

LIST OF MAP UNITS

Qal	Alluvial deposits, undivided
T1	Triassic plutonic rocks
W1	Wedge plutonic rocks
W2	Wedge plutonic rocks, extensively altered
W3	Wedge plutonic rocks, extensively altered
W4	Wedge plutonic rocks, extensively altered
W5	Wedge plutonic rocks, extensively altered
W6	Wedge plutonic rocks, extensively altered
W7	Wedge plutonic rocks, extensively altered
W8	Wedge plutonic rocks, extensively altered
W9	Wedge plutonic rocks, extensively altered
W10	Wedge plutonic rocks, extensively altered
W11	Wedge plutonic rocks, extensively altered
W12	Wedge plutonic rocks, extensively altered
W13	Wedge plutonic rocks, extensively altered
W14	Wedge plutonic rocks, extensively altered
W15	Wedge plutonic rocks, extensively altered
W16	Wedge plutonic rocks, extensively altered
W17	Wedge plutonic rocks, extensively altered
W18	Wedge plutonic rocks, extensively altered
W19	Wedge plutonic rocks, extensively altered
W20	Wedge plutonic rocks, extensively altered

CORRELATION OF MAP UNITS

Qal	Quaternary
T1	Tertiary
W1	Wedge
W2	Wedge
W3	Wedge
W4	Wedge
W5	Wedge
W6	Wedge
W7	Wedge
W8	Wedge
W9	Wedge
W10	Wedge
W11	Wedge
W12	Wedge
W13	Wedge
W14	Wedge
W15	Wedge
W16	Wedge
W17	Wedge
W18	Wedge
W19	Wedge
W20	Wedge

- Contact, approximately located, dotted where concealed
- Boundary of study area
- Geochemical sample site
- Gold = 0.1-0.3 ppm
- Gold > 0.3 ppm
- △ Silver = 0.5-7 ppm
- △ Silver > 7 ppm

STUDIES RELATED TO WILDERNESS

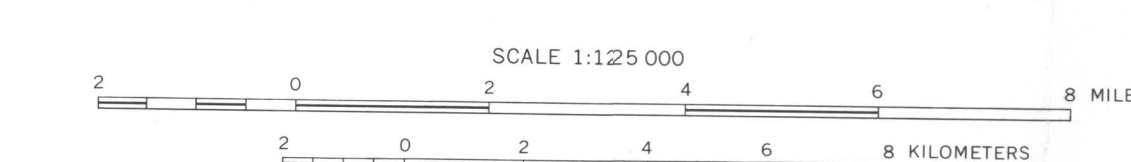
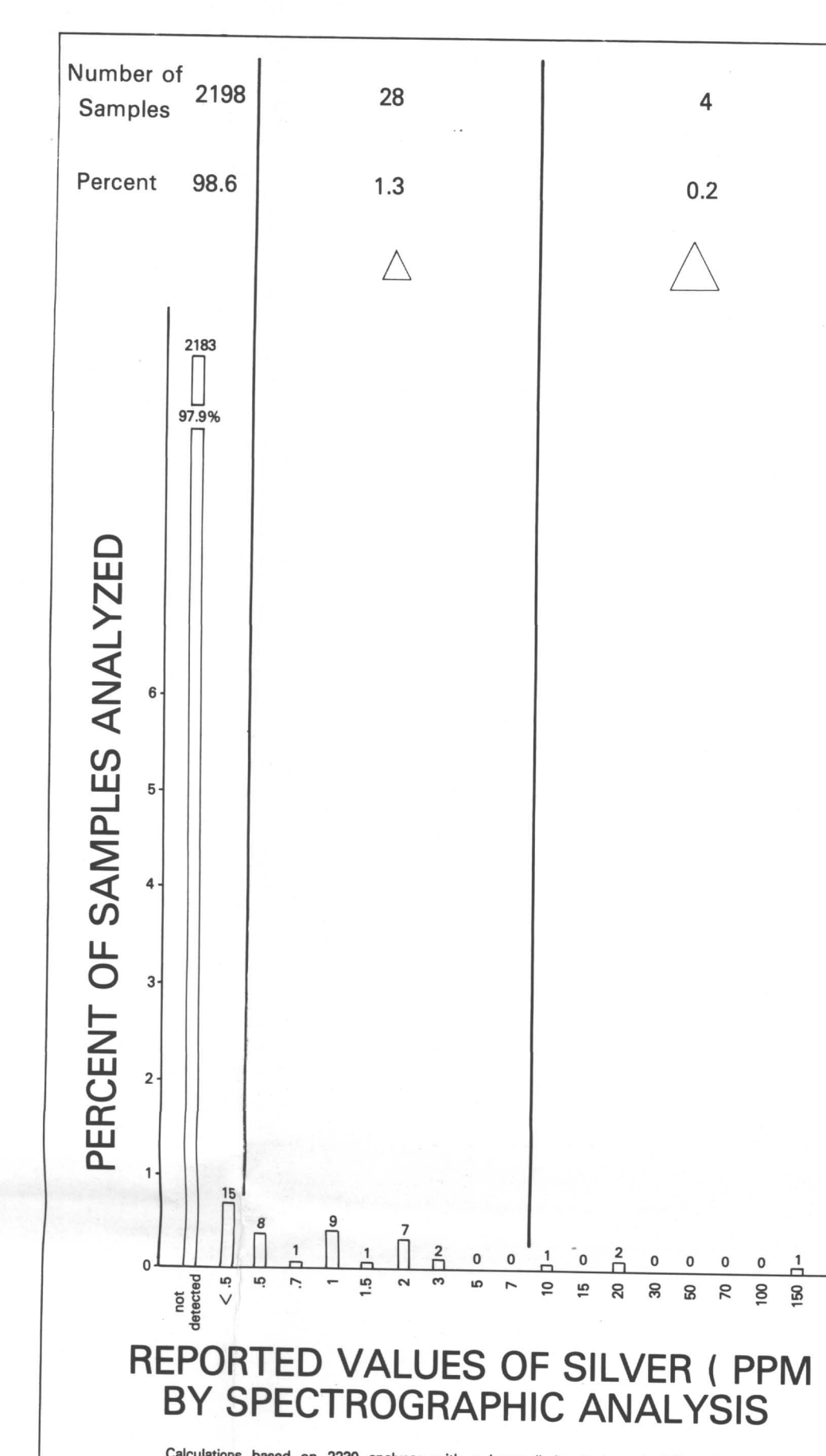
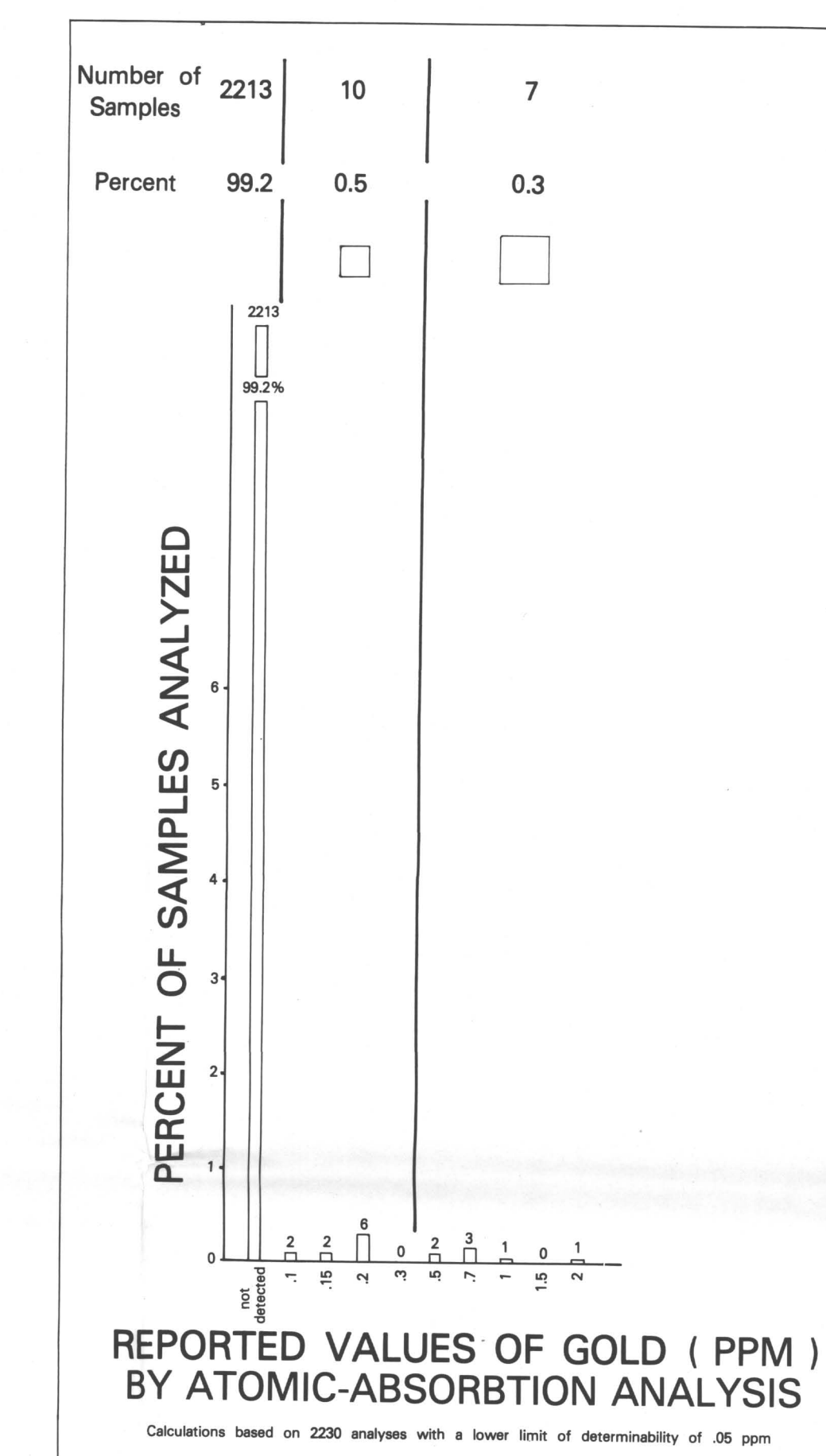
The Wilderness Act (Public Law 88-577, September 3, 1964) and related acts require the U.S. Geological Survey and the U.S. Bureau of Mines to survey certain areas on Federal lands to determine their mineral resource potential. Results must be made available to the public and be submitted to the President and the Congress. This report presents the results of a geochemical survey of the Western Chichagof-Yakobi Islands Wilderness Study Area in the Tongue National Forest, Alaska. About 45 percent of the study area was established as a wilderness on December 2, 1980, under the Alaska National Interest Lands Conservation Act (P.L. 96-487).

In the course of the U.S. Geological Survey investigations of the Western Chichagof-Yakobi Islands Wilderness Study Area, 2,250 bedrock geochemical samples were collected. Samples were analyzed for 31 elements by a Grates, semi-quantitative spectrographic method (Cotton and Norrish, 1967) and for 4 elements by atomic absorption spectrophotometry (Uard and others, 1987). Complete analytical data, station coordinates, and a station location map are available in two reports: Johnson, 1982, and Johnson and Elliott, 1984. A map and discussion of the mineral resource potential of the study area is also available (Johnson, Karli, and Stille, 1982).

Investigations of the study area were for different lithologies in the study area. Because of this and variability introduced from other sources such as sampling technique, analytical variance, and chemical weathering, it is impossible to select a specific analytical level from which values indicate mineralization. Higher values may indicate a greater likelihood of bedrock mineralization, but confidence levels are low for single element high values and results which are not supported by neighboring values. This map shows the distribution of high analytical values for the elements gold and silver as well as the location of all 2,250 samples. Multiple symbols for a single element at one sample site represent multiple samples at that site.

REFERENCES CITED

- Grimes, D. J., and Herrens, A. P., 1968, Direct-current and alternating-current spark emission spectrographic field methods for the semiquantitative analysis of geological materials: U.S. Geological Survey Circular 591, 6 p.
- Johnson, R. R., 1982, Magnetic tape containing trace element data for bedrock geochemical samples from the West Chichagof-Yakobi Islands Wilderness Study Area, southeastern Alaska: National Technical Information Service Report No. D82-02-003, computer tape, 2 vol.
- Johnson, R. R., and Elliott, G. W., 1984, Map showing bedrock geochemical station locations, Western Chichagof-Yakobi Islands Wilderness Study Area, southeastern Alaska: U.S. Geological Survey Open-File Report 84-001, scale 1:125,000.
- Johnson, R. R., and Karli, S. W., 1982, Reconnaissance geologic map of the Western Chichagof and Yakobi Islands Wilderness Study Area, southeastern Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-1176-A, scale 1:125,000.
- Johnson, R. R., Karli, S. W., and Stille, J. M., 1982, Mineral resource potential map of the Western Chichagof and Yakobi Islands Wilderness Study Area, southeastern Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-1176-B, scale 1:125,000.
- Uard, J. V., Johnson, R. R., Harms, T. P., and Yan, S. H., 1987, Atomic absorption methods of analysis useful in geochemical applications: U.S. Geological Survey Bulletin 1289, 45 p.



MAP SHOWING THE DISTRIBUTION AND ABUNDANCE OF GOLD AND SILVER IN BEDROCK SAMPLES, WESTERN CHICHAGOF AND YAKOBI ISLANDS WILDERNESS STUDY AREA, SOUTHEASTERN ALASKA

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1984

This map is preliminary and has not been revised for consistency with the original data. Editorial standards, but the original data have been approved previously.