

DISCUSSION

This map shows the locations of 1,218 stream-sediment samples collected by the Alaska Division of Geological and Geophysical Surveys and the United States Geological Survey. A map number has been assigned to each sample according to its position in the drainage network, as diagrammed below. In places where samples are very close together, or where duplicate samples were taken, the same map number may refer to two or more samples. Some numbers have not been used. Geochemical analyses are listed in this folio (Ellersieck, 1978) in order of map number.

Stream-sediment samples from the Cosmos Hills (Fritts, 1969 and 1970; regions IA and IB on index map below) are not included in this compilation. They represent a relatively intensive sampling in a few drainages, rather than a uniform reconnaissance as in the rest of the quadrangle. Median values for many elements reported by Fritts are considerably higher than values from other areas in the quadrangle.

The average density of samples in regions II through V is on the order of one sample per nine km². This is a relatively sparse coverage. For example, 28 percent of the 58 reported occurrences of metallic minerals outside the Cosmos Hills (Mayfield and Grybeck, 1978) do not have a stream-sediment sample within five km downstream. Therefore, it is probable that at least 28 percent of the undiscovered occurrences have not been sampled either.

REFERENCES

Ellersieck, Inyo, 1978, Analytical results for stream-sediment geochemical samples, Ambler River quadrangle, Alaska: U. S. Geological Survey Open-File Report 78-120 C, 6 sheets.

Fritts, C. E., 1969, Geology and geochemistry in the southeastern part of the Cosmos Hills, Shugnak D-2 quadrangle, Alaska: Alaska Division of Mines and Geology, Geology Report 37, 35 pages.

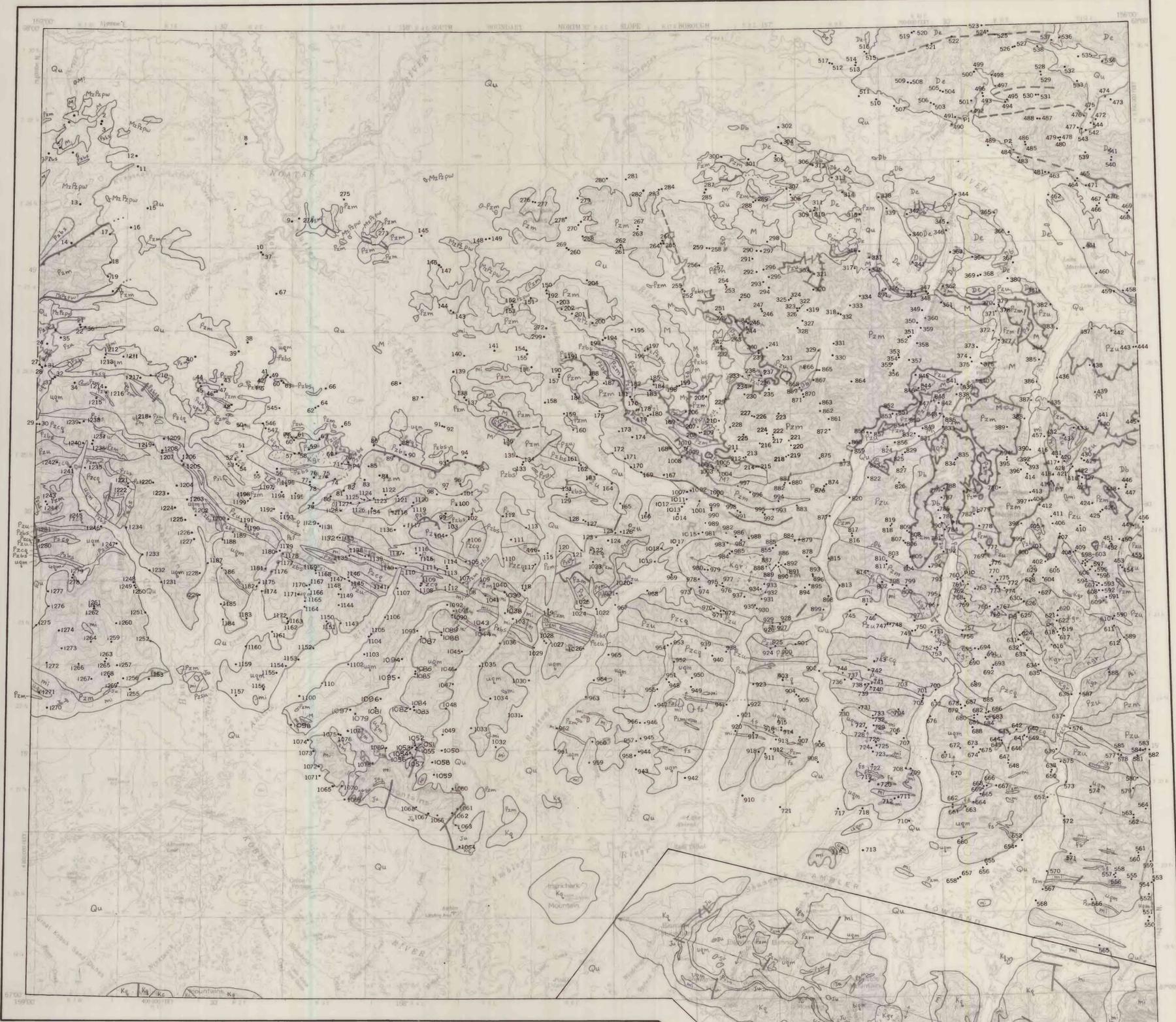
Fritts, C. E., 1970, Geology and geochemistry of the Cosmos Hills, Ambler River and Shugnak quadrangles, Alaska: Alaska Division of Mines and Geology, Geology Report 39, 69 pages.

Garland, R. E., Pessel, G. H., Triple, T. C., and McClintock, W. W., 1973, Geochemical analysis of stream sediment samples from the Ambler River A-1, A-2, A-3, B-1, B-2, B-3, C-1, C-2, and C-3 quadrangles, Alaska: Alaska Division of Geological and Geophysical Surveys Open-File Report no. 39, scale 1:63,360, 4 sheets.

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Mayfield, C. F., and Grybeck, Donald, 1978, Mineral occurrences and resources in the Ambler River quadrangle, Alaska: U. S. Geological Survey open-file map 78-120 I, scale 1:250,000, 1 sheet.

Pessel, G. H., 1976, Geochemistry of stream-sediment samples in southwestern Ambler River quadrangle, Alaska: Alaska Division of Geological and Geophysical Surveys Open-File Report number 71, scale 1:200,000, 5 sheets.



EXPLANATION FOR GENERALIZED GEOLOGIC MAP

CORRELATION OF MAP UNITS

Qu	Quaternary	IG	Igneous and meta-igneous rocks
M	Mesozoic or Paleozoic	Ju	Jurassic
Pz	Paleozoic	Mi	Mesozoic and Old Paleozoic
U	Unconformity	Pri	Permian and Older

DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS

- Qu UNCONSOLIDATED SURFICIAL DEPOSITS (QUATERNARY)

SEDIMENTARY AND META-SEDIMENTARY ROCKS

- Kc QUARTZ CONGLOMERATE, SANDSTONE, AND MUDSTONE (CRETACEOUS)
- Kc INEQUUS PEBBLE-COBBLE CONGLOMERATE (CRETACEOUS)
- M LISIANSKI GROUP AND UPPER PART OF ENDOCIT GROUP (MISSISSIPPIAN)—INCLUDES KAYAK SHALE AND KAYAKIT CONGLOMERATE
- Dc LOWER PART OF ENDOCIT GROUP (DEVONIAN)—MARLY SLATE AND SANDSTONE
- Db DARK CALCAREOUS SCHIST, LIMESTONE, AND SILICEOUS PHYLLITE (DEVONIAN)
- Pzm LARKSTONE AND MARBLE (DEVONIAN AND OLDER)

METASEDIMENTARY ROCKS OF UNCERTAIN AGE

- MpPzHm PHYLLITE AND MARIC VOLCANIC WACKES (MESOZOIC OR PALEOZOIC)
- PzCq CHLORITIC QUARTZITE AND SCHIST (PALEOZOIC)—LOCALLY INCLUDES FELDSPATHIC ORTHONESS
- PzHm GRAPHITIC PHYLLITE AND SCHIST (PALEOZOIC)
- PzHm UNDIFFERENTIATED METAMORPHIC ROCKS (PALEOZOIC)—INCLUDES MARBLE, QUARTZITE, CALC-SCHIST, AND LESSER QUARTZ-WACKES SCHIST
- Uqm GRAY PHYLLITE AND QUARTZ-WACKES SCHIST (PALEOZOIC AND OLDER?)

IGNEOUS AND META-IGNEOUS ROCKS

- MgI META-IGNEOUS PLUTONIC ROCKS (CRETACEOUS)
- Ju ULTRAMAFIC ROCKS AND SERPENTINITE (JURASSIC)
- Mi BASALT, DIABASE, AND GNEISS (MESOZOIC AND/OR PALEOZOIC)
- Fs FELSIC SCHIST (MESOZOIC AND/OR PALEOZOIC) MAY BE, IN PART, VOLCANIC
- Pri INTERMEDIATE META-IGNEOUS ROCKS (MESOZOIC AND/OR PALEOZOIC) MAY BE PLUTONIC AND OLIV. VOLCANIC, MOSTLY GRANODIORITE OR QUARTZ DIORITE IN COMPOSITION

LITHOLOGIC CONTACT, dashed where uncertain

HIGH ANGLE FAULT, solid where uncertain, dotted where concealed

THRUST FAULT, dotted where concealed

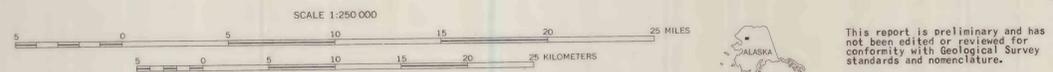
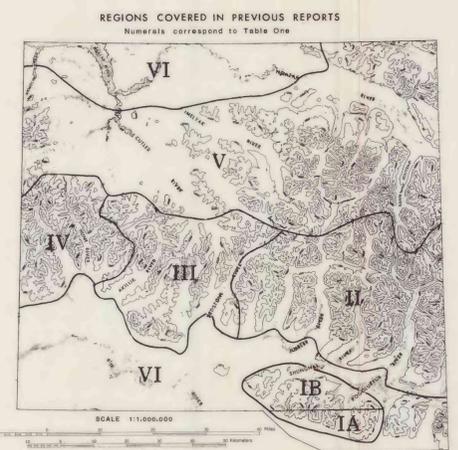
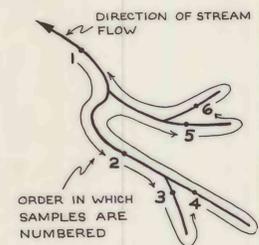
Generalized geologic map compiled by
C.F. MAYFIELD

TABLE ONE

REGION	NO. SAMPLES	FIELD NO. PREFIXES	ANALYTICAL SPEC	LABORATORY AA	REFERENCE
IA	124	124	—	USGS ANCHORAGE	Fritts, 1969
IB	112	112	—	UNIV. ALASKA MINERAL INDUSTRY RESEARCH LAB	Fritts, 1970
II	304	304	720 72E 72B 72R 72C 72Z	USGS	Garland and others, 1973
III	184	184	732	USGS AND ALASKA DIV. GEOL. AND GEOPHYS. SURV.	Garland and others, 1975
IV	110	32-110	74M0 74EY 74XK	USGS	Pessel, 1976
V	561	560	76E4 76M0 76T8 76WH	USGS BRANCH OF EXPLORATION RESEARCH	Ellersieck, 1978
VI	UNSAMPLED AREAS. COVERED WITH ALLUVIUM, COLLUVIUM, OR GLACIAL DRIFT				

EXAMPLE OF NUMBERING SYSTEM

In this system, the samples in each drainage basin will have consecutive map numbers. The Noatak drainage is numbered 1-538. The Kobuk drainage is numbered 550-1281.



MAP SHOWING STREAM-SEDIMENT GEOCHEMICAL SAMPLE LOCATIONS,
AMBLER RIVER QUADRANGLE, ALASKA

COMPILED BY INYO ELLERSIECK

1978

Background information to this folio is published as U. S. Geological Survey Circular 793, available free of charge from the U. S. Geological Survey, Reston, Va. 22092.