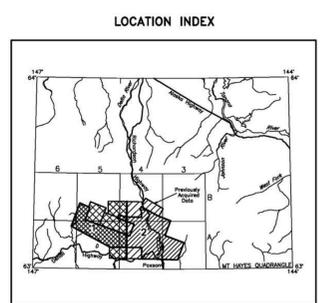
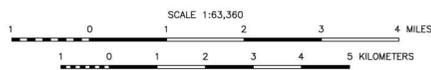
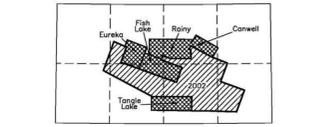


Section outlines from U.S. Geological Survey Mt. Hayes A-4, 1976; A-5, 1978; A-6, 1979; B-4, 1984; B-5, 1976; B-6, 1978; Quadrangles, Alaska



DIGITAL ELEVATION MODEL OF THE SOUTHERN DELTA RIVER AREA, EAST-CENTRAL ALASKA

PARTS OF MT. HAYES QUADRANGLE
2003



DESCRIPTIVE NOTES

The geophysical data were acquired with a DIGEM[®] Electromagnetic (EM) system and a Scintrex cesium magnetometer. Both were flown at a height of 100 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 N20°E 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 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.

PREVIOUSLY SURVEYED AREAS

The previously acquired geophysical data were acquired with an Aerodot Concor Electromagnetic (EM) system and a Scintrex cesium magnetometer. The electromagnetic system utilized two vertical coaxial coil pairs at 936 Hz and 4,476 Hz and three horizontal coil pairs at 849 Hz, 4,189 Hz and 32,490 Hz. Mean terrain clearance for the magnetometer and EM system were slightly higher than 150 and 100 feet, respectively. In addition the survey recorded data from a radar altimeter, GPS navigation system, 60 Hz monitor and video camera. The GPS electronic positioning system operated in differential mode. The flight line direction varies from block to block as follows: Cornwall N30°E, Eureka and Fish Lake N20°E, and Rainy and Tangle Lake N-S. The flight lines were one-eighth mile apart. Extended tie lines were flown with the current survey which cover both the 1995 and 2002 survey areas. The older survey was flown with an AS350B2 helicopter.

DIGITAL ELEVATION MODEL

This Digital Elevation Model (DEM) has been computed from GPS "Z" values minus the aircraft altimeter data recorded during the course of a helicopter-borne geophysical survey flown at a nominal line spacing of a quarter of a mile, azimuth 20 degrees. Elevation values have been interpolated/gridded between survey lines. Every effort has been made to make the model a useful general reference. No guarantee can be made that this model is a true representation of the height above sea level and it may contain radar altimeter responses from buildings and in some instances dense timber. Users of the product should be aware of the topographic limitations mapped herewith.

DO NOT USE THIS MAP FOR NAVIGATION PURPOSES



DIGITAL ELEVATION CONTOURS



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 (DGGGS), and Stevens Exploration Management Corp. Airborne geophysical data for the current area were acquired and processed by Fugro Airborne Surveys in 2002. Airborne geophysical data for the Cornwall, Eureka, Fish Lake, Rainy and Tangle Lake areas were acquired in 1995 by Aerodot Inc. and were provided for publication by the BLM. The current survey was funded by the U. S. Department of Interior, Bureau of Land Management (BLM) and conducted in support of its mineral assessment program in the Delta River mining district. Laurel Burns was the contract manager for DGGGS.

This map and other products from this survey are available by mail order or in person from DGGGS, 704 University Ave., Suite 200, Fairbanks, Alaska, 99709. Some products are also available in person only at the BLM's Juneau Mineral Information Center, 100 Savikko Road, Douglas, Alaska, 99824.