

The geophysical data were acquired with a Geomagnetic (EM) system, Exploranium DGH-20 gamma-ray spectrometer and a Sinterix camera mounted on a small aircraft flying at an altitude down to a height of 100 feet. The gamma-ray measurements were made over a 600 ft by 600 ft area.

In addition the survey recorded data from a total odometer, GPS navigation system, 50/GPS receiver, digital compass, barometric altimeter, and an AS350B-2 Squirrel helicopter at a mean altitude of 100 ft. The flight path was defined by survey flight lines with a spacing of a quarter of a mile. The lines were spaced approximately 90° apart.

An Ashtech GG24 NAVSTAR GLONASS Global Positioning System was used for navigation. The accuracy of the position data was determined by using post-flight differential positioning to a relative accuracy of better than 5 m. Flight paths were planned to cover the entire study area (UTM zone 6), September, 1997 (North American datum).

The horizontal resolution of the data is constant of 0 and an east constant of 500,000m. Positional accuracy of the presented data is better than 5 m.

BIG DELTA QUADRANGLE
2000

RADIOMETRICS

The gamma-ray spectrometry data were recorded at a 1.0 second sample rate into 256 channel main and radon spectra using an Explanium 58820 gamma-ray spectrometer. The gamma-ray spectrometer was equipped with a computer comprising the system were: main detector, 16.7L radon detector 4.2L. After application of noise adjusted singular value decomposition, the data from the main detector were obtained from the main detector were recorded in five windows corresponding to thorium (228Ac 212Pb 208Tl), uranium (235U 231Pa 235Th), potassium (40K), radon (222Rn 220Rn) and cosmic radon (3000-86000 keV). Counts from the radon detector were recorded in three windows corresponding to 222Rn, 220Rn and 226Rn. The radon detection system was calibrated following methods outlined in ACS Report 323. The data were corrected for background, and corrected for pressure interferences, changes in temperature, pressure, and deprimures from the flow rate. The data were then converted to standard concentration units which were interpolated to a 300 m depth resolution (1000-1700 m).

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.

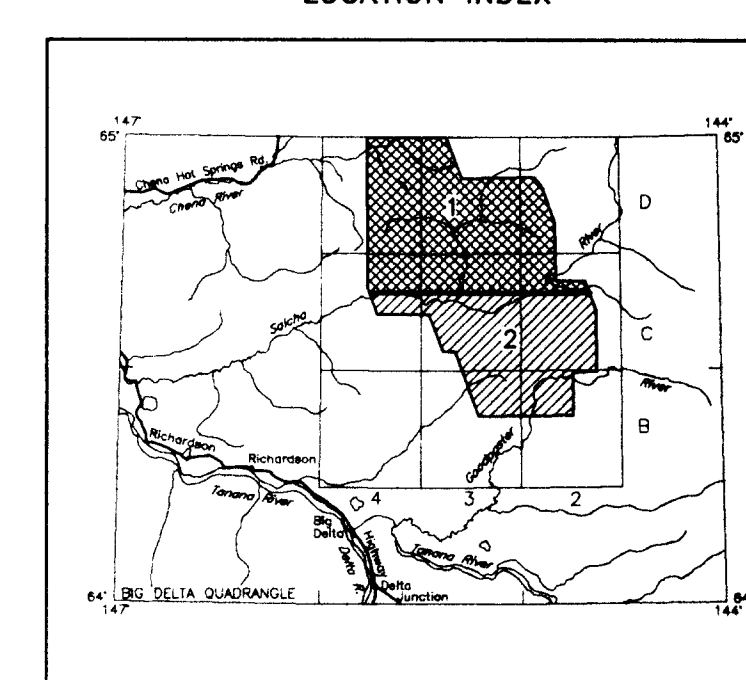
THORIUM / POTASSIUM (eTh/K)

A blank region indicates an area where the summed concentrations for below threshold require for a meaningful calculation of the ratio. Equivalent strontium/potassium concentration ratio results have been multiplied by 10^4 for clarity in presentation.

CONTOUR INTERVAL

.....	1.00 ($\times 10^{-4}$)
.....	0.20 ($\times 10^{-4}$)
.....	0.04 ($\times 10^{-4}$)
.....	0.02 ($\times 10^{-4}$)
	10W

LOCATION INDEX



SURVEY HISTORY

This map has been compiled and drawn under contract between the State of Alaska, Department of Natural Resources, Division of Geologic & Geophysical Surveys (DGGS), and Stevens Environmental Management Corp. Airborne geophysical data for the area were acquired by Geotrex-Dighem, a division of GGG Canada Ltd., in 1999. Laurel Burns was the contract manager for DGGS. This map and other products from this survey are available by mail order or in person from DGGS, 794 University Ave., Suite 200, Fairbanks, Alaska, 99709.