

CORRELATION OF MAP UNITS

[Geologic map generalized from Berg and others (1978)]

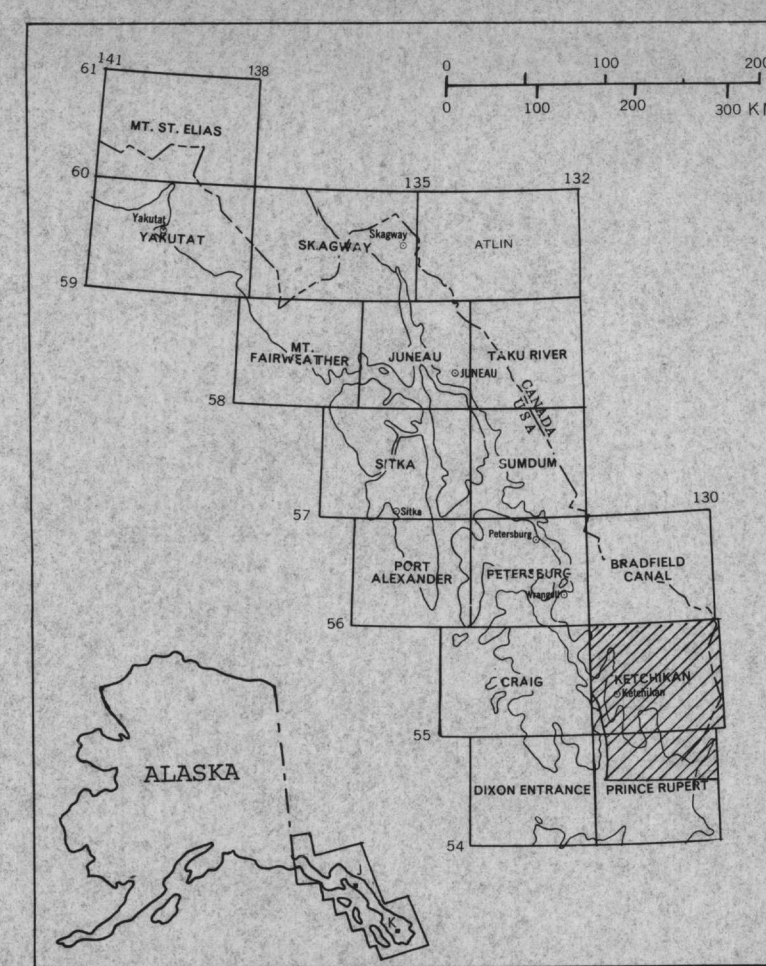
Qu	} Quaternary and Tertiary	QUATERNARY AND TERTIARY	
Qv			
Qw			
Te	} Miocene	TERTIARY OR CRETACEOUS OR JURASSIC	
Tep			
TKp	} Lower Cretaceous or Upper Jurassic	TERTIARY OR CRETACEOUS OR JURASSIC	
Kup			
Kjs Kjr			
Jvt Jvs	} Upper Triassic	JURASSIC OR TRIASSIC	
Jvt			
MrPp MrPs	} Middle and Upper Paleocene	JURASSIC OR TRIASSIC	
MrPp			
MrPs			
Psv	} Silurian or older	PALEOZOIC OR OLDER	
Psp			
Psv			

DESCRIPTION OF MAP UNITS

Qu	UNCONSOLIDATED DEPOSITS, UNDIVIDED (Quaternary)
Qv	VOLCANIC ROCKS (Quaternary and Tertiary)
Qw	UNDIVIDED MIOCENE PLUTONIC ROCKS
Te	UNDIVIDED EOCENE PLUTONIC ROCKS
TKp	UNDIVIDED TERTIARY OR CRETACEOUS PLUTONIC ROCKS
	GRAVINA ISLAND FORMATION AND UNDIVIDED CORRELATIVE ROCKS (Lower Cretaceous or Upper Jurassic)
Kup	Ultramafic and other plutonic rocks
Kjs	Metasedimentary rocks
Kjr	Metavolcanic rocks
Jvt	TEXAS CREEK GRANODIORITE (Jurassic or Triassic)
Jvs	METAMORPHOSED VOLCANIC AND SEDIMENTARY ROCKS (Jurassic or Triassic)
Jvt	METAMORPHOSED SEDIMENTARY AND VOLCANIC ROCKS (Upper Triassic)
MrPp	PARAGNEISS AND AMPHIBOLITE (Mesozoic or Paleozoic)
MrPs	METAMORPHIC ROCKS, UNDIVIDED (Mesozoic or Paleozoic)
Mr	METAMORPHOSED SEDIMENTARY AND MINOR VOLCANIC ROCKS (Middle and upper Paleozoic)
Psv	FELSIC METAVOLCANIC ROCKS (Paleozoic or older)
Psp	PLUTONIC ROCKS, CHIEFLY TRONDHJEMITE (Silurian or older)
Psv	METAMORPHOSED 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

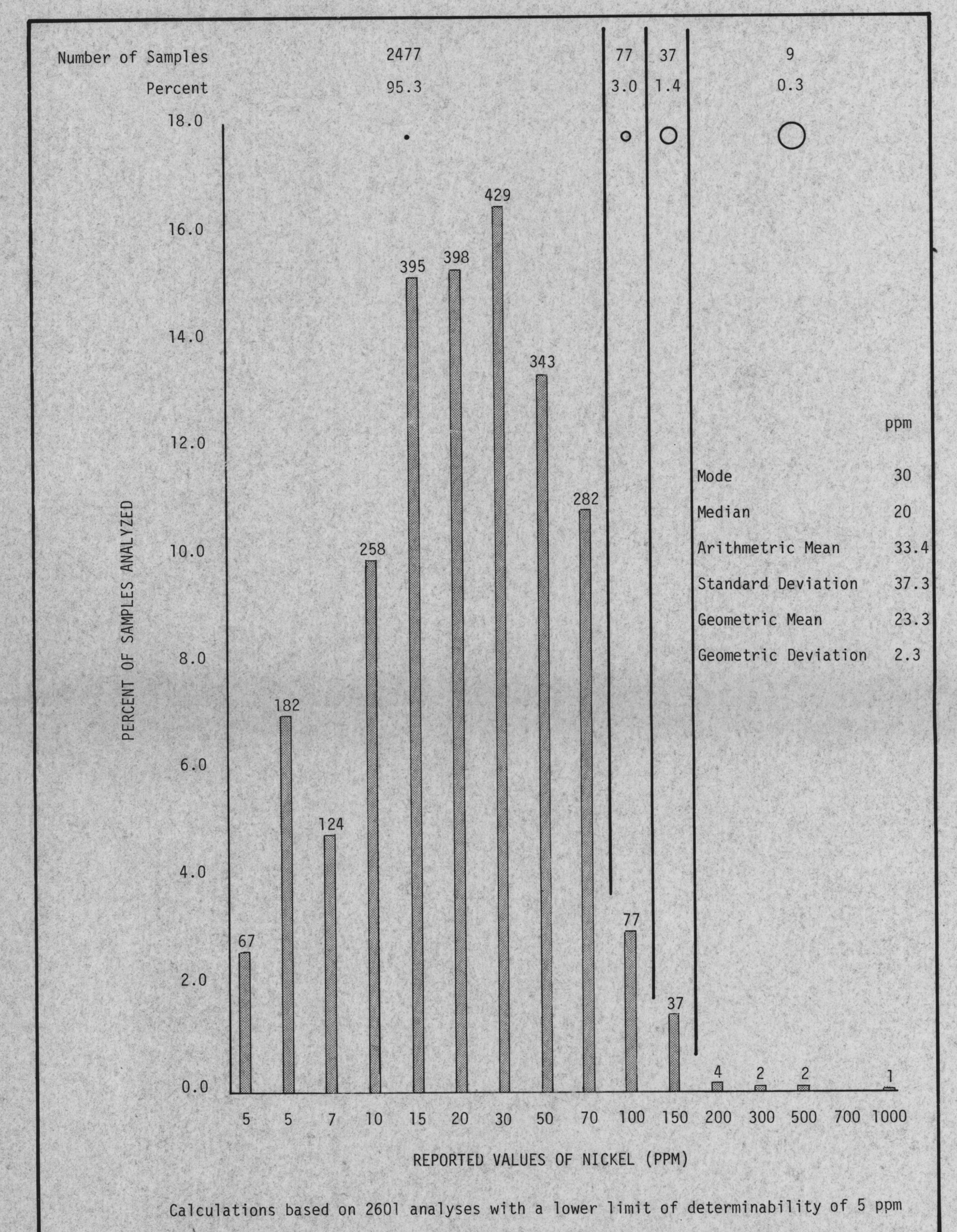


In the course of U.S. Geological Survey investigations of the Ketchikan and Prince Rupert quadrangles, 2602 stream-sediment samples were collected. Samples were analyzed for up to 30 elements by a 6-step, semiquantitative emission spectroscopic method (Grimes and Maranzino, 1968) and for up to 8 elements by atomic-absorption spectrophotometry (Koch and others, 1969). This map shows sample collection sites for 2601 samples which were analyzed for nickel by the spectrographic 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 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 McDaniel, 1978).

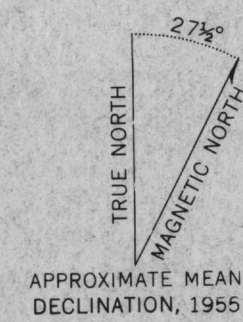
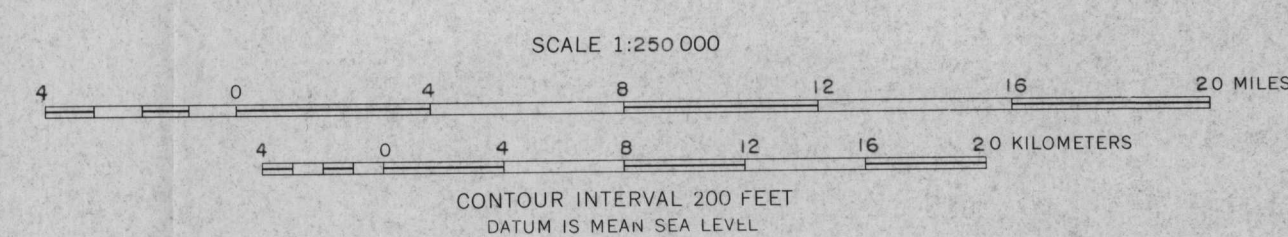
Background levels vary for different lithologies and in different areas. Because of this and variability introduced from other sources such as sampling practice, analytical variance, and degree of chemical weathering, it is impossible to select a specific analytical level above which values indicate 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 Maranzino, 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 McDaniel, 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. Carten, J. Childs, A. Clark, M. Condon, M. Diggles, G. Dunne, R. Elliott, C. Holloway, J. Houghton, R. Koch, R. Miller, R. Rudser, J. Smith, B. Wiggins, 1966-1977

MAP SHOWING SPECTROGRAPHICALLY DETERMINED NICKEL IN STREAM SEDIMENTS, KETCHIKAN AND PRINCE RUPERT QUADRANGLES, ALASKA

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

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