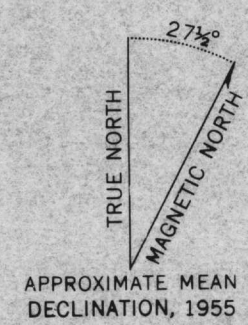
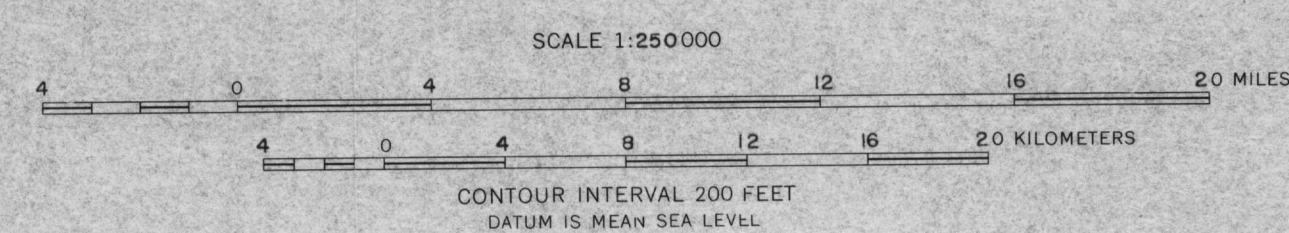




Base from USGS 1:250,000 topo series:  
KETCHIKAN, 1955; PRINCE RUPERT, 1959.  
ALASKA-CANADA.



MAP SHOWING COPPER DETERMINED BY ATOMIC ABSORPTION IN STREAM SEDIMENTS, KETCHIKAN AND PRINCE RUPERT QUADRANGLES, ALASKA

By  
R.D. Koch, R.L. Elliott, and M.F. Diggles  
1978

CORRELATION OF MAP UNITS  
[Geologic map generalized from Berg and others (1978)]

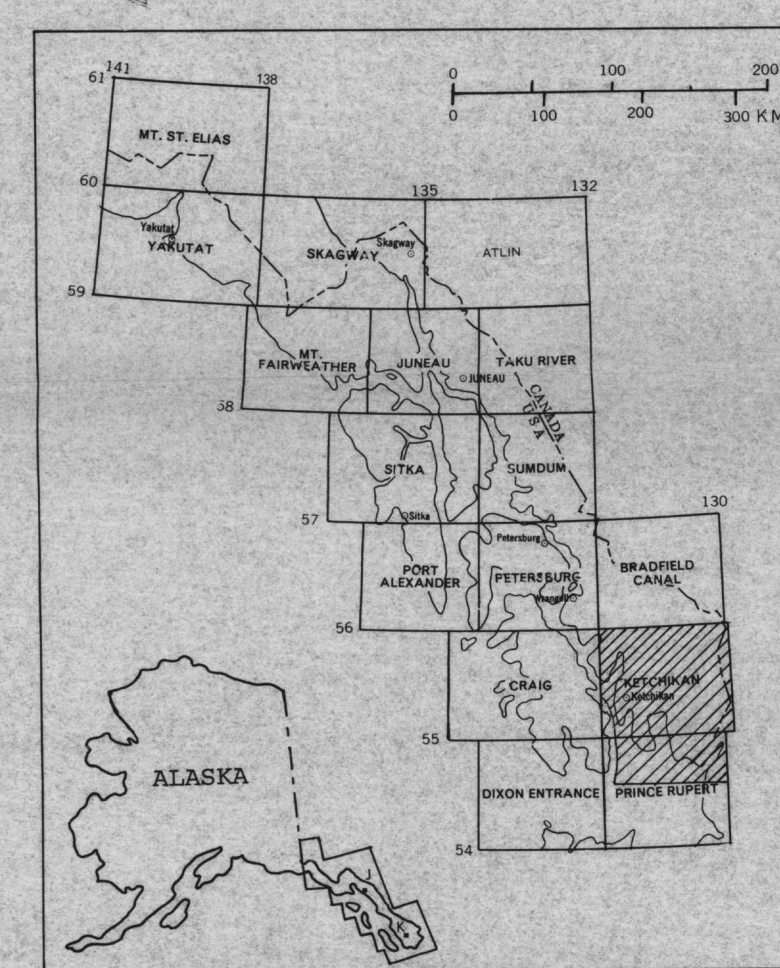
Qu	QUATERNARY
QTV	QUATERNARY AND TERTIARY
Tmp	TERTIARY
TeP	
TKp	
KJup	TERTIARY OR CRETACEOUS
KJa KJv	
JHt JHvs	JURASSIC
Jsv	
MJUp MJUv	JURASSIC OR TRIASSIC
Psv	
Psv	TRIASSIC
Psp	
Psv	MESOZOIC OR PALEOZOIC
Psv	
	MIDDLE AND UPPER PALEOGENE
	SILURIAN OLDER

DESCRIPTION OF MAP UNITS

Qu	UNCONSOLIDATED DEPOSITS, UNDIVIDED (Quaternary)
QTV	VOLCANIC ROCKS (Quaternary and Tertiary)
Tmp	UNDIVIDED MIOCENE PLUTONIC ROCKS
TeP	UNDIVIDED EOCENE PLUTONIC ROCKS
TKp	UNDIVIDED TERTIARY OR CRETACEOUS PLUTONIC ROCKS
KJup	GRAVINA ISLAND FORMATION AND UNDIVIDED CORRELATIVE ROCKS (Lower Cretaceous or Upper Jurassic)
KJv	Ultramafic and other plutonic rocks
KJv	Metasedimentary rocks
JHt	Metavolcanic rocks
JHvs	TEXAS CREEK GRANODIORITE (Jurassic or Triassic)
Jsv	METAMORPHOSSED VOLCANIC AND SEDIMENTARY ROCKS (Jurassic or Triassic)
Jsv	METAMORPHOSSED SEDIMENTARY AND VOLCANIC ROCKS (Upper Triassic)
MJUp	PARAGNEISS AND AMPHIBOLITE (Mesozoic or Paleozoic)
MJUv	METAMORPHIC ROCKS, UNDIVIDED (Mesozoic or Paleozoic)
Psv	METAMORPHOSSED SEDIMENTARY AND MINOR VOLCANIC ROCKS (Middle and upper Paleozoic)
Psv	TELIC METAVOLCANIC ROCKS (Paleozoic or older)
Psp	PLUTONIC ROCKS, CHIEFLY TRONDJEMLITE (Silurian or older)
Psv	METAMORPHOSSED SEDIMENTARY AND VOLCANIC ROCKS (Silurian or older)

SYMBOLS

-----	Contact. Approximately located; dotted where concealed
-----	High-angle fault. Dashed where inferred; dotted where concealed
-----	Thrust fault. Dashed where concealed, inferred, or assumed
-----	Sawtooth on upper plate



Folio of the Ketchikan and Prince Rupert Quadrangles, Alaska  
Koch and others--Geochemistry -Cu

In the course of U.S. Geological Survey investigations of the Ketchikan and Prince Rupert quadrangles, 2602 stream-sediment samples were collected. Samples were analyzed for up to 30 elements by a 6-step, semi-quantitative emission spectroscopic method (Grimes and Marranzino, 1968) and for up to 5 elements by atomic-absorption spectrophotometry (Ward and others, 1969). This map shows sample collection sites for 2321 samples which were analyzed for copper by the atomic-absorption method. Complete analytical data plus location maps (scale 1:125,000), station coordinates, and a discussion of sampling analytical procedures for samples from sites shown on this map are published in two reports (Koch and Elliott, 1978b, c). These data are also available on magnetic computer tape (Koch, Van Trump, and McDonald, 1978).

Background levels vary for different lithologies and in different areas. Because of this and variability introduced from other sources such as sampling practice, analytical variance, and degree of chemical weathering, it is impossible to select a specific analytical level above which values indicate mineralization. For this reason, the analytical values have been grouped into four ranges with each range represented by a different symbol on the map. Higher values may indicate a greater likelihood of bedrock mineralization but confidence levels are low for single-element "anomalies" and results which are not supported by neighboring values.

Selected References

Berg, H. C., Elliott, R. L., Smith, J. G., and Koch, R. D., 1978, Geologic map of the Ketchikan and Prince Rupert quadrangles, Alaska: U.S. Geol. Survey open-file rept. 78-73A, 1 sheet, scale 1:250,000.

Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semi-quantitative analysis of geologic material: U.S. Geol. Survey Circ. 591, 6 p.

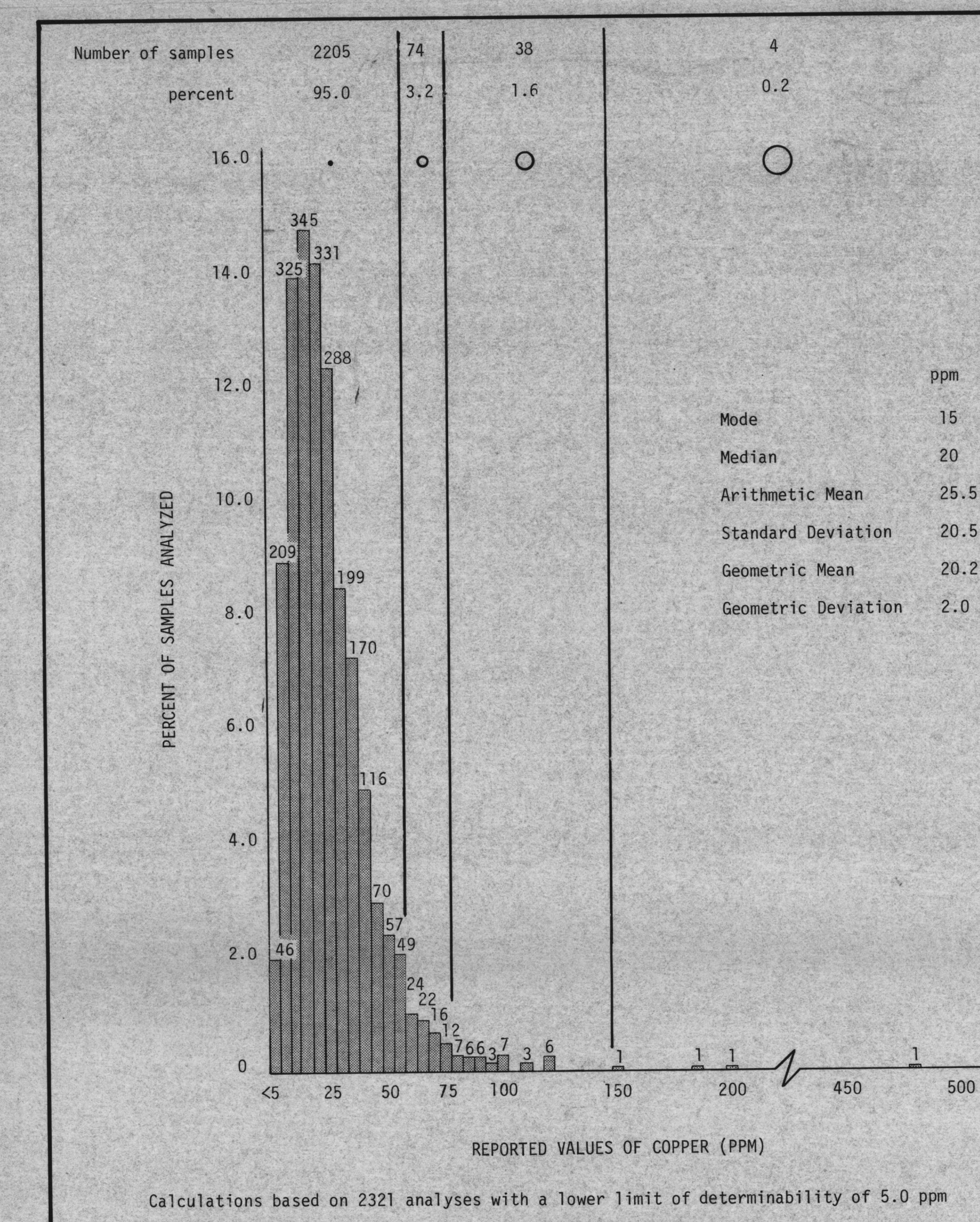
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1978c, Analyses of stream-sediment samples from the Ketchikan quadrangle, southeastern Alaska: U.S. Geol. Survey open-file rept. 78-156C, 214 p.

Koch, R. D., Van Trump, George, Jr., and McDonald, S. K., 1978, Magnetic tape containing analytical data for rock and stream-sediment samples from Ketchikan and Prince Rupert quadrangles, southeastern Alaska: U.S. Geol. Survey Rept., 8 p., computer tape [Available from the Natl. Tech. Inf. Service, U.S. Dept. Commerce, Springfield, VA NTIS PB-276-777].

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Note  
Reported values of 5 to 95 represent 5 ppm-wide class intervals and values of 100 or greater represent 10 ppm-wide class intervals. Graph bars are plotted with a consistent width of 5, to maintain correspondence between area and number of samples.

This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.