

GEOLOGICAL SURVEY OF CANADA  
DEPARTMENT OF ENERGY, MINES AND RESOURCES

AIRBORNE RADIOMETRIC MAP

**BANCROFT  
ONTARIO**

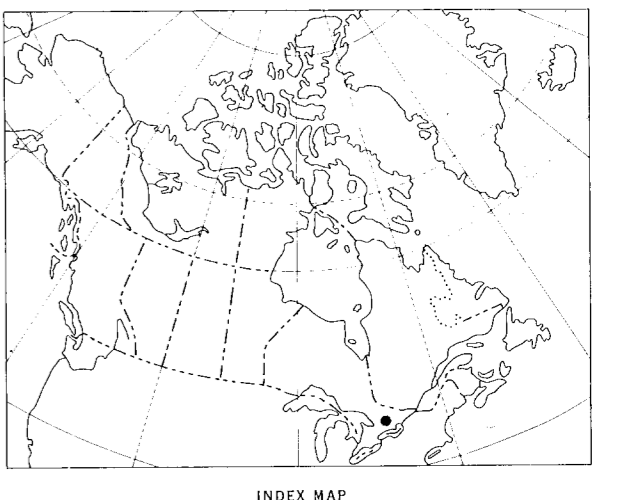
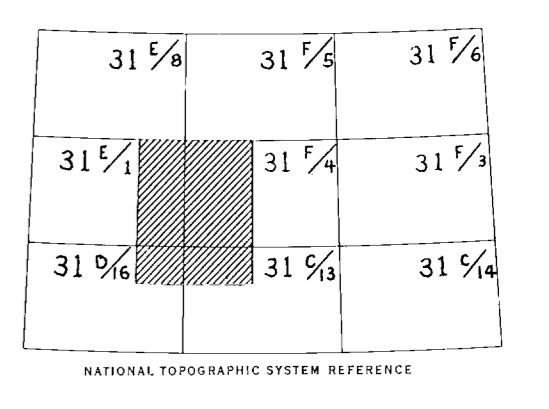
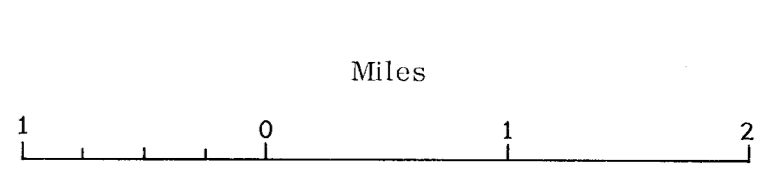
THORIUM (<sup>208</sup>Tl)  
Contour interval 10 counts / 2.5 sec.

The gamma radiation contours shown on the machine drawn contour map have been compiled from the profiles which are issued with these maps. Numbers of flight-lines are plotted in position on each map. The detectors were 12, 9 x 4 inch NaI(Tl) crystals flown at a mean terrain clearance of 400 feet. The data has been corrected for background, height variation and Compton scattering in the crystals. Due to the statistical nature of the radiation considerable smoothing has been applied to the data. The contouring sequence is self-evident and points of local maxima are represented by triangles. The machine contouring was carried out using a technique developed by Holroyd & Bhattacharyya (G. S. C. Paper 70-55).

Radiation from the ground is derived almost entirely from the uppermost 12 inches, irrespective of whether it is soil or rock. The Potassium, Uranium and Thorium maps represent the counts received in 2.5 seconds and in the case of the Integral for 0.5 seconds. The ratio maps represent the ratio of the counts of the respective elements. An approximate ground concentration may be obtained using the relations:

- 1 ppm Uranium  $\approx$  25 counts
- 1 ppm Thorium  $\approx$  11 counts
- 1 % Potassium  $\approx$  170 counts

Airborne radiometric survey 1969  
A. G. Darley, R. L. Gastly  
Exploration Geophysics Division  
Geological Survey of Canada



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45  
DEC 1970  
GEOLOGICAL SURVEY  
OTTAWA

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