

1978

## GEOLOGY GENERALIZED FROM WEBER AND OTHERS (1978)

## UNCONSOLIDATED DEPOSITS

	Qac		
Qaf	Qd	Qm	QU

Pgc PERMIAN

Prüfung

$Pzq$

Pepta

Page

CONCLUSIONS AND RECOMMENDATIONS

#### AND GLACIAL OUTWASH DEPOSITS

SEDIMENTARY ROCKS

QUARTZ MONZONITE

### UNITIC AND MINOR DIORITIC ROCKS

CKS

QUARTZITE, MARBLE, COARSE META- AND META-TUFF  
SANDSTONE, CALC-PHYLLITE, AND MARBLE

AND MINOR AMOUNTS OF OTHER GNEISS

AUGEN GNEISS, AMPHIBOLITE, AND MA

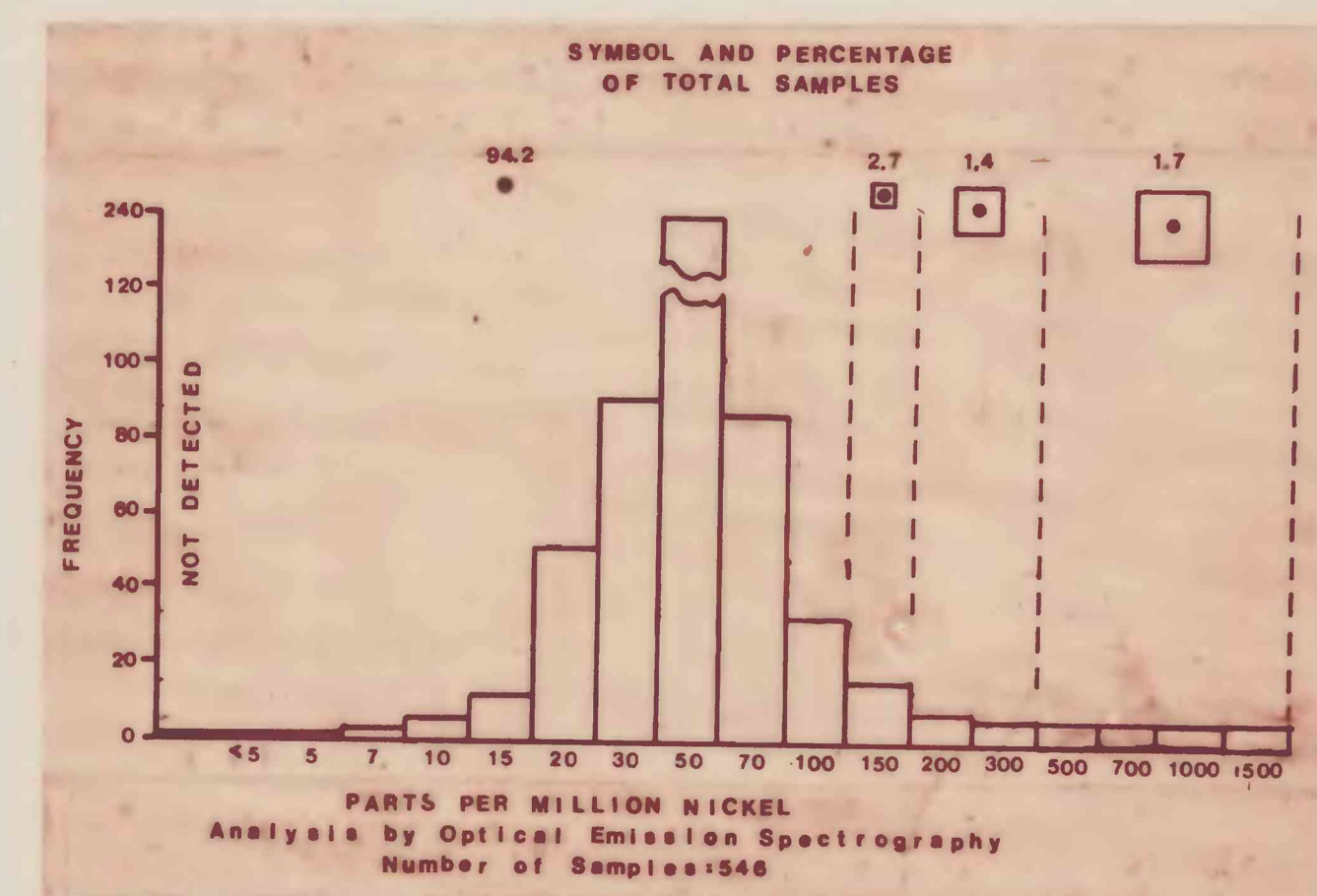
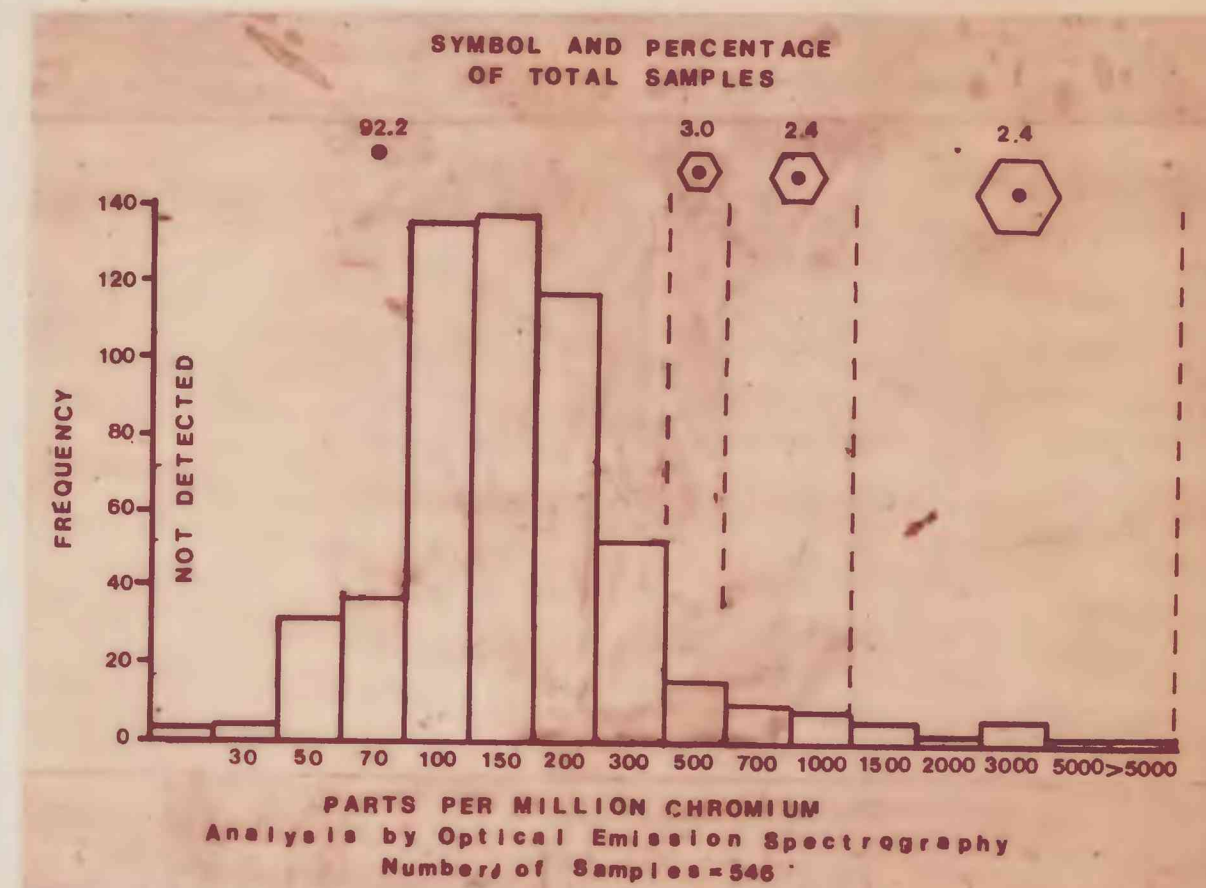
GEOLOGIC SYMBOLS

BLE FAULT, DOTTED WHERE CONCEA

REPRESENTS BACKGROUND VALUE

UES--Explained on histogram

TION RELATING TO THIS MAP  
SURVEY CIRCULAR 783 AVAIL



This map shows the distribution and abundance of cobalt, chromium, and nickel in 546 stream-sediment samples collected in the Big Delta quadrangle in 1975 and 1977. This sampling was a part of geochronal studies made for the Alaska Mineral Resource Assessment Program. Stream sediments were collected from the active channels of streams draining areas ranging from approximately 10 to 25 km<sup>2</sup>. The areas within the quadrangle include a low density of sample sites, particularly along the major northeast-trending fault and in the northwest corner. These areas were dense brush and trees prevented helicopter landings. Areas in the southwestern and south-central portions of the quadrangle were not sampled because they are covered by thick unconsolidated deposits of Quaternary material, which limits effective geochemical sampling within the scope of the present geochemical studies.

The stream sediments were air-dried and sieved through an 80 mesh (0.2 mm) screen. A split of the -80 mesh material was analyzed for cobalt, chromium, and nickel by semiquantitative emission spectrography (Grimes and Marranzino, 1968). Map plots and histograms were produced from the analytical results. The range of anomalous values for each element was determined from the histograms and was subdivided into two or more plotting intervals represented by the symbols on the map and histograms.

Complete analytical data for all of the sample sites shown on this map are available in a U.S. Geological Survey Open-File Report by R. M. O'Leary and others (1978).

Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semiquantitative analysis of geologic materials: U.S. Geological Survey Circular 591, 6 p.

O'Leary, R. M., Cooley, E. F., Day, G. W., Hessin, T. D., McDougal, C. M., and McDaniel, S. K., 1978, Spectrographic and chemical analyses of geochemical samples from the Big Delta quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-571, 127 p.

Weber, F. R., Foster, H. D., Keith, T. E. C., and Dusel-Bacon, Cynthia, 1978, Preliminary geologic map of the Big Delta quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-529A, scale 1:250,000.

BACKGROUND INFORMATION RELATING TO THIS MAP IS PUBLISHED  
AS U.S. GEOLOGICAL SURVEY CIRCULAR 783 AVAILABLE FREE  
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