



The geophysical data were acquired with a DIGHEMY Electromagnetic (EM) system and a Fugro D13440 helicopter. The EM system was mounted on the helicopter's floor and the EM and magnetic sensors were flown at a height of 600 feet. Additionally, a laser altimeter, GPS navigation system, 50/60 Hz interference filter, and a digital data recorder were performed with an AS-350-B3 Squirrel helicopter at a mean terrain clearance of 200 feet. The flight track was spaced at intervals of approximately 3 miles. The line spacing of a quarter of a mile. The lines were collected at intervals of approximately 3 miles.

A Novatel OEM4-G2L global Positioning System was used for navigation. The helicopter position was determined by differential positioning to a relative accuracy of 1 meter. The aircraft position was projected onto the Clarke 1886 UTM zone 4 sphereid, 1927 North American datum using a datum shift of 10 meters. The horizontal distance of 0 and an east constant of 500,000m. Positional accuracy was better than 10m with respect to the UTM grid.

The DIGHEM[®] EM system measured inphase and quadrature components at five frequencies. Two vertical coaxial coil-pairs operated at 1000 and 5500 Hz, three horizontal coplanar coil-pairs operated at 900, 1000 and 5500 Hz. The EM system was sampled every second intervals. The EM system responds to bedrock conductors, conductive overburden, and cultural sources. Apparent resistivity is generated from the inphase and quadrature components and is used to generate a pseudo-layer half space model. The data were interpolated onto a regular 80 m grid using a modified Akima (1970) technique. All grids were then resampled from the 80 m cell size down to a 25 m cell size to produce the maps and final grids contained in this publication.

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.

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In areas where the EM bird height exceeded 150 m, resistivity was not calculated. This avoids meaningless resistivity calculations due to small signals where the helicopter flew higher to avoid cultural objects or for safety reasons. Blank areas in the grids were created where zones of high flying correlated over more than one survey line.

This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Survey (DGGS), and Fugro GeoServices, Inc. Airborne geophysical data and maps of this area were originally processed by Fugro Airborne Surveys Corp. in 2010 and 2011. Previously flown DGGS surveys adjacent to the current survey are shown in the location of the data. The project was completed in 2012. Publication. The project was funded by the Alaska State Legislature as part of the Alaska Airborne Geological & Geophysical Mineral Inventory Program.

All data and maps produced to date from this survey are available for public use. For a nominal fee, users through DGGS, 3354 College Road, Fairbanks, Alaska 99709-3707, and are downloadable for free from the DGGS website (www.dggs.alaska.gov/pub/). Maps are available on paper through the same office, and are viewable online at the website in Adobe Acrobat PDF file format.