

PARTS OF HOWARD PASS AND MISHEGUK MOUNTAIN QUADRANGLES

by
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2006

DESCRIPTIVE NOTES

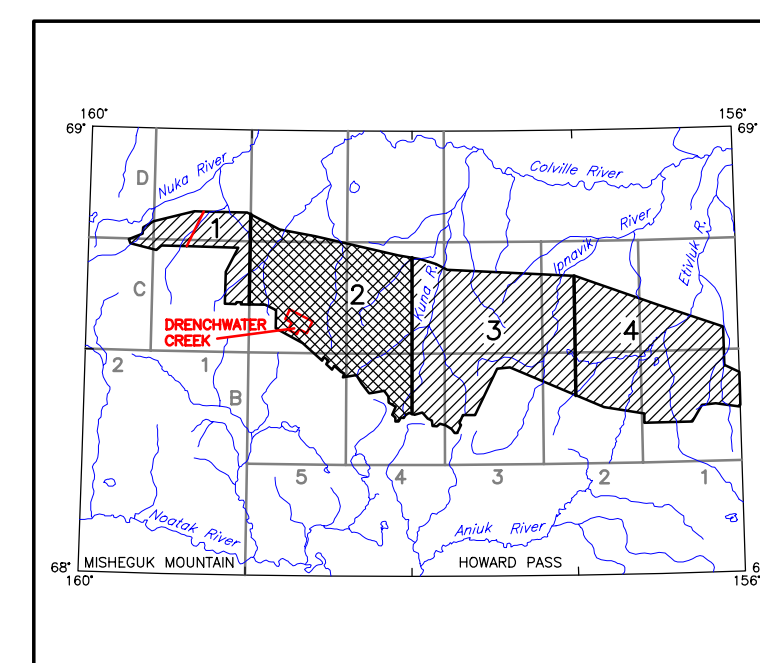
The geophysical data were acquired with a BIODOM Electromagnetic (EM) system and a Sinterrex console magnetometer. The system consists of a transmitter and a receiver, both of which are suspended from a helicopter. The height of the 60-m cables, in addition to the survey recorded data from a radar altimeter, provides video camera. Flights were performed with a minimum clearance of 200 feet along NW-SE (340°) survey lines, and a minimum 100-m clearance along NE-SW (225°) survey flight lines. The survey area was divided into 100-m by 100-m cells, spaced a quarter of a mile with the exception of the Dranchwater Creek area (red area) where the cells were spaced 100 m apart. The cells were spaced one eighth of a mile. The line lines were spaced 100 m apart. The survey area was divided into intervals of approximately 3 miles except for the Dranchwater Creek area where the interval was 1.5 miles.

An Ashtech G224 NAVSTAR GPS/GNSS Global Positioning System (GPS) was used for navigation. The helicopter position was derived every 0.5 seconds. The accuracy of the GPS was better than 1 m. The relative accuracy of better than 5 m. Flight path was recorded every 0.5 seconds. The GPS was used to record (UTM zone 4) stereo, 122 North American datum, using a central meridian (CM) of 159° 00' 00" W. The GPS was used to record the position of the helicopter. The positional accuracy of the presented data is better than 1 m.

RESISTIVITY

The DIGHEM[®] EM system measured inphase and quadrature components at five frequencies. Two vertical coaxial coil-pairs operated at 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 900 Hz using the pseudo-layer half space method and data from the vertical coils using the layer 80 m mid, using the modified Waiya [1972] technique.

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 (DGGs), and Stevens Exploration Management Corp. Airborne geophysical data for the area were acquired and processed by Fugro Airborne Surveys Corp. in 2005. Funding for the project was provided by the U.S. Department of the Interior, Bureau of Land Management.

This map and other products from this survey are available by mail order in person from DGGS, 3354 College Road, Fairbanks, Alaska, 99709-3707. Published maps are also available for viewing or downloading as Adobe Acrobat Files (*.pdf) on our Web site (<http://www.dggs.dnr.state.ak.us/pubs/>). Some products are also available for viewing at the BLM Alaska State Office, 222 W. 7th Avenue, Anchorage, AK 99513.