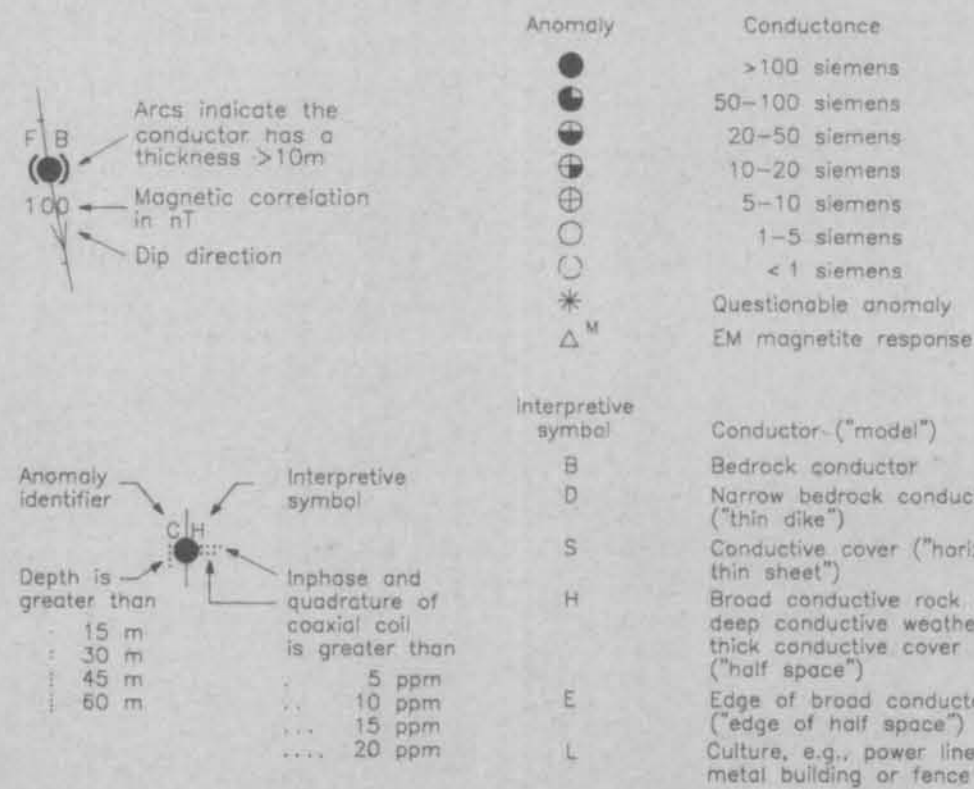
An Ashtech G24 NAVSTAR<sup>®</sup> CLONASS Global Positioning System was used for navigation. The helicopter position was derived every 0.5 seconds using post-flight differential positioning to a relative accuracy of better than 5 m. Flight path positions were projected onto the Clarke 1866 (UTM zone 6) 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.

ELECTROMAGNETICS

To determine the location of EM anomalies or their boundaries, the DIGHEM<sup>TM</sup> EM system measured inphase and quadrature components at five frequencies. Two vertical coaxial-coil pairs operated at 300 and 550 Hz while three horizontal coplanar-coil pairs operated at 900, 7200, and 55,000 Hz. EM data were sampled at 0.1 second intervals. The EM system responds to bedrock conductors, conductive overburden, and cultural sources. The type of conductor is indicated on the aeromagnetic map by the interpretive symbol attached to each EM anomaly. Determination of the type of conductor is based on EM anomaly shapes of the coaxial- and coplanar-coil responses, together with conductor and magnetic patterns and topography. The power line monitor and the flight track video were examined to locate cultural sources.



ELECTROMAGNETIC ANOMALIES



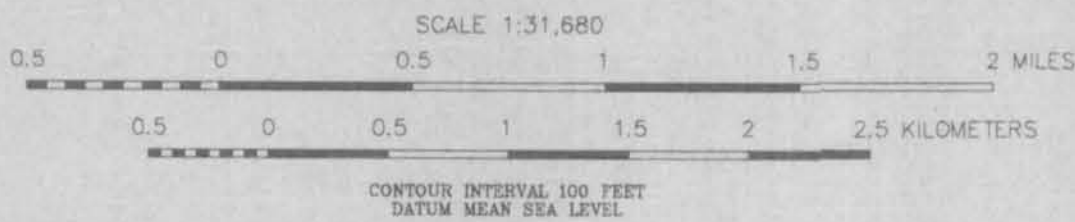
TOTAL MAGNETIC FIELD AND  
DETAILED ELECTROMAGNETIC ANOMALIES  
OF THE SALCHA RIVER - POGO MINING AREA,  
CENTRAL ALASKA

PARTS of BIG DELTA D-3  
and D-4 QUADRANGLES  
2000

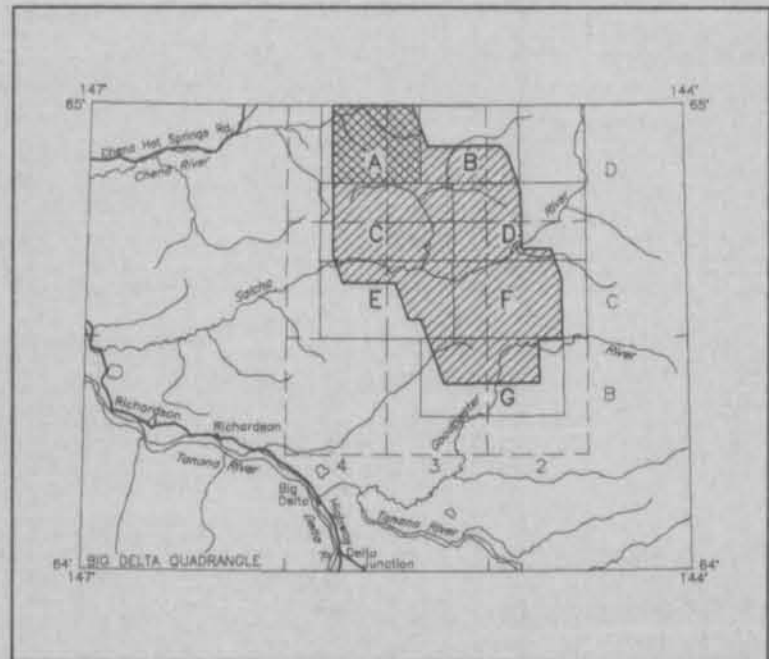
TOTAL MAGNETIC FIELD

The total magnetic field 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 1999) was removed from the leveled magnetic data.

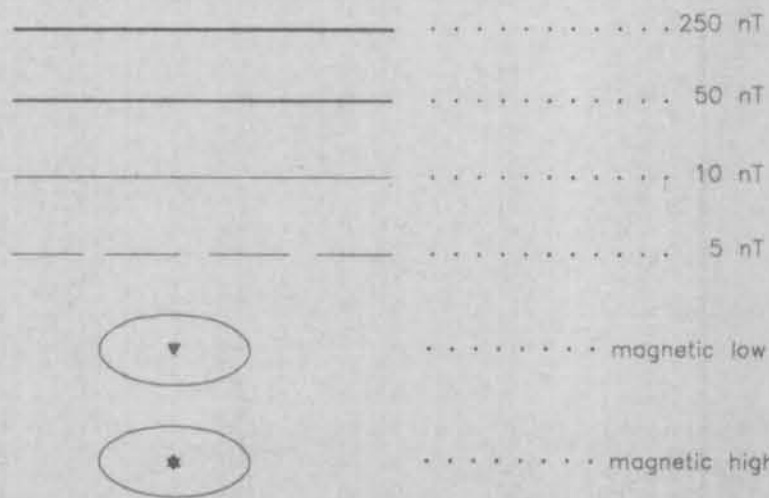
Akima, H. 1970. A new method of interpolation and smooth curve fitting based on local procedures. *Journal of the Association of Computing Machinery*, v. 17, no. 4, p. 589-602.



LOCATION INDEX FOR SCALE 1:31,680



MAGNETIC CONTOUR INTERVAL



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 Management Corp. Airborne geophysical data for the area were acquired by Geotrex-Digheem, a division of CGG Canada Ltd., in 1999. Laurel Burns was the contract manager for DGGs. This 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.