

The underlying bedrock geology is a generalized version of the Ontario Geological Survey Earth Resources and Land Information System digital 1:1 000 000 scale Bedrock Geology of Ontario. The original 60 units were reduced to 23 to facilitate data presentation, with emphasis placed on combining similar rock types.

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## Relative concentrations of gold in Ontario drainage sediments are illustrated

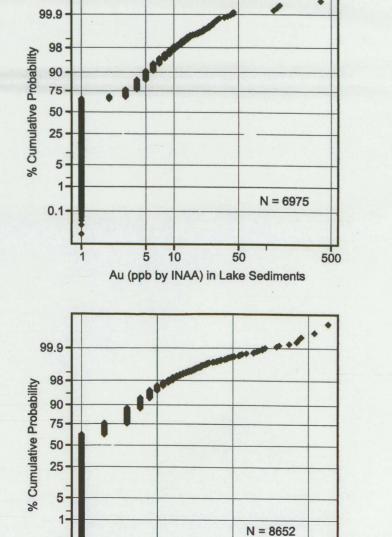
INTRODUCTION

with two types of graphic images; shaded contour plots and proportional spot plots. Contour plots depict broad regional trends in the data. Actual values of concentrations at specific sites are represented with proportional dot plots. Proportional dot plots display more detailed information and indicate the location of anomalous values. This style of presentation also facilitates the use of the bedrock geology as a background, allowing easy visual evaluation of the relationship between geology and element distribution. For contour plots, a grid is produced by interpolating the irregularly spaced sample site data to a regular grid with side dimensions of 2 500 metres. Data are smoothed using a moving average of points within a circular zone of influence (Bonham-Carter, 1994). Up to 15 sites within the maximum search radius of 15 000

Proportional dot plots are created using filled circles, with the maximum diameter representing sites with values greater than or equal to the 98<sup>th</sup> percentile. The smallest diameter corresponds to the minimum value, or, if concentrations for some samples are not detectable, then the minimum value is usually set to one-half detection limit. Values between the minimum and maximum correspond to diameters fitting an

Percentile values shown for the contour map and the proportional dot map may differ. Weighted distance averages for grid cells determined from log<sub>10</sub> values are used to calculate percentiles for the contour map, whereas element concentration data from each site are used in the calculation of percentiles for the proportional dot map. Cumulative probability plots of lake sediment data (bottom right) provide both information about individual sample points and a visual image of the statistical distribution of data (Garrett, 1991). Single populations plot as straight lines and if several straight line sections are observed, if there are gaps in the line formed by individual points or the plot

**CUMULATIVE PROBABILITY PLOTS** 



Detection Limit 1 2 0.5 2 10 2 2 14.8 8.2 32.2 54.4 198 97.6 77.2 0.5 1 2.5 29 110 16 100

AAS - atomic absorption spectrometry INAA - Instrumental Neutron Activation Analysis FA-NA - fire assay - neutron activation

CV-AAS - cold vapour / atomic absorption spectrometry

50.0

Au (ppb by FA-NA) in Lake Sediments