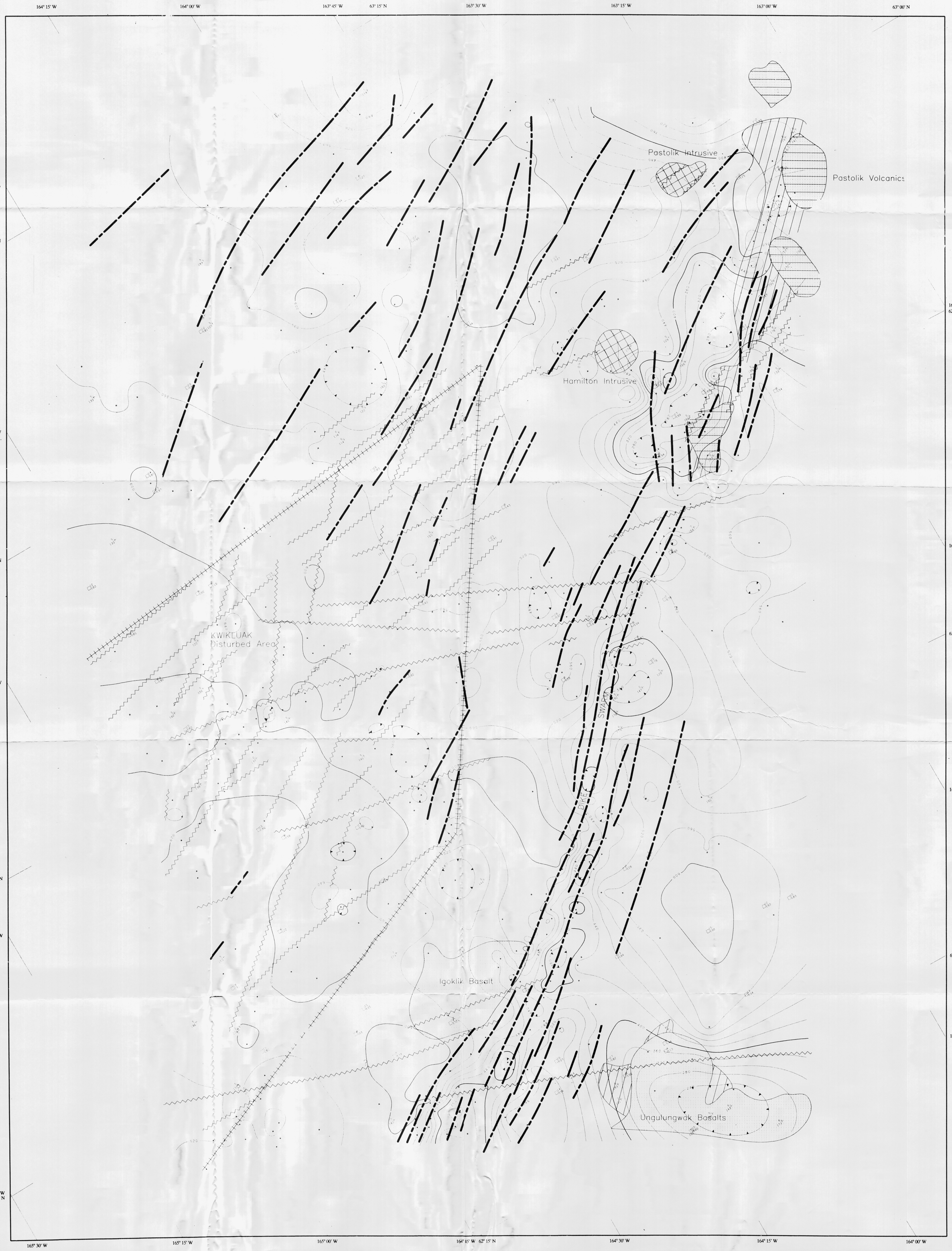

Section outlines from U.S. Geological Survey topographic bases: Black (1951); St. Michael (1952); Kwiguk (1952); Quadrangles, Alaska

DESCRIPTIVE NOTES

The aeromagnetic data were acquired using a Scintrex H8 cesium vapor magnetometer and an RMS AADC-4 automatic compensator installed in a 680 Aero Commander fixed-wing aircraft. In addition, the RMS DAS-8 digital acquisition system recorded data from both radar and barometric altimeters, from the GPS navigation/positioning system, from the 60 Hz monitor and from the video camera. Differential post-processing of the GPS data resulted in a relative positional accuracy of 10 meters or better.

SURVEY DATE	SEPTEMBER-NOVEMBER 1995
AVERAGE SENSOR ELEVATION	300 FEET ABOVE TERRAIN
CLARKE 1866 SPHEROID	UTM PROJECTION ZONE 3
INCLINATION	73.1 DEGREES NORTH
DECLINATION	15.9 DEGREES EAST
INTENSITY	54750 nT
CONTOUR INTERVAL	5, 25, 100, 500 nT
TRAVERSE INTERVAL	0.5 mile
TIE LINE INTERVAL	5.0 miles

TOTAL FIELD MAGNETICS

The total field magnetic contours were produced using digitally recorded data from a Scintrex H8 cesium vapor magnetometer with a sampling interval of 0.1 seconds. The magnetic data were (1) corrected for diurnal variations by subtraction of the digitally recorded base station magnetic data, (2) levelled to the tie line data, and (3) corrected for regional variation by subtracting the IGRF1990 updated to October 1995 and adding a bias of 54750 nT, and (4) interpolated onto a regular 200m grid.

INTERPRETATION LEGEND

Depth to magnetic basement contours
Contour interval is a multiple of 40 m.

Volcanics:

Andesitic flows and volcanoclastic rocks, possibly of Jurassic age, expressed at the surface.

Basalt: Quaternary horizontal flows and associated volcanic craters expressed at the surface.

Inferred extension of surficially expressed volcanics and basalts.

Magnetic lineations probably associated with faulting and/or intrusive dykes.

Boundary for Kwikluak disturbed area.

Magnetic lineations interpreted as associated with faults, with possible horizontal displacement.

Interpreted subsurface intrusives possibly similiar to the Upper Cretaceous intrusive expressed in the Kuzitvak Mountains.

11 / 155 — Shallow magnetic source depth calculated from the total magnetic field using Werner deconvolution.

12 / 195 — Shallow source depth calculated from the horizontal magnetic gradient using Werner deconvolution.

Position of estimated depth to magnetic basement using Werner deconvolution.

0 5 10 15 mi
SCALE 1:125,000

0 5 10 15 20 kms
SCALE 1:125,000

INTERPRETATION MAP OF THE LOWER YUKON DELTA, ALASKA

1996

Star: True North
Arrow: Magnetic North

Angles presented are approximate mean deviations for centre of the sheet. Use diagram for reference only.

LOCATION OF SURVEY AREA

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, and Zonge Engineering & Research Organization. The airborne magnetic data were acquired by Aerodat Ltd. during the period of September-November, 1995. Products from this survey are available from the Alaska Division of Geological and Geophysical Surveys, 794 University Ave., Suite 200, Fairbanks, Alaska, 99709.

LOCATION INDEX