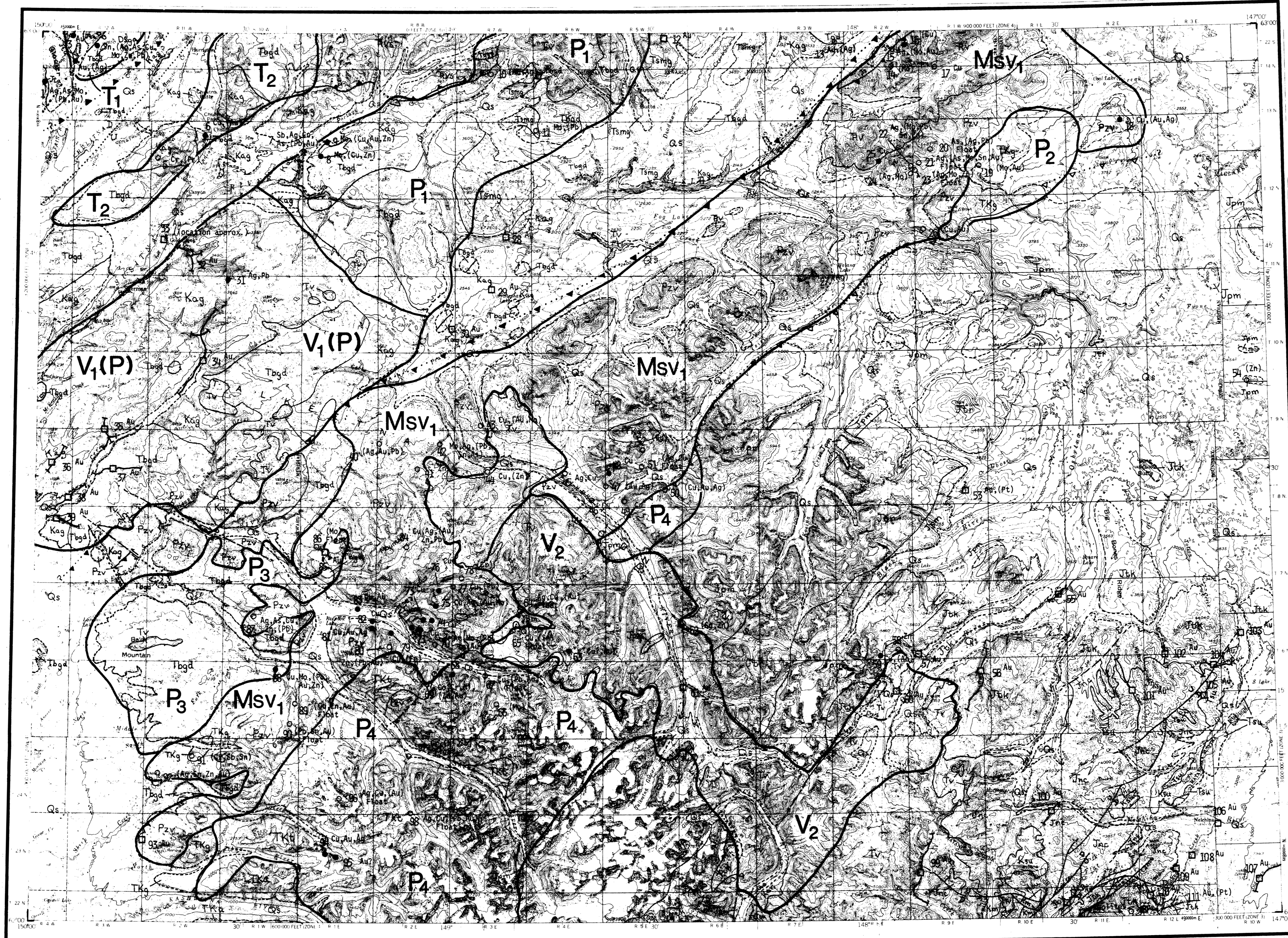


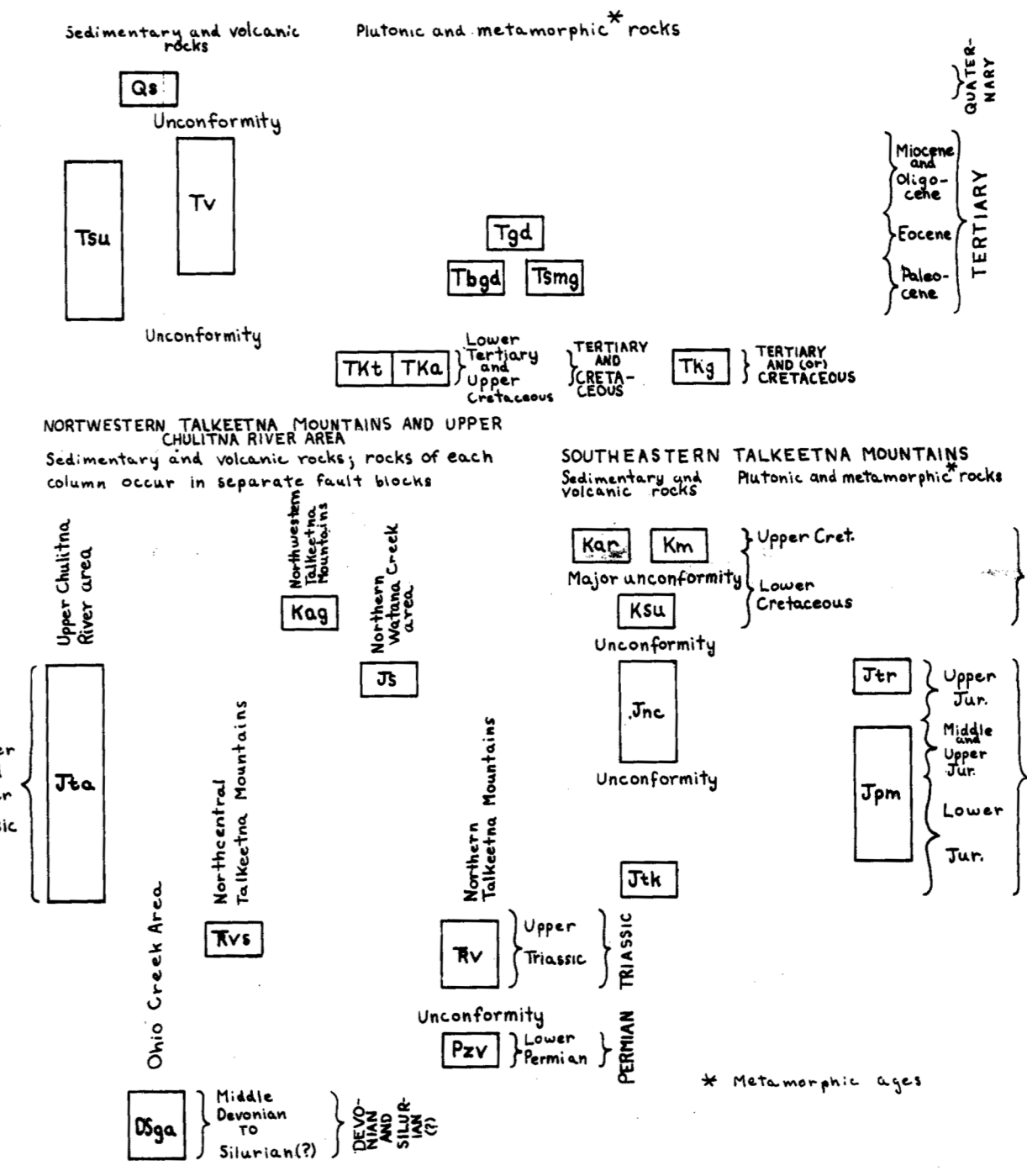
Folio of the TALKEETNA MOUNTAINS Quadrangle, Alaska



Base map from U.S. Geological Survey, 1:250,000
Talkeetna Mountains Quadrangle, Alaska, 1955

CORRELATION OF MAP UNITS

Geology generalized after Csejtey and others, 1978

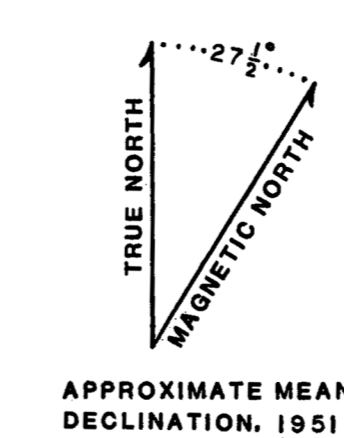
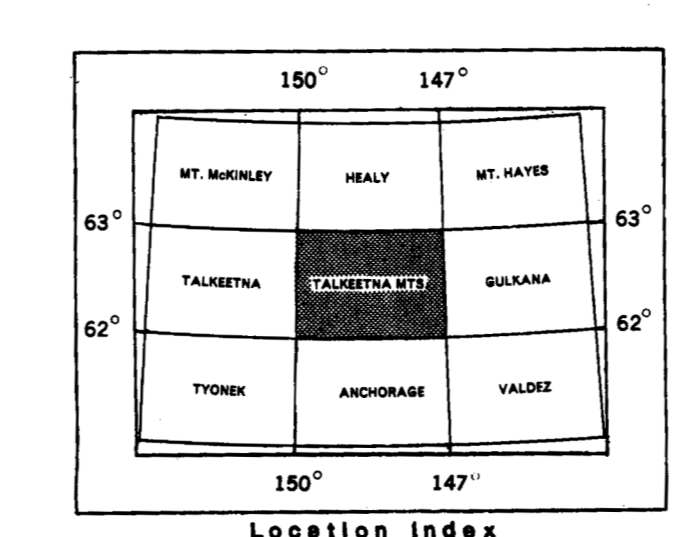
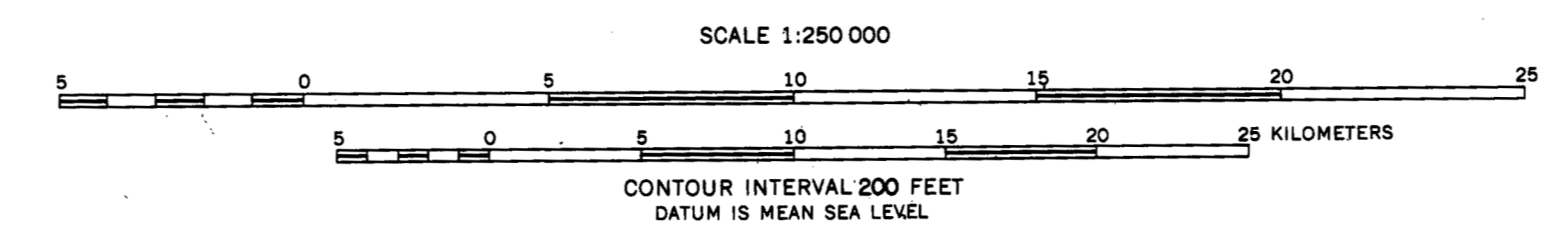


DESCRIPTION OF MAP UNITS

- Qs SURFICIAL DEPOSITS, UNDIFFERENTIATED (Quaternary)
- Tv VOLCANIC ROCKS, UNDIVIDED (Pliocene to Pleistocene?)—felsic and mafic subaerial volcanic rocks and related shallow intrusions.
- Tu TERTIARY SEDIMENTARY ROCKS, UNDIFFERENTIATED (Pliocene to Miocene)—terrestrial, mostly fluvial to stream with a few high-altitude lakes.
- Tgd GRANODIORITE (Eocene).
- Tgpe BIOTITE AND HORNBLende GRANODIORITE (Pliocene, in part early Eocene).
- Tmg SCHIST, MICA-SCHIST, AND GRANITE (Pliocene intrusive and metamorphic ages)—Migmatitic border zone of biotite and hornblende granodiorite.
- TKL TONALITE (Upper Cretaceous and lower Paleocene).
- TKA ADAMELITE (Upper Cretaceous and lower Paleocene).
- TKg GRANITIC ROCKS, UNDIVIDED (Cretaceous and/or Tertiary).
- KAR ARKOSE RIDGE FORMATION (Lower and/or Upper Cretaceous).
- Ka MATANUSKA FORMATION (Lower and Upper Cretaceous).
- Ksu SEDIMENTARY ROCKS, UNDIVIDED (Lower Cretaceous)—shallow marine sequence of calcareous sandstone, claystone, and massive clastic limestone.
- Kag ARGILLITE AND LITHIC GRAYWACKE (Lower Cretaceous)—intercalated, marine, flysch-like sequence.
- Js SEDIMENTARY AND VOLCANIC ROCKS, UNDIVIDED (Upper Jurassic)—marine sequence of argillite, graywacke, conglomerate, and andesitic to latitic feldspar porphyry dikes and intercalated flows.
- Jtr TRONDHJEMITE (Upper Jurassic)
- Juc JURASSIC SEDIMENTARY ROCKS, UNDIVIDED (Middle and Upper Jurassic)—includes Nainan and Chitina Formations, and Tuxedil Group.
- Jsa CRYSTAL TUFF, ARGILLITE, CHERT, GRAYWACKE, AND LIMESTONE (Lower to Upper Jurassic)—shallow to moderately deep marine, intercalated sequence.
- Jpm PLUTONIC AND METAMORPHIC ROCKS, UNDIFFERENTIATED (Lower to Upper Jurassic)—mainly quartz diorite, gneiss, amphibolite, and gneiss.
- Jtk TALKEETNA FORMATION (Lower Jurassic).
- Jbs METASALT AND SLATE (Upper Triassic)—intercalated, shallow-water marine sequence.
- Jtw BASALTIC METAVOLCANIC ROCKS (Upper Triassic)—mainly shallow-water marine metabasalt flows.
- Pzv BASALTIC AND ANDESITIC METAVOLCANIC ROCKS (Penny/Pennant?) and Early Tertiary)—shallow to deep marine sequence of intercalated basaltic to andesitic flows, tuffs, coarse volcaniclastic rocks, and subordinate mudstone and limestone.
- Qsp GRAYWACKE, ARGILLITE, SHALE, AND LIMESTONE (Sturtevant?) to Middle Devonian)—intercalated marine sequence, probably continental margin deposits.

SYMBOLS

- Explanatory Note**
This report, consisting of a map and a booklet of text, three tables, and a list of references cited, is the culmination of a series of multidisciplinary investigations to assess the mineral resources of the Talkeetna Mountains quadrangle of Alaska. These multidisciplinary investigations were carried out under the auspices of the U.S. Geological Survey's Alaska Mineral Resource Assessment Program (AMRAP).
- Delimited tract for the occurrence of certain types of mineral deposits.** Type(s) of deposits designated by letter symbol(s). Criteria used to define tracts are listed in table 1 for each area.
- Letter symbols for type(s) of mineral deposits.** Subscript numbers correspond to numbers in table 1.
- Lode deposits**
- T Disseminated tin deposits
 - Msv Massive sulfide base and precious metal deposits associated with volcanic rocks
 - P Porphyry copper and (or) porphyry molybdenum deposits.
 - V Base and precious metal vein deposits.
 - (P) Porphyry molybdenum deposits in area selected primarily for another deposit type
- Placer deposits**
- Mine. Minor but proven record of production. Presently claimed.
 - Prospect. Has been claimed but without proven record of production. Claims may or may not be presently active.
 - Extent of placer deposits.
- Individual mineral deposits and occurrences.** Numbers adjacent to the mineral deposit symbols correspond to map numbers in table 1.
- Lode deposits**
- Mine. Has produced but not necessarily shipped ore. Presently claimed.
 - Prospect. Has been claimed; in most cases has been scantly explored; lacks evidence of production. Claims may or may not be presently active.
 - Occurrence. Generally a minor deposit that has not been claimed as far as known. Mainly known from recent U.S. Geological Survey field investigation or from the analysis of geochemical rock samples. It also includes the locations of float samples with anomalous concentrations of metals.
- Placer deposits**
- Mine. Minor but proven record of production. Presently claimed.
 - Prospect. Has been claimed but without proven record of production. Claims may or may not be presently active.
 - Extent of placer deposits.
- Cu, Au, Sn, Zn/Fe**
- Known or reported commodity(ies). Listed in decreasing order of probable commercial value or of abundance in the deposit. Minor constituents or potential byproducts are shown in parentheses. Metallic commodities are abbreviated using their standard chemical symbols.



EXPLANATION OF GEOLOGIC MAP SYMBOLS

- Contact, approximately located
- Approximate contact of surficial deposits
- Fault
 - Long dashed where approximately located; short dashed where inferred; dotted where concealed. U indicates upthrown side where direction of displacement is known. Arrows indicate relative lateral movement.
- Thrust fault
 - Long dashed where approximately located; dotted where concealed. Teeth indicate upthrown side.
- Approximate axis of intense shear zone of variable width, possibly marking a thrust fault
 - Dotted where concealed; teeth indicate possible upthrown side of postulated thrust.

MAP AND DISCUSSION OF THE METALLIFEROUS AND SELECTED NONMETALLIFEROUS MINERAL RESOURCES OF THE TALKEETNA MOUNTAINS QUADRANGLE, ALASKA

By
D. A. Singer, Béla Csejtey, Jr., and R. J. Miller
1978

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