

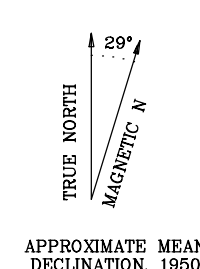
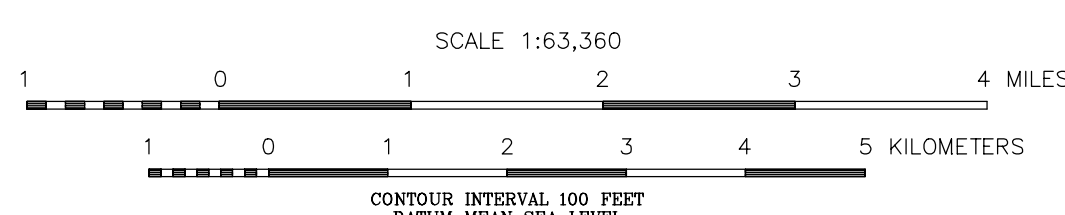
The geophysical data were acquired with a DIGHEM[®] electromagnetic (EM) system, a Sinterex cesium CS2 magnetometer, and a Herz VLF system installed in an aircraft. The system was flown in a series of survey lines recorded data from a radar altimeter, GPS navigation system, 50/60 Hz monitors and video 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.

PARTS OF NOME AND SOLOMON QUADRANGLES

by
Laurel E. Burns, Fugro Airborne Surveys Corp., and Stevens Exploration Management Corp.
2004

The DIGHEM[®] EM system measured inphase and quadrature components at five frequencies. Two vertical coaxial coil-pairs operated at 900 and 5000 Hz while three horizontal coplanar coil-pairs operated at 900, 7200 and 56,000 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 inphase and quadrature component of the coplanar 7200 Hz using the pseudo-layer half space model. The data 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.



The map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geological & Geophysical Survey and Stevens Engineering Management Corp. The map was produced by Eugene Airborne Surveys, Inc. and supercedes the earlier fully revised, released DGGS in 1994. Airborne geophysical data for areas 1 and 2 were acquired and processed in 1993 under contract between DGGS and WGM, Mining and Geological Consultants, Inc. The data for areas 1 and 2 was provided by Bering Straits Native Corporation. The subcontractor acquiring and processing the data was Digital Data Systems, Inc. All other data and products from this survey are available from DGO, 3354 College Road, Fairbanks, Alaska, 99709-0370.

