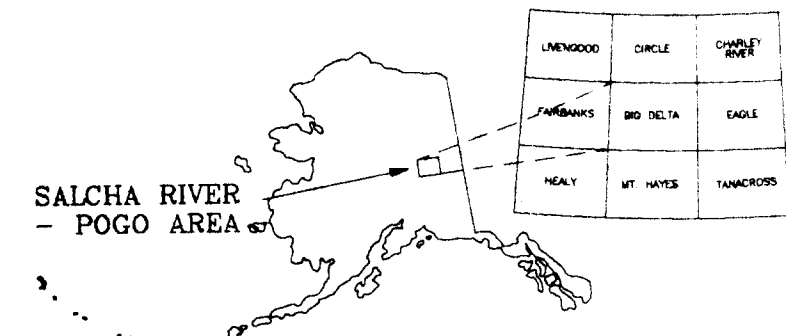
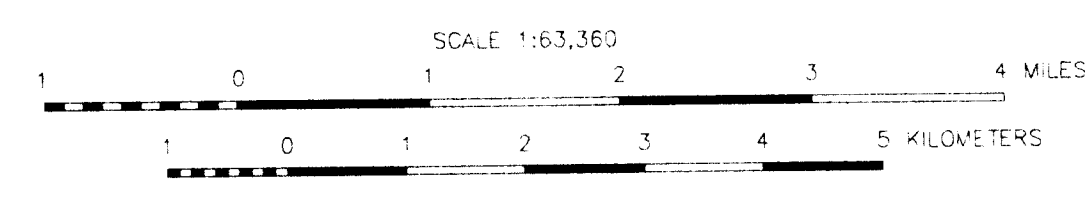


Sections withdrawn from U.S. Geological Survey Big Delta C-2, 1956, C-3, 1966, C-4, 1966, D-2, 1966, D-3, 1966, D-4, 1966, Coast Range, Alaska



7200 Hz COPLANAR RESISTIVITY OF THE SALCHA RIVER - POGO MINING AREA, CENTRAL ALASKA

BIG DELTA QUADRANGLE
2000

DESCRIPTIVE NOTES

The geophysical data were acquired with a DIGHEM[®] Electromagnetic (EM) system, Epiromium G8-820 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 cameras. 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.

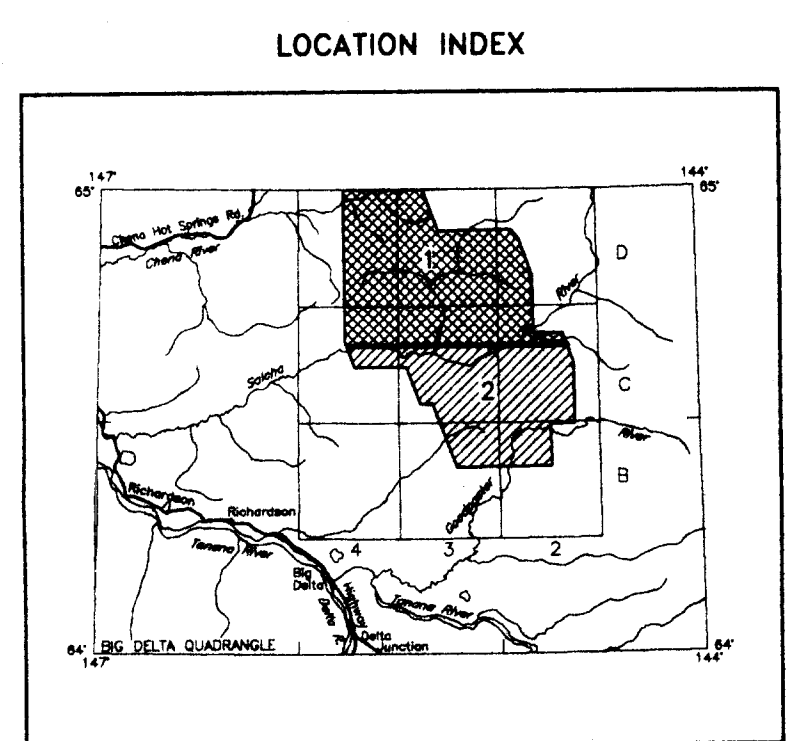
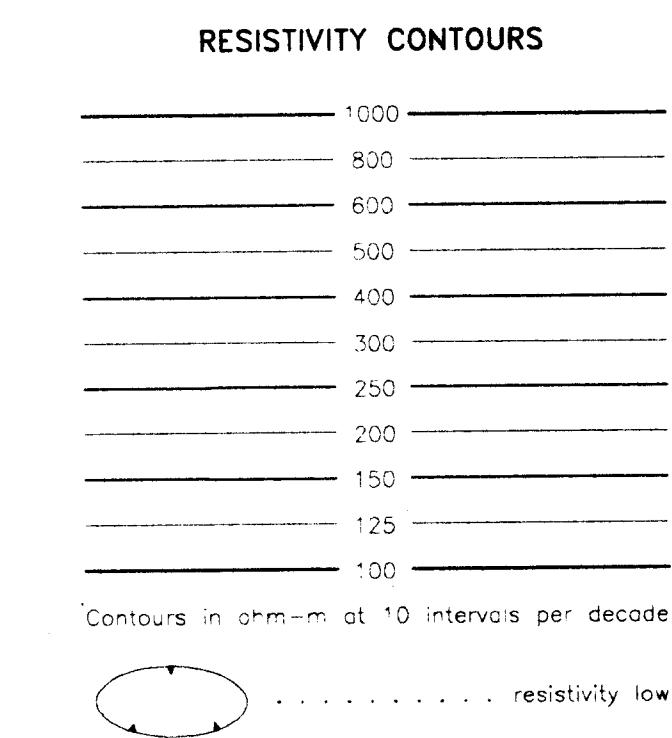
An Ashtech GG24 NAVSTAR / GLONASS Global Positioning System was used for navigation. The helicopter position was derived every 0.5 seconds using post-flight differential positioning to a relative accuracy of better than 5 m. Flight path positions were projected onto the Clarke 1866 (UTM zone 6) spheroid, 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.

RESISTIVITY

The DIGHEM[®] EM system measured in-phase and quadrature components at the frequencies. Two vertical coplanar coil pairs operated at 900 and 5500 Hz while three horizontal coplanar-coil pairs operated at 900, 700, 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. Apparent resistivity is generated from the in-phase and quadrature components of the coplanar 7200 Hz using the pseudo-over hole-sphere model (Foster, 1978). The data were interpolated onto a regular 100 m grid using a modified Akima (1978) technique.

Akima, H., 1978. A new method of interpolation and smooth curve fitting based on local properties. *Journal of the Association of Computing Machinery*, 31, 2: 589-602.

Foster, D.C., 1978. Resistivity mapping with an airborne multi-coil electromagnetic system. *Geophysics*, v. 43, p. 144-172.



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 (DGGG), and Stevens Exploration Management Corp., Anchorage. Geophysical data for the area were acquired by Geotrex-Digheim, a division of CGG Canada Ltd., in 1999. Laurel Burns was the contract manager for DGGG. This map and other products from this survey are available by mail order or in person from DGGG, 794 University Ave., Suite 200, Fairbanks, Alaska, 99709.

APPROXIMATE MEAN DECLINATION 1990