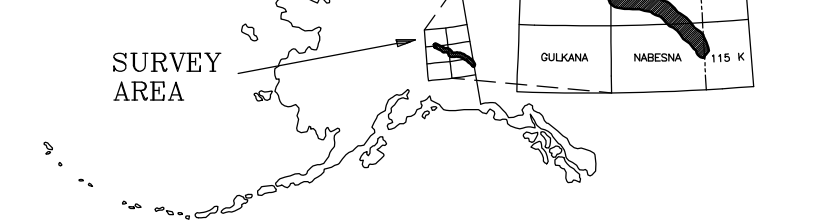


**400 Hz COPLANAR APPARENT RESISTIVITY
OF THE ALASKA HIGHWAY CORRIDOR,
EAST-CENTRAL ALASKA**

PARTS OF TANACROSS QUADRANGLE

by
Laurel E. Bums, Fugro Airborne Surveys Corp., and Stevens Exploration Management Corp.
2006

Fig. 100-10, Geophysical Survey of the Alaska Highway Corridor, East-Central Alaska, 2006. Scale 1:63,360. UTM Zone 18N. UTM coordinates in meters.



DESCRIPTIVE NOTES
The geophysical data were acquired with a RESOLVE Electromagnetic (EM) system and a Scripps cesium magnetometer. The EM and magnetic sensors were flown at a height of 100 feet. In addition, the survey recorded data from a radar altimeter, GPS navigation system, 100/400 Hz monitors and video camera. Flights were performed using AS350B-2 and AS350B-3 Squirrel helicopters at a mean terrain clearance of 200 feet along NW-SE (350') 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 Autech G24 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 real-time accuracy of better than 5 m. Flight path positions were projected onto the Clarke 1858 UTM zone 18N spheroid, 1927 North American datum using a central meridian (CM) of 141°, 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.



SCALE 1:63,360
0 1 2 3 4 MILES
0 1 2 3 4 5 KILOMETERS
COORDINATE INTERVAL: 100 FEET
MAP GRID: 100 METERS

RESISTIVITY ALTITUDE LIMITS
In areas where the EM bird height exceeded 100 m, and the response and quadrature signals were below 3 ppm, the resistivity was not calculated and the grid is blank. This avoids meaningless resistivity calculations due to small signals in areas where the helicopter flew higher to avoid cultural objects or for safety reasons.

RESISTIVITY
The RESOLVE EM system measured in-phase and quadrature components of six frequencies. One vertical coaxial coil-pair operated at 3500 Hz while five horizontal capacitor coil-pairs operated at 400, 1800, 8200, 42000 and 142000 Hz with time intervals of 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 component of the 400 Hz using the pseudo-layer half space model. The data were interpolated onto a regular 80 m grid using a modified Akima (1970) technique.
Akima, H., 1970. A new method of interpolation and smooth curve fitting based on local properties, *Journal of the Association of Computing Machinery*, v. 17, no. 4, p.889-892.

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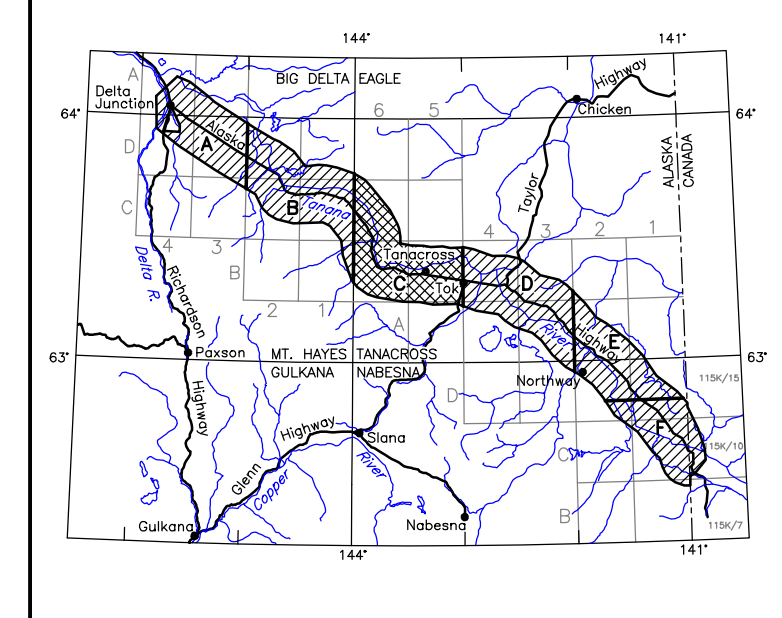
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LOCATION INDEX



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 new area were acquired and processed by Fugro Airborne Surveys Corp. in late 2005 and early 2006.
This map and other products from this survey are available by mail order or in person from DGGS, 3364 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.adn.state.ak.us/pubs/>).