



CORRELATION OF MAP UNITS
[Geologic map generalized from Berg and others (1979)]

Qu	Quaternary and Tertiary	QUATERNARY AND TERTIARY
Qv		
Tmp	Eocene	TERTIARY
Teo		
Tkp		
Tkr		
Khp	Lower Cretaceous or Upper Jurassic	CRETACEOUS OR JURASSIC
Kju		
Jvt	Upper Triassic	TRIASSIC
Jrv		
Mhp	Middle and Upper Paleocene	MESOZOIC OR PALEOZOIC
Mpu		
Pz	Silurian or Older	PALEOZOIC OR OLDER
Pv		
Pp		
Pzv		

DESCRIPTION OF MAP UNITS

Qu	UNCONSOLIDATED DEPOSITS, UNDIVIDED (Quaternary)
Qv	VOLCANIC ROCKS (Quaternary and Tertiary)
Tmp	UNDIVIDED MIDDLE EOCENE PLUTONIC ROCKS
Teo	UNDIVIDED EOCENE PLUTONIC ROCKS
Tkp	UNDIVIDED TERTIARY OR CRETACEOUS PLUTONIC ROCKS
Khp	GRAVINA ISLAND FORMATION AND UNDIVIDED CORRELATIVE ROCKS (Lower Cretaceous or Upper Jurassic)
Kju	Ultramafic and other plutonic rocks
Jvt	Metasedimentary rocks
Jrv	Metavolcanic rocks
Mhp	TEXAS CREEK BRONZODORITE (Jurassic or Triassic)
Mpu	METAMORPHOSSED VOLCANIC AND SEDIMENTARY ROCKS (Jurassic or Triassic)
Pz	METAMORPHOSSED SEDIMENTARY AND VOLCANIC ROCKS (Upper Triassic)
Pv	PARAGNEISS AND AMPHIBOLITE (Mesozoic or Paleozoic)
Pp	METAMORPHIC ROCKS, UNDIVIDED (Mesozoic or Paleozoic)
Pzv	METAMORPHOSSED SEDIMENTARY AND MINOR VOLCANIC ROCKS (Middle and upper Paleozoic)
Pz	FELSIC METAVOLCANIC ROCKS (Paleozoic or older)
Pv	PLUTONIC ROCKS, CHIEFLY TRONDHJEMITE (Silurian or older)
Pzv	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 -Zn

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, semiquantitative 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 2430 samples which were analyzed for zinc by the atomic-absorption method. Complete analytical data plus location maps (scale 1:125,000), station coordinates, and a discussion of sampling and 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 semiquantitative analysis of geologic material: U.S. Geol. Survey Circ. 591, 6 p.

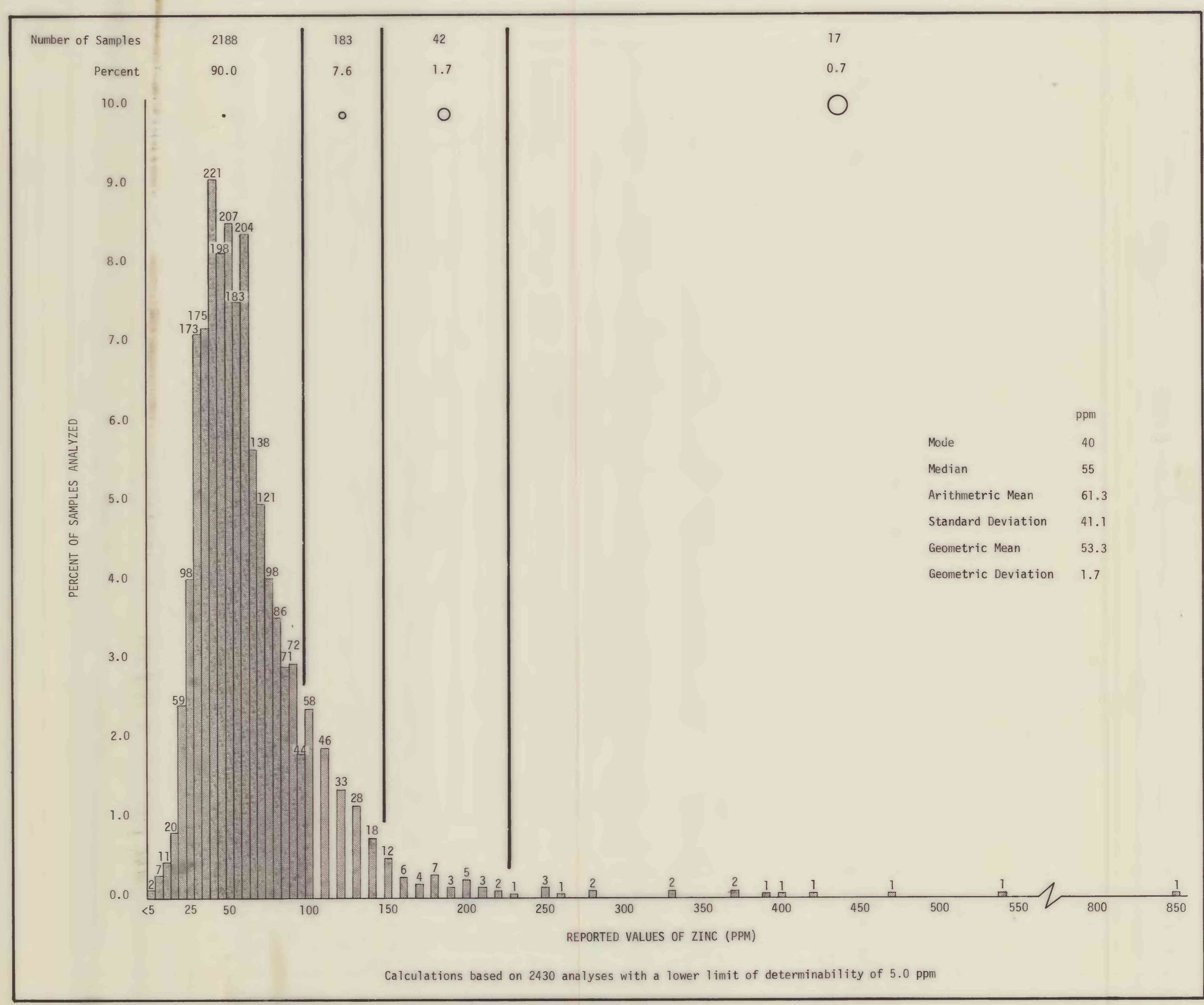
Koch, R. D., and Elliott, R. L., 1978a, Analyses of rock samples from the Ketchikan quadrangle, southeastern Alaska: U.S. Geol. Survey open-file rept. 78-156A, 163 p.

1978b, Analyses of rock and stream-sediment samples from the Prince Rupert quadrangle, southeastern Alaska: U.S. Geol. Survey open-file rept. 78-156B, 98 p.

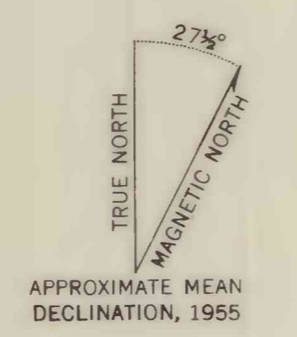
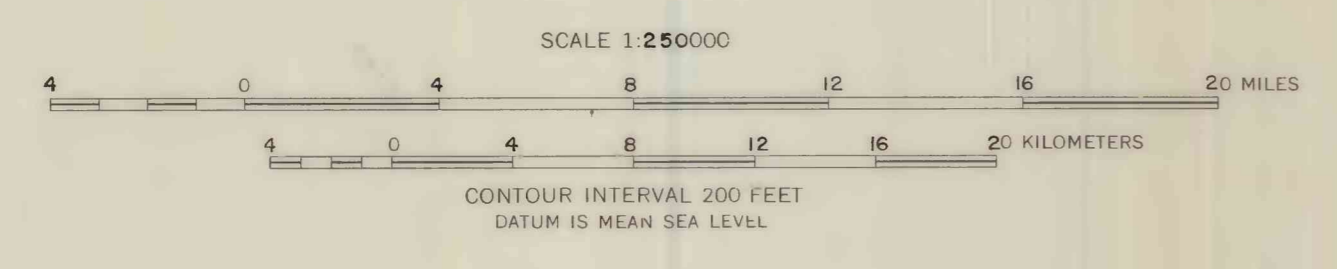
1978c, Analyses of stream-sediment samples from the Ketchikan quadrangle, southeastern Alaska: U.S. Geol. Survey open-file rept. 78-156C, 214 p.

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).

Ward, F. N., Nakagawa, H. M., Harms, T. F., and Van Sickle, G. H., 1969, Atomic-absorption methods of analysis useful in geochemical exploration: U.S. Geol. Survey Bull. 1289, 45 p.

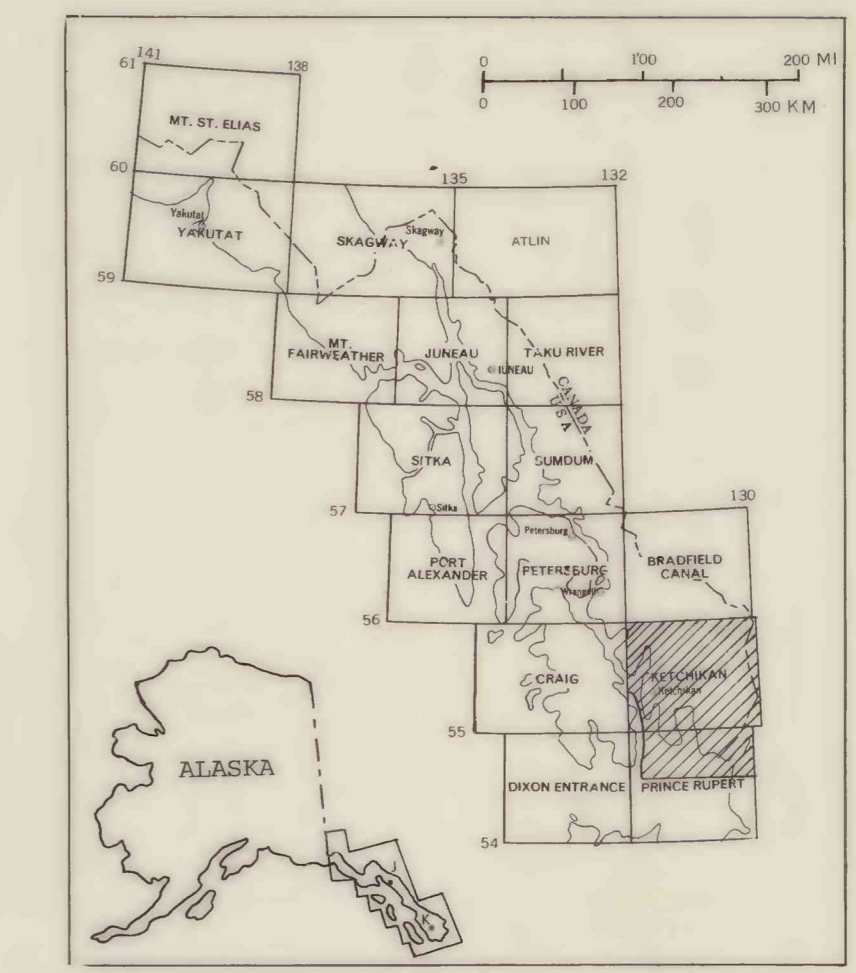


Base from USGS 1:250,000 topo series: KETCHIKAN, 1955; PRINCE RUPERT, 1959. ALASKA-CANADA.



Geology by H. Berg, R. Carter, J. Childs, A. Clark, N. Condon, M. Diggle, G. Dunne, R. Elliott, C. Holloway, J. Houghton, R. Koch, R. Miller, R. Ruder, J. Smith, B. Wiggins, 1966-1977

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.



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

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

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