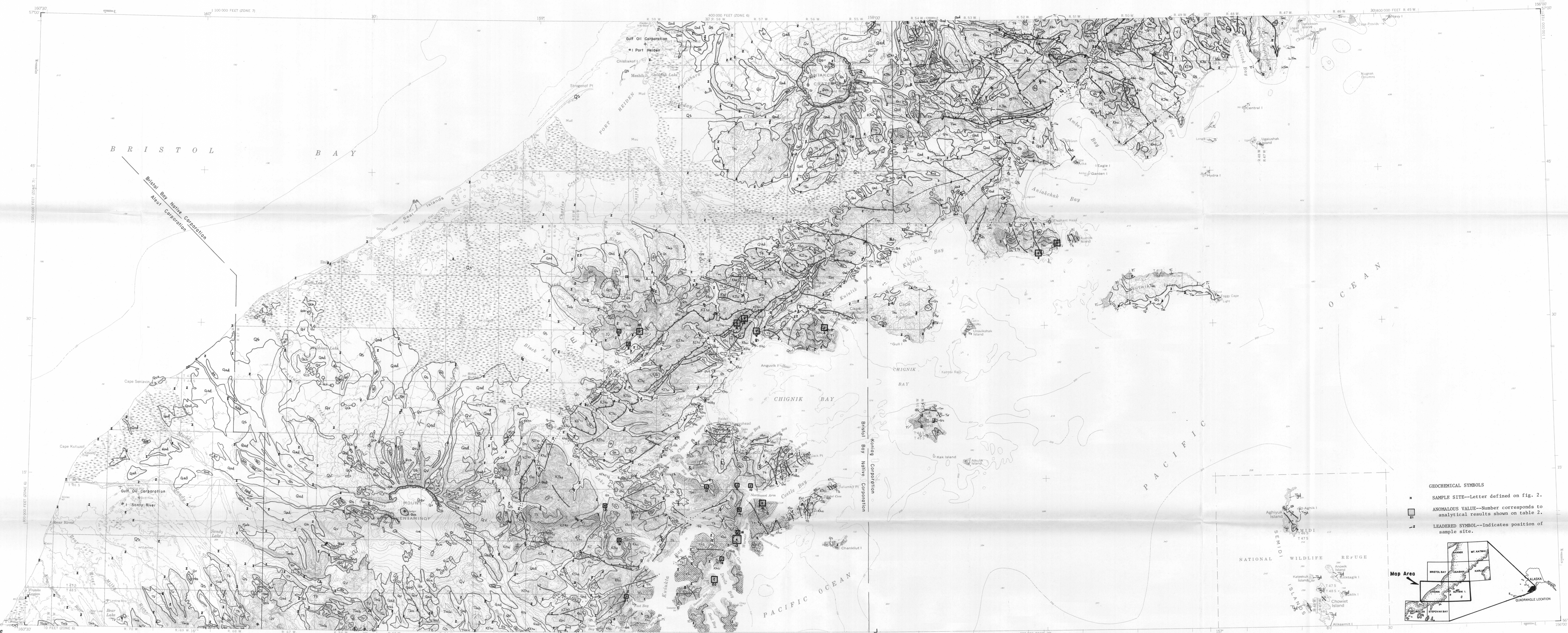

Base from U.S. Geological Survey, 1963

Geology from Detterman and others, 1979.

MOLYBDENUM IN MINUS-80-MESH STREAM-SEDIMENT SAMPLES

SCALE 1:250 000

5 0 5 10 15 MILES

5 0 5 10 15 KILOMETERS

CORRELATION OF MAP UNITS

SURFICIAL DEPOSITS AND SEDIMENTARY ROCKS	VOLCANIC ROCKS	INTRUSIVE ROCKS		
Qs	Qad, Qcs, Qv		Holocene and Pleistocene	QUATERNARY
Tmb	Tv	Ti	Pliocene and Miocene	TERTIARY
Unconformity	Tm		Miocene or Oligocene	TERTIARY
Tt			Eocene and Paleocene	TERTIARY
Unconformity		Tgd	Paleocene	TERTIARY
Khc			Upper Cretaceous	CRETACEOUS
Unconformity				
KJhs			Lower Cretaceous to Middle Jurassic	CRETACEOUS AND JURASSIC

DESCRIPTION OF MAP UNITS

SURFICIAL DEPOSITS AND SEDIMENTARY ROCKS

Qs SURFICIAL DEPOSITS--Unconsolidated alluvium, colluvium, glacial, marine, swamp and eolian deposits; mainly sand, silt, gravel and pumice

Tmb MILKY RIVER FORMATION OF GALLOWAY (1974) AND BEAR LAKE FORMATION--Milky River Formation (Pliocene); mainly volcanogenic sandstone and conglomerate, non-marine. Bear Lake Formation (Miocene); sandstone, conglomerate, siltstone, shale, and coal; shallow marine to non-marine

Tt TOLSTOI FORMATION OF BURK (1965) (Paleocene and Eocene)--Sandstone, conglomerate, siltstone, dark shale, coal; high percent volcanic debris; mainly non-marine

Khc HOODOO AND CHIGNIK FORMATIONS--Hoodoo Formation (Upper Cretaceous); dark shale and siltstone; deep water deposit. Chignik Formation (Upper Cretaceous); sandstone, shale, conglomerate, siltstone, and coal; shallow water to non-marine

KJhs HERENDEEN LIMESTONE AND STANIUKOVICH, NAKNEK, AND SHELIKOF FORMATIONS--Herendeen Limestone (Lower Cretaceous); thin-bedded calcarenite composed of Inoceramus prisms and thin calcareous sandstone. Staniukovich Formation (Upper Jurassic and Lower Cretaceous); thin-bedded feldspathic and laumontitic sandstone. Naknek Formation (Upper Jurassic); dark siltstone and shale in upper part, light arkosic sandstone and conglomerate in lower part. Shelikof Formation (Middle Jurassic); dark siltstone and shale

VOLCANIC ROCKS

Qad ASH AND DEBRIS FLOW DEPOSITS--Volcanic ash, pumice, tuff, and breccia; includes air-fall, ash flow, and avalanche deposits; unsorted to well-sorted; poorly- to well-stratified; includes some lava flows

Qcs CINDER AND SPATTER CONES, AND DOMES--Cinders, scoria, and associated pyroclastic rock

Qv VOLCANIC ROCKS--Andesite and dacite flows, tuff, volcanic breccia, and lahars

Tv VOLCANIC ROCKS--Rhyolite, andesite, dacite, and basalt flows; tuff, volcanic rubble flows, and lahars; includes hypabyssal plugs and domes

Tm MESHIK FORMATION (Miocene or Oligocene)--Basalt flows, volcanic rubble flows, and lahars; minor volcanogenic sedimentary rock

INTRUSIVE ROCKS

Ti INTRUSIVE ROCKS--Quartz diorite, diorite, and gabbro; medium- to coarse-grained; mainly small plutons

Tgd GRANODIORITE--Semidi Islands pluton; medium- to coarse-grained; hornblende- and biotite-bearing

GEOLOGIC MAP SYMBOLS

Contact--Dotted where concealed

Fault--Dashed where approximately located, dotted where concealed, queried where probable. U, upthrown side; D, downthrown side. Arrows indicate relative lateral movement

Thrust or high-angle reverse fault--Dotted where concealed; sawteeth on upper plate

Folds--Showing trace of axial plane; dashed where approximately located; dotted where concealed. Arrow indicates direction of plunge

Anticline

Syncline

Volcanic crater

Volcanic vent or cinder cone

Hornfels

Alteration

Dikes and sills

Exploratory drill hole

Hot spring

Native Corporation boundary

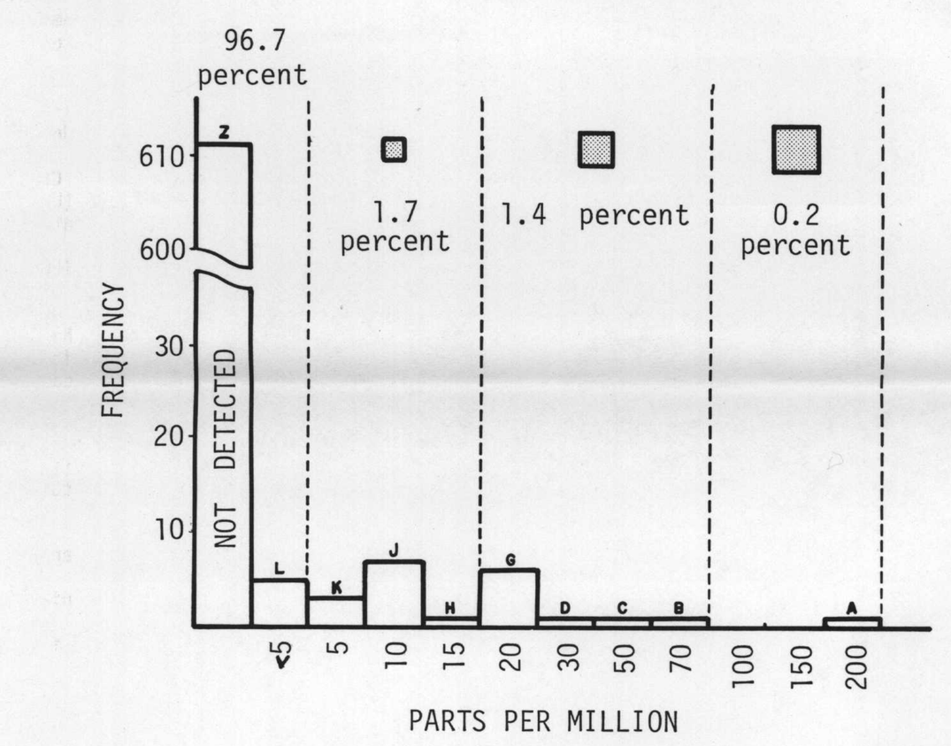

Figure 2.--Histogram for molybdenum in 637 minus-80-mesh stream-sediment samples, Chignik and Sutwik Island quadrangles, Alaska, showing: symbols denoting anomalous concentrations, percentage of total number of samples represented by each range, and letters corresponding to concentrations in parts per million. Statistics are based on all unqualified values (21) within the sample population; arithmetic mean, 27.1; standard deviation, 42.6; geometric mean, 16.2; and geometric deviation 2.5.

Table 2.--*Copper, lead, zinc, and silver associated with anomalous molybdenum values in minus-80-mesh stream-sediment samples, Chignik and Sutwik Island quadrangles, Alaska*

[Values reported in parts per million; Mo, Cu, Pb, and Ag determined by semiquantitative emission spectroscopy, Zn by atomic absorption; N, not detected; L, detected but below value shown; lower limit of detection for Ag is 0.5 ppm; *, anomalous concentration. Map number corresponds to sample site on stream-sediment map]

Map no.	Field no.	Mo	Cu	Pb	Zn	Ag
1	SW092	20	700*	200*	350*	1*
2	093	20	700*	200*	45	1*
3	CG159	30	150*	20	40	N
4	202	70	500*	15	40	L(0.5)
5	201	20	1,000*	15	95*	L(0.5)
6	402	20	1,000*	20	110*	N
7	416	10	150*	30	65	N
8	413	20	150*	30	95*	N
9	415	15	150*	50*	90*	N
10	144	10	100	20	40	N
11	143	10	150*	20	50	N
12	172	10	100	100*	80	N
13	182	5	50	30	50	N
14	142	5	150*	20	50	N
15	141	20	200*	30	55	N
16	061	10	70	15	25	N
17	062	200	1,000*	20	25	N
18	041	5	70	15	45	N
19	064	10	150*	10	25	N
20	066	50	150*	15	65	N
21	036	10	150*	30	140*	L(0.5)

DISTRIBUTION AND ABUNDANCE OF MOLYBDENUM IN MINUS-80-MESH STREAM-SEDIMENT AND NONMAGNETIC HEAVY-MINERAL-CONCENTRATE SAMPLES, CHIGNIK AND SUTWIK ISLAND QUADRANGLES, ALASKA

By
D.E. Detra and G.W. Day

1980

This map is one of a series, all bearing the number MF-1053. Background information relating to this map is published as U.S. Geological Survey Circular 802 available free from Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202

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