UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

UNDISCOVERED LOCATABLE MINERAL RESOURCES OF THE TONGASS NATIONAL FOREST AND ADJACENT LANDS, SOUTHEASTERN ALASKA

By

David A. Brew
U.S. Geological Survey, MS 904
Menlo Park, CA 94025

Lawrence J. Drew
U.S. Geological Survey, MS 920
Reston, VA 22092

Jeanine M. Schmidt
U.S. Geological Survey
4200 University Drive
Anchorage, AK 99508

David H. Root
U.S. Geological Survey, MS 920
Reston, VA 22092

Donald F. Huber
U.S. Geological Survey, MS 984
Menlo Park, CA 95025

OPEN-FILE REPORT 91-10

CONTENTS

LIST OF ILLUSTRATIONS

FIGURES

[Figures 1 to 6 are on sheet 1 of 12 of this report; figures 7 to 11 are on sheet 2 of 12.]

PLATES

LIST OF TABLES

ABSTRACT AND EXECUTIVE SUMMARY

Southeastern Alaska is a geologically complex region that contains a wide variety of known locatable mineral deposits, some of which have produced very important amounts of metals and other materials during the past 100-plus years. The Juneau district, the Chichagof district, the Kasaan Peninsula Bokan Mountain, and the Hyder district are all well known productive localities. In recent years major new discoveries have been made at the Green's Creek mine and the Quartz Hill molybdenite property.

This report estimates the undiscovered locatable mineral-resource endowment of all of the region; it then estimates the undiscovered mineral-resource endowment of the Tongass National Forest , which covers about 80 percent of the region; and, finally, itestimates the undiscovered mineral-resource endowment of that part of the Tongass that was open to mineral entry as of October, 1990. The lands open to mineral entry are estimated to contain slightly over half of the undiscovered locatable mineral resource endowment of the region.

Regional geologic, economic geologic, geochemical, geophysical, and mineral exploration history information for the region have been integrated to define 124 tracts that are permissive for the occurrence of undiscovered locatable mineral resources. The tracts range in size from about 12 to 2,920 square kilometers in area and cover almost all parts of the region. Some tracts are wholly in the Tongass National Forest, others are partially within or wholly outside. Areas not assigned to tracts are interpreted to have no undiscovered mineral-resource endowment, based on available data.

The mineral-resource endowment estimates for all of the individual tracts are combined to provide an aggregated estimate of the undiscovered locatable mineral-resource endowment of the Tongass National Forest and adjacent lands in southeastern Alaska. That estimate is 5.04 million metric tonnes of copper, 0.445 million metric tonnes of molybdenum, 168 metric tonnes of gold, 2.22 million metric tonnes of zinc, 7,550 metric tonnes of silver, 1.19 million metric tonnes of lead, 129 million metric tonnes of iron, 0.167 million metric tonnes of thorium, 0.142 million metric tonnes of rare-earth-element oxides, 2,770 metric tonnes of uranium, 26,500 metric tonnes of nickel, 62 metric tonnes of antimony, 0.181 million metric tonnes of tin, and 2,500 metric tonnes of tungsten.

These estimates do not include the metal contained in all of the mineral deposits inferred to occur in the region; this is because there are no world-wide tonnage and grade models for several of the deposit types .These estimates are converted to gross-in-place monetary value (GIPV) using commodity prices based on U.S. Bureau of Mines averages for the decade 1978-1987. That aggregated value is $40.9 billion.

Because the Tongass National Forest does not cover all of the tracts for which estimates were made, the value of its undiscovered mineral-resource endowment is only part of the above figure. The estimated gross-in-place value (GIPV) of the undiscovered mineral resources in all of the Tongass National Forest is $28.7 billion. Similarly, because only part of the Tongass is open to mineral entry, the estimated value of the endowment on lands open to mineral entry is only part of the total Tongass figure. That estimated gross-in-place value (GIPV) of the undiscovered mineral resources in Tongass National Forest lands that are presently open to mineral entry is $24.4 billion.

Based on the above information, most of the tracts in the whole region are classified into categories based on the on gross-in-place values (GIPV) of the estimated undiscovered mineral resources: (1) 13 tracts with GIPV greater than $1 billion, (2) 52 tracts with GIPV less than $1 billion and greater than $100 million, (3) 33 tracts with GIPV less than $100 million and greater than $1 million, and (4) 6 tracts with GIPV less than $1 million.

Similarly, the individual tracts that are wholly or partially within the Tongass National Forest and are open to mineral entry are classified into the same categories based on the on gross-in-place values (GIPV) of the estimated undiscovered mineral resources, as follows: (1) 7 tracts with GIPV greater than $1 billion, (2) 33 tracts with GIPV less than $1 billion and greater than $100 million, (3) 30 tracts with GIPV less than $100 million and greater than $1 million, and (4) 5 tracts with GIPV less than $1 million.

The individual tracts that are wholly or partially within the Tongass National Forest are also classified on the basis of the ratio of their GIPV to their area in square kilometers: (1) 8 tracts with GIPV/km sq. ratios less than 1.0E+08 ($1 billion per square kilometer) and greater than 1.0E+07 ($1 million per square kilometer) ; (2) 30 tracts with ratios less than 1.0E+07 (1$ million per square kilometer) and greater than 1.0E+06($100,000 per square kilometer) ; (3) 33 tracts with ratios less than 1.0E+06 ($100,000 per square kilometer) and greater than 1.0E+05($10,000 per square kilometer) ; and (4) 13 tracts with ratios less than 1.0E+05($10,000 per square kilometer).

These estimates of the undiscovered mineral resource endowment were made using probabilistic methods. Each individual tract is judged to contain one or more different types of mineral deposits. Each type of deposit may contain one or more metallic element(s) of economic interest. For tracts where available information was judged to provide a sufficient basis, the number of as-yet-undiscovered deposits of each type discoverable by conventional mineral exploration methods was estimated for each tract at the 0.95, 0.90, 0.50, 0.10, and 0.05 probability levels. Several tracts were judged too small or too well explored to justify such an estimate. In addition, jointly-made USGS-USBM non-probabilistic estimates were available for several tracts.

The estimates of the numbers of undiscovered deposits in each tract were used in combination with the world-wide grade and tonnage for each deposit type to calculate a probabilistic undiscovered mineral-resource endowment for each tract by means of the U.S. Geological Survey MARK3 mineral resource endowment simulator. By Monte Carlo simulation, this program produces a distribution of tonnages for each metal contained in each deposit type in a given tract; we have used the mean unconditional tonnage figure for each metal in our analysis. When aggregated over all deposit types, these distributions yield a probabilistic estimate of the undiscovered mineral resources in each tract.

The gross-in-place monetary values (GIPV) calculated are not a direct measure of the value of the undiscovered mineral-resource endowment to the economy because they do not take into account the costs of finding, exploring, developing, mining, beneficiating, and transporting the resources. These factors have to be evaluated separately for each tract; such evaluation is an appropriate continuation of this present analysis.

Although the gross-in-place value (GIPV) is not a direct measure of the ultimate contribution that the undiscovered mineral resources may make to the region, it can be compared with the following mineral-resource monetary values to almost complete the mineral-resource framework for the Tongass National Forest and adjacent lands in southeastern Alaska: (1) the gross-in-place value of $33.76 billion reported by the U.S. Bureau of Mines for all the discovered mineral resources in the Tongass National Forest and their $15.6 billion figure for the net present value of the 13 deposits in the Forest that they judge to be economically viable for development under today's market conditions; (2) $2.459 billion calculated in this report to be the present-day value of mineral resources produced from the region during the past 100 years; and (3) $596.82 million calculated in this report as the present-day value of mineral-resource exploration and development activities during the past 90 years. The gross-in-place value of discovered resources not in the Tongass National Forest is needed to make the framework complete.

Regarding leasable and other locatable mineral resources: no oil or gas resources of of economic interest are judged to exist in southeastern Alaska, but coal, dimension stone, and the industrial minerals barite, limestone, and marble have been produced in the past. They are described briefly in this report, but no quantification of their value is given. Geothermal energy is also discussed and previous quantified resource estimates made by others are included. Rock for aggregate, sand, and gravel are salable mineral resources of continuing importance, but they are neither discussed nor evaluated in this report.

INTRODUCTION

General

Southeastern Alaska is part of the Cordilleran orogenic belt of North America, and as such it is marked by a long and complicated geologic record. That geologic record includes the formation of about a thousand known metallic mineral deposits and occurrences, some of which have been developed into mines and prospects. Starting when Alaska became part of the United States and continuing to the present day, the exploration, development, and other activities associated with these deposits have been an important part of the southeastern Alaska economy. This report estimates the undiscovered mineral-resource endowment of all of the region; it then estimates the undiscovered mineral-resource endowment of the Tongass National Forest , which covers most of the region; and, finally, itestimates the undiscovered mineral-resource endowment of that part of the Tongass that was open to mineral entry as of October, 1990. The lands open to mineral entry are estimated to contain slightly over half of the undiscovered locatable mineral resource endowment of the region.

The Tongass National Forest covers about 80 percent of the southeastern Alaska region and is therefore inferred to include the majority of undiscovered locatable mineral deposits. The Forest lands have in the past been classified or otherwise designated in various land use categories, including 14 Wilderness areas established before October 1990 and five additional Wilderness Areas established by an Act of Congress in October 1990 and signed into law in November 1990. Lands in the Wilderness category are essentially closed to mineral entry, but most of the Forest is open according to provisions of the 1872 Mining Law. One main purpose of this report is to provide information on the as-yet-undiscovered locatable mineral resources to the Forest Service for their use in revising previous land classifications and developing new management alternatives. Figure 1 gives a generalized picture of the distribution of different types of lands in southeastern Alaska. (The five new Wilderness Areas are not shown.)

This report consists of introductory material;a brief description of the regional geology; explanations of maps and several large tables; the maps and tables themselves; conclusions; a list of references,;and three appendices, including one that relates the different reference items used in the study to the fifteen individual 1:250,000-scale topographic quadrangles that cover the region. These fifteen quadrangles are shown on figure 2; they are the basis on which most of the data are organized.

The introductory and regional geologic material describes the region in terms of the factors most pertinent to the assessment of undiscovered mineral resources: location; geological, geophysical, and geochemical mapping coverage; and availability of previous detailed mineral-resource assessments of specific areas.

Location

Southeastern Alaska, also known as the Alaska panhandle, extends from roughly latitude about 59 degrees, 45 minutes North south to the State's southern boundary at about 54 degrees, 45 minutes North (Fig. 1). The region includes all of the Alexander Archipelago and adjacent parts of the mainland. In comparison, the region is roughly two-thirds the size of the State of California and about the same size as the country of Nepal. Much of the region is covered by the waters of the Inside Passage and adjoining fiords and channels. In general, the terrain is mountainous, with only few low-elevation relatively flat areas. Wahrhaftig (1965) provides a more detailed discussion of the terrain; he divided the region into several physiographic provinces and sub-provinces. Timberline ranges from sea level to about 2500 feet elevation; below timberline thick forest and brush are common; above timberline large parts of the higher mountains are covered by glaciers and permanent snowfields. Road access is available only to the northern communities of Haines and Skagway through Yukon Territory and British Columbia and to the southern community of Hyder through British Columbia. Access to all other communities and locations is by boat or air.

Regional tectonic framework

All of southeastern Alaska is in the Insular geologic belt of Douglas and others (1970) and in Superterrane II of Monger and others (1982). In general, these designations imply that all of the geologic, geochemical, and geophysical features of the region are in one way or another related to the accretion of exotic portions of the earth's crust to the North American continent by plate-tectonic processes operating in the Pacific Ocean basin. These same processes also indirectly responsible for metallogenic events and generated many of the mineral deposits in the region..

A recent brief synthesis of the tectonic history of northern southeastern Alaska (Brew and others, in press a, b) indicates that eight major tectonic elements are present in the region (Fig. 3). From west to east these are the Yakutat, Chugach, Wrangellia, Alexander, and Wrangellia plus Alexander terranes, the Gravina overlap assemblage on the aforementioned element, and the Yukon prong and Stikine terranes. Immediately to the east of the Stikine terrane, but entirely within British Columbia, are the Laberge overlap assemblage (not shown on figure 3) on the Stikine and on(?) Cache Creek terrane, and the Cache Creek terrane itself.

The rocks in these tectonic elements are in general of different ages and different types in the different terranes, with the oldest rocks (Proterozoic(?) and Early Paleozoic) in the Yukon prong. The next oldest are in the Alexander terrane (Late Proterozoic(?) through Late Triassic) and Stikine terrane (Devonian through Late Triassic); and younger rocks are in Wrangellia (Permian through Early Jurassic(?)), Chugach terrane (Late Jurassic through Cretaceous), and Yakutat terrane (Late Jurassic through Late Tertiary). All of these terranes, except \for the Yakutat and Chugach, are interpreted to contain rocks that were deposited far from what is now southeastern Alaska and were transported as coherent packages for perhaps thousands of kilometers before being joined to each other and to North America. The Yakutat and Chugach terranes formed close to the western margin of the Alexander and Wrangellia terranesduring terrane movements. Late Jurassic through early Late Cretaceous rocks of the Gravina belt were deposited on the Alexander and Wrangellia terranes after juxtaposition.

It is difficult to generalize the lithostratigraphy of the different tectonic elements, mainly because a great variety of rock sequences indicating different depositional environments are present. Nevertheless, regardless of the age of the rocks, most sequences are interpreted to have formed in complex volcanic-arc environments distant from North America and only a few units represent relatively long-lived stable depositional situations. The exceptions to this generalization are: (1) the Yukon prong rocks, which apparently formed adjacent to ancestral North America, (2) the Chugach and Yakutat terrane rocks, which were deposited adjacent to terranes already being accreted to North America, albeit at more southern latitudes than their present locations, and (3) the Gravina overlap assemblage, which is still essentially where it was deposited on the Alexander and Wrangellia terranes.

The plate tectonic processes that transported and amalgamated the terranes also resulted in the imposition of later geologic features on the terranes during and following the actual accretion. These include the development of major magmatic belts (Brew and Morrell, 1983; Brew, 1988), of major metamorphic belts (Brew and others, in press a), and of high-angle transcurrent fault systems (Ovenshine and Brew, 1972; Loney and others, 1975; Sonnevil, 1981).

The mineral deposits in the region are of two general types, those that formed in the terranes before transport and accretion to North America and those related in some way to the accretionary processes. The former type includes stratiform sulfide and barite deposits that formed essentially when the rocks were deposited as well as other deposits associated with intrusive-magmatic and metamorphic events that occurred before or during the tectonic transport of the terranes. The latter type includes a variety of deposits associated with the intrusive-magmatic and metamorphic events that accompanied and followed accretion.

The regional geology is generalized in figure 4 and is described in more detail in a following section

Regional Geophysics

The geophysical features of southeastern Alaska are in general closely related to the major geologic features just described, but they also reveal additional structural and(or) tectonic elements that are not apparent from the regional geology. Regional aeromagnetic, gravity, seismic, and aeroradiometric data are available; the last-listed were not used in this study, although local aeroradiometric survey data were used. We incorporated local geophysical information from the sources cited in figure 5.

The regional aeromagnetic data (Decker, 1979, 1981; Geological Society of America, 1987) show that the magnetic field generally parallels the dominant northwest-southeast structural "grain" in the region, with pronounced linear highs along the western margin of the Coast plutonic-metamorphic complex and along segments of the major faults that occur close to the continental margin. In addition, the data indicate the presence of some of the larger Alaskan-type mafic-ultramafic plutonic masses (Taylor, 1967), some isolated granitic plutons, and the significant change in geophysical trend orientation referred to as the "Haines bend". This last feature is a geologically enigmatic change in the orientation of both the magnetic and gravity fields from the consistent azimuth of 325 degrees that exists for almost all of southeastern Alaska to an azimuth of about 290 degrees at about the latitude of Haines.

The regional gravity data (Barnes, 1976; D.F. Barnes, unpublished maps) indicate that the gravity field in southeastern Alaska consists in general of a series of flat steps and steep risers, or gradients, between the low gravity values of the Pacific Ocean crust and the higher values along the northwest-southeast border with British Columbia. One of the steep gradients is along the western margin of the Coast plutonic-metamorphic complex; others are associated with major Neogene faults. The gravity data locally reflect the presence of some of the larger Alaskan-type mafic-ultramafic plutonic masses (Taylor, 1967) and provided the first indication of the significant "Haines bend" change in geophysical trend orientation.

Regional seismic data are pertinent to this Tongass study in that they identify areas susceptible to earthquakes. Moderate to large earthquake activity may require special construction practices and may affect mining and transportation of mined ore. Homer (1990) indentifies four areas that have potentially damaging levels of seismic activity in southeastern Alaska. One is along the Fairweather-Queen Charlotte Islands fault at the continental margin; one in a northeast-trending zone that connects the above fault in the Cross Sound area to the Denali fault several tens of kilometers northwest of Haines; one along the Denali fault from that junction point on to the northwest; and the last area consists of three northeast-trending zones in the Coast plutonic-metamorphic complex between Juneau and Haines.

Regional Geochemistry

No regional syntheses have been made of the stream-sediment, panned-concentrate, or bedrock geochemical data available for southeastern Alaska. We incorporated local data of different types from the sources cited in figure 6.

Regional mineral-resource assessments

One published regional non-probabilistic mineral-resource assessment exists for southeastern Alaska (Berg, 1984). We used it as the source for most of the brief deposit descriptions found in table 2, but did not use either its classification of deposit types or mineral-resource assessment tract boundaries. We did rely heavily on available local probabilistic mineral-resource assessments, however. This is discussed in some detail in the section of this report titled "Methods". The local information we incorporated is cited in figure 7.

Discovered mineral resources

The discovered locatable mineral resources in the Tongass National Forest part of southeastern Alaska have been reported on recently by the U.S. Bureau of Mines (Coldwell, 1990), but the information was not available to us in time to incorporate in this version of this report. Preliminary results of that analysis were provided to the U.S. Forest Service and incorporated in a publication released in January 1990 (U.S. Forest Service, 1990a, p.48). They state that the gross-in-place value (GIPV) of discovered mineral resources contained in 144 deposits in the Tongass National Forest is $43.76 billion (now adjusted to $33.76 billion, J.R. Coldwell, written communication, November 5, 1990) and that there are 13 identified mineral deposits on the Tongass National Forest that appear to be economically viable under today's market conditions. The net present value of these 13 deposits is estimated at $25.6 billion (now adjusted to $15.6 billion; J.R. Coldwell, oral communication, December 18, 1990) . The same general information, somewhat revised and together with some additional material, appears in the Draft Environmental Impact Statement for the Tongass Forest Land Management Plan Revision (U.S. Forest Service, 1990b). Of the 13 deposits just noted, five are low-sulfide gold-quartz vein deposits, one is a synorogenic-synvolcanic nickel-copper deposit, one a Kuroko massive sulfide, one a copper skarn, one an Alaskan-type platinum-group element deposit, one a porphyry molybdenum deposit, one a felsic-plutonic-related uranium and rare-earth-element deposit, and the last is the tailings from a low-sulfide gold-quartz deposit.

Acknowledgements

We thank Thomas K. Bundtzen of the State of Alaska Division of Geological and Geophysical Surveys for assistance in estimating the magnitude and value of past mineral-exploration activities in southeastern Alaska. Informal review of many parts of the report was done by R.A. Loney and R.D. Koch and a mfew parts were read by D.A. Singer. Formal technical review was by R.B. McCammon and D.P. Cox. W.A. Scott was responsible for the execution of the MARK3 program runs. J.L. Drinkwater provided essential support in preparing the tables.

REGIONAL GEOLOGY

Introduction

The regional geologic information used in this study is cited in figure 2. As general background tectonic information we used Berg and others (1978), Brew (1990), and Brew and others (in press a); for Cenozoic extrusive-magmatic belt information Brew and Morrell (1983) and Brew (1988) ; for intrusive-magmatic belt information Brew (1988) ;and Moll-Stalcup and others (in press); and for metamorphic belts Brew and others (in press b) . Our geologic overviews during the assessment were guided first by our review of all available geologic mapping and secondly by the regional geologic compilations of Souther and others (1979) and Beikman (1975). The compilation of Gehrels and Berg (1984) was used as guidance for a limited part of southern southeastern Alaska. The generalized geologic map (Fig. 4) is compiled from the sources given in figure 2, from Brew and others (in press a), and from Beikman (1975).

The scheme used in preparing the geologic map (Fig. 4) differentiates extrusive igneous rocks, intrusive igneous rocks of different ages, metamorphic rocks with different protoliths and different metamorphic ages, accretionary wedge and subduction complex rocks, and sedimentary and volcanic rocks of different types and ages. This generalized approach is required by the scale of figure 4; it has the advantages of emphasizing the very large-scale geologic features of the region, but also has the disadvantage of not differentiating different types of intrusive rocks or of volcanic rocks. This generalized map is currently being revised as part of the preparation of a new geologic map that will accompany Plate 16 in the final U.S. Geological Survey publication. Souther and others (1979) and Beikman (1975) provide more detailed information that somewhat offsets the disadvantages noted above.

The following discussion of the regional geology provides some details specific to the different map units shown on figure 4. Within each unit we call attention to rocks that are particularly important as potential ore-forming environments, such as marine felsic volcanic rocks, subaerial basalts, redbeds, ultramafic rocks, felsic intrusive rocks, mafic intrusive rocks, and alkaline intrusive rocks. Major fault zones that may have had a role in the localization of vein and other deposits are described briefly.

Extrusive rocks

Extrusive volcanic rocks of Tertiary and Quaternary age occur in a few localities in southeastern Alaska (unit E1 of Fig. 4)(Brew, 1988). The biggest volcanic fields are on Kruzof, Pleasant , Admiralty, Kupreanof, and Zarembo Islands, all in northern and central southeastern Alaska . Several other much smaller fields are in the southern part of the region. The Edgecumbe volcanic field on Kruzof Island consists of Pleistocene and Holocene basalt, andesite, and rhyodacite of two main composite volcanoes built on a low-lying shield that rests on hornfelsed graywacke of the accretionary wedge and subduction complex rock unit described below. The field on Pleasant Island consists of Neogene andesite flows and breccia resting unconformably on Paleozoic sedimentary rocks of theAlexander terrane described below. The Admiralty volcanic field on Admiralty Island also consists of Neogene andesite flows and breccia resting unconformably on Paleozoic and Mesozoic sedimentary and volcanic rocks of the Wrangellia and Alexander terranes, on Mesozoic sedimentary rocks of the Gravina over lap assemblage, and on Paleogene sedimentary rocks of a local basin. The volcanic fields on Kupreanof and Zarembo Islands are like the Admiralty field, but include more varied rocks, including some felsic varieties. None of these volcanic fields has any associated important mineral deposits, but those on Kupreanof, and Zarembo Islands have been prospected intensely in recent years.

Intrusive rocks

Intrusive igneous rocks of Tertiary, Mesozoic, and Paleozoic age underlie almost half of southeastern Alaska (Fig. 4). Those of Tertiary age (unit I4 of Fig. 4)include granitic, dioritic, and gabbroic units (Brew and Morrell, 1983; Brew, 1988). They occur in four main belts: one belt is near the continental margin in the Fairweather Range and on Yakobi, Chichagof, Kruzof and Baranof Islands; another extends from the Fairweather Range northeasterly through the Glacier Bay region to the vicinity of Haines, the third extends from the Glacier Bay region southeasterly through the whole region to beyond Ketchikan; and the fourth extends the length of the Coast Mountains, making up the backbone of the Coast plutonic-metamorphic complex. The rocks in the different belts differ in age and composition.

The continental margin belt.consists of gabbroic and granitic bodies to the north in the Yakutat, Glacier Bay, and Yakobi Island areas and of dominantly granitic.plutons to the south in western Chichagof and Baranof Islands.The intrusions are roughly 45 to 50 million years old and were emplaced in the accretionary wedge and subduction complex rocks of the Chugach and Yakutat terranes. The gabbros have associated nickel-copper deposits, including the Brady Glacier deposit within Glacier Bay National Park. Low-sulfide gold-quartz vein deposits, including those of the Chichagof district, are spatially associated with the granitic bodies. The belt that extends to the northeast through Glacier Bay consists of slightly younger granitic plutons emplaced in Chugach, Alexander, and Wrangellia terrane rocks. Copper- and molybdenum-bearing porphyry-type deposits, including the Muir Inlet Nunatak molybdenite deposit,occur in some of the plutons; some skarn deposits are present; and low-sulfide gold-quartz vein deposits are locally present in and near the northeastern end of the belt. The third belt that extends from the Glacier Bay region southeasterly through the whole region to beyond Ketchikan consists of both volcanic and plutonic rocks about 25 to 30 million years old emplaced in and on Alexander and Wrangellia terrane, Gravina overlap assemblage, and various metamorphic belt rocks. As noted previously, the local occurrences of extrusive felsic volcanic rocks are highly altered and have been prospected for epithermal deposits. The southeastern end of the belt includes the world-class molybdenum-bearing porphyry deposit at Quartz Hill. The major belt that extends the length of the Coast Mountains consists of granitic to tonalitic intrusions that range in age from about 70 to 50 million years. Low-sulfide gold-quartz deposits, including those in the Juneau gold belt, occur in metamorphic rocks close to the western margin of the belt; they are near the older plutons, but are close in age to the younger plutons that are exposed somewhat further east. Both skarn deposits and minor molybdenite-bearing deposits are associated with the younger bodies in the belt.

Intrusive igneous rocks of Mesozoic age (unit I3 of Fig. 4) occur in two major belts that extend almost the full length of southeastern Alaska (Brew and Morrell, 1983). The older belt extends from the Glacier Bay region south-southeasterly to Prince of Wales Island and beyond into British Columbia; the younger extends from northern Admiralty Island south-southeasterly to Ketchikan and beyond into British Columbia.

The belt that extends from the Glacier Bay region south-southeasterly to Prince of Wales Island and beyond into British Columbia consists generally of granodioritic, dioritic, and gabbroic plutons that range in age from about 160 to 100 million years. The belt includes several batholiths in its northern part and scattered bodies south of Chichagof and Admiralty Islands. All of the bodies were emplaced in either Wrangellia or Alexander terrane rocks. The northern part of the belt is inferred to be more deeply eroded than the southern, and has no major mineral deposits associated with it. The southern part, in contrast, has several important skarn localities, including those on the Kasaan Peninsula and at Hetta Inlet. Of particular note is the Jurassic age peralkaline intrusion at Bokan Mountain on southeastern Prince of Wales Island, it is host to large uranium-thorium deposits.

The belt that extends from northern Admiralty Island south-southeasterly to Ketchikan and beyond into British Columbia consists of granodioritc and tonalitic bodies that are roughly 95 million years old. With only a few exceptions, the plutons were all emplaced in either Gravina overlap assemblage rocks or in adjacent metamorphic rock units whose protoliths probably included Gravina assemblage and Wrangellia and Alexander terrane rocks. Throughout its length the individual plutons are generally small and are scattered or in clusters; but north of Ketchikan there is one possibly composite body of batholithic dimensions. This belt is notable in that it has essentially no associated mineral deposits. North of the belt, however are two bodies inferred to be of somewhat similar age that contain large low-sulfide gold-quartz deposits; they are the Jualin pluton with the Kensington and Juallin deposits and the Treadwell sill with the Treadwell deposits.

A single pluton of Jurassic age occurs at the British Columbia border near Hyder in easternmost southeastern Alaska. It contains and is otherwise related to the mineral deposits of the Hyder district. The body is part of a belt that is otherwise on the Canadian side of the International Boundary and was emplaced in Stikine terrane rocks.

Mafic and ultramafic rocks of Mesozoic age (unit I2 of Fig. 4) occur in one main belt in the region (Brew and Morrell, 1983) and as sparsely scattered bodies elsewhere. The main belt is narrow and extends along the length of southeastern Alaska, from Yukon Territory on the north to near Prince Rupert to the south. It consists of a series of widely spaced concentrically zoned, or Alaskan-type, mafic-ultramafic complexes of inferred middle Cretaceous age. Most complexes have a core of dunite, partially surrounding units of peridotite and pyroxenite, and an outer zone of gabbro that may b[illegible]er than the inner rocks. In general, the complexes were emplaced.in Gravina assemblage or immediately adj[illegible]tamorphic rocks, but they are also in Wrangellia and Alexander terrane rocks. The larger ones: Klukwan, [illegible]m, Blashke Islands, Union Bay, and Duke Island, contain large amounts of ilmenite and have been exte[illegible]ospected for their iron resources.

Sparse scattered bodies of serpentinized ultramafic rocks occur in the Chugach terrane, in metamorphic rocks on Admiralty Island, and in the Coast plutonic-metamorphic complex between the latitude of Skagway and Petersburg. Some of these contain small amounts of chromite.

Intrusive rocks of Paleozoic age (unit I1 of Fig. 4) occur in one belt in the region (Brew and Morrell, 1983); that belt, as well as several of the others discussed so far, have been offset about 150 kilometers in a right-lateral sense by the Chatham Strait fault. Thus the granite, syenite, trondjhemite, and related rocks of southeasternmost Chichagof Island are part of a belt of plutons that also occurs on southern Prince of Wales Island and on Annette Island and the nearby mainland. All were emplaced in Alexander terrane rocks; the plutons on southern Prince of Wales Island are of batholithic size. Most of the syenite bodies have associated radioactivity anomalies and most have been, or are being, prospected for rare-earth-element deposits.

In addition to the above belt, a single pluton of Devonian age occurs in the Yakutat region and several bodies of orthogneiss in the Coast plutonic-metamorphic complex are interpreted to be metamorphosed Paleozoic-age plutons. The former was emplaced in metamorphic rocks inferred to be long to the Alexander terrane; the latter bodies are in metamorphic rocks of the Nisling assemblage of Canadian workers. The Nisling rocks belong to the Yukon prong, which is interpreted to be a southward extension of the Yukon-Tanana terrane of central Alaska and nearby Yukon Territory.

Metamorphic rocks

The metamorphic rocks of southeastem Alaska are here considered in three units, based mainly on the combinations of terranes from which they were derived (Fig. 4). The first unit consists of slate, phyllite, schist, and gneiss derived from rocks of the Alexander, Wrangellia, and Stikine terranes and from Gravina overlap assemblage rocks. The second unit consists of slate, phyllite, semischist, hornfels, and schist derived from Alexander terrane rocks. The third unit consists of schist and gneiss of the Nisling assemblage rocks in the Yukon prong. All of these units are classified into smaller belts and discussed in detail by Brew and others (in press a). The Chugach and Yakutat terrane rocks and some of the Gravina assemblage rocks described below, and not under this metamorphic rock heading, are also wholly or in part metamorphic. They are treated separately because they are of single terrane origin and their other characteristics and relations are clearer than are those of theunits described here.

Metamorphic rocks of the first unit (M3 of figure 4),derived from combinations of the Alexander, Wrangellia, and Stikine terranes and from Gravina overlap assemblage rocks, occur in three main belts in southeastem Alaska. One is in western Chichagof Island and nearby parts of Glacier Bay National Park where Wrangellia and Alexander(?) rocks are involved; the second is on Admiralty, Kupreanof, and nearby islands where Alexander, Wrangellia, and Gravina(?) rocks are involved; and the third is in the western metamorphic belt of the Coast plutonic-metamorphic complex where Alexander, Wrangellia, and Stikine terrane, Gravina assemblage, and perhaps even Nisling assemblage rocks are involved. The protolithic ages of the rocks in these three belts are Ordovician through Cretaceous and their metamorphic age is Cretaceous and Early Tertiary.

The metamorphic belt in westem Chichagof Island and nearby parts of Glacier Bay National Park is relatively small and narrow. It consists of greenschist- and some amphibolite-metamorphic facies slate, phyllite, greenschist, schist, and gneiss derived from sedimentary rocks and extrusive intermediate composition volcanic rocks. Some low-sulfide gold-quartz vein deposits occur in the belt. The belt on Admiralty, Kupreanof, and nearby islands is relatively broad and lies to the west of the Gravina assemblage rocks. It consists of greenschist- and minor amphibolite-metamorphic facies slate, greenschist, phyllite, schist, and gneiss derived from sedimentary rocks and extrusive intermediate to mafic composition volcanic rocks. Volcanogenic massive sulfide deposits, including that of the currently active Greens Creek mine occur in the belt.The belt in the western metamorphic belt of the Coast plutonic-metamorphic complex, as shown on figure 4, actually includes two subbelts of slightly different age. Both are Barrovian series, ranging from prehnite-pumpellyite- to amphibolite-metamorphic facies slate, greenschist, phyllite, schist, migmatite, and gneiss derived from a wide variety of sedimentary rocks and extrusive and intrusive intermediate to mafic composition volcanic rocks. Most of the Juneau gold belt low-sulfide gold-quartz vein deposits are in this belt.

Metamorphic rocks of the second unit (M2 of figure 4),derived from Alexander terrane rocks, occur in two belts; that to the north is associated with granitic rocks in the Glacier Bay and Chichagof Island areas and that to the south is a broad area of regional metamorphism. Protolithic ages are Silurian to Devonian in the northern belt; there the metamorphic age is Cretaceous and locally perhaps older. Protolithic ages in the southern belt are Cambrian to Ordovician; there the metamorphic age is Early Paleozoic. The northem belt is relatively small and narrow and consists of albite-epidote hornfels to amphibolite-metamorphic facies slate, phyllite, semischist, hornfels, marble, gneiss, and schist derived from clastic and carbonate sedimentary rocks. Some skarn deposits occur in these rocks near Tertiary intrusions. The southern belt consists of greenschist-metamorphic facies phyllite, semischist, marble, and schist derived a variety of intermediate to felsic extrusive volcanic rocks, carbonate rocks, and clastic rocks of volcanic parentage. Slightly metamorphosed volcanogenic massive sulfide deposits occur at several localities in this belt.

Metamorphic rocks of the third unit (M1 of figure 4), the Nisling assemblage rocks, occur in the in the Yukon prong which may extend the length of southeastern Alaska (Fig. 3). As shown in figure 4, the unit is exposed discontinuously in between Tertiary plutons in the Coast plutonic-metamorphic complex and along the International Boundary from north of Skagway south to about the latitude of Petersburg. Protolithic ages are inferred to be Proterozoic(?) to Early Paleozoic and the metamorphic age Late Paleozoic(?). The unit consistsof amphibolite-metamorphic facies schist, marble, migmatite and gneissderived from carbonate and clastic sedimentary rocks, intermediate composition extrusive volcanic rocks, and from granitic intrusions. Few, if any, mineral deposits occur in this unit although the marbles appear permissive for skarn deposits.

Accretionary-wedge rocks and melange in subduction complex of Chugach and Yakutat terranes

The widely exposed Chugach and Yakutat terranes form the seaward margin of southeastern Alaska from the southern tip of Baranof Island north to Yakutat (Figs. 3, 4). The two terranes differ mainly in that the Yakutat contains thick Tertiary sediments and minor extrusive volcanic rocks that are not present in the Chugach; thus,the Chugach and the lower part of the Yakutat are essentially similar. The eastern contact of the Chugach terrane is a major crustal break, the Border Ranges fault. No mineral deposits are associated with the fault. West of the fault are prehnite-pumpellyite- to greenschist-metamorphic facies slate, phyllite, greenschist, and semischist of the melange part of the subduction complex. The melange is now a collage consisting of small-fault-bounded fragments up to kilometers in size; they were derived from fine-grained clastic rocks, minor carbonate rocks, and a variety of extrusive intermediate composition volcanic rocks. Individual blocks range in age from Triassic(?) to Early Cretaceous. The matrix of these blocks is inferred to be Early to middle Cretaceous and the metamorphic age of the complex is Late Cretaceous. Some low-sulfide gold-quartz vein deposits occur in these rocks.

The accretionary wedge rocks are immediately west of the melange rocks. They consist of graywacke, argillite, minor conglomerate, slate, phyllite, and graywacke semischist that were deposited in a turbidite fan complex. Mineral assemblages indicate prehnite-pumpellyite- to low-greenschist-metamorphic facies. The age of the accretionary wedge rocks is inferred to be Early to middle Cretaceous and the metamorphic age Late Cretaceous. The low-sulfide gold-quartz vein deposits of the Chichagof district occur in these rocks, where they are close to a major fault and within a belt of Tertiary granitic bodies.

Sedimentary and volcanic rocks

The sedimentary and volcanic rocks of southeastern Alaska are shown by age and(or) terrane affiliation on figure 4. Five units are distinguished: (1)sandstone, conglomerate, and andesite of Early to Late Tertiary age; (2) graywacke, slate, argillite, conglomerate, and basaltic volcanic rocks of the Gravina overlap assemblage of Late Jurassic and Cretaceous age and some of their metamorphic equivalents with a metamorphic age of Late Cretaceous and Early Tertiary; (3) graywacke, argillite, limestone, conglomerate and andesitic and basaltic volcanic rocks of the Wrangellia and Alexander terranes of Ordovician to Early Jurassic(?) age; (4) graywacke, argillite, limestone, conglomerate, and minor volcanic rocks of the Alexander terrane of Ordovician to Carboniferous age; and (5) volcanic rocks, greenstone, graywacke, and argillite of the Stikine terrane ofLate Paleozoic to Jurassic age.

The sandstone, conglomerate, and andesite of Early to Late Tertiary age (unit S5 of Fig. 4) occurs in two main areas. One is as the upper stratigraphic part of the Yakutat terrane; the other is in a local nonmarine basin, known as the Admiralty trough, that developed on Wrangellia and Alexander terrane rocks and which also underlies much of the outcrop of extrusive Tertiary volcanic rocks discussed earlier (Fig. 4). Polymictic conglomerate and sandstone of local origin dominate both areas, but the Yakutat terrane outcrops also include fine-grained clastic rocks and extrusive andesites and are in part marine. The rocks in both areas are unmetamorphosed. The Admiralty trough sedimentary rocks contain local accumulations of uranium and thorium minerals and have been prospected for sandstone-type uranium deposits.

The graywacke, slate, argillite, conglomerate, and basaltic volcanic rocks of the Gravina overlap assemblage of Late Jurassic and Cretaceous age, together with metamorphic equivalents with a metamorphic age of Late Cretaceous and Early Tertiary age (unit S4 of Fig. 4) occur in a narrow belt along the western margin of the Coast plutonic-metamorphic complex (Fig.4). This unit has been recently reevaluated by Brew and Karl (1988a,b); they describe the unit as a sequence of dominantly mudstone and sandstone turbidite deposits interbedded and interfingered with lesser amounts of basaltic and hawaiitic (sodic olivine basaltic) flows and breccias, and locally interbedded with significant but minor amounts of both granitic-clast-bearing conglomerate and tuffaceous mudstone. The metamorphic grade of these rocks is mostly subgreenschist-metamorphic facies, but in the aureoles of plutons and in the metamorphic belt described above as being in the same area, the grade reaches hornblende hornfels and amphibolite facies, respectively.

The origin of the material in the unit and its depositional environment are somewhat controversial; much of the sedimentary material was derived from the apparently underlying Wrangellia and Alexander terrane rocks to the west, however, and most of the volcanic material is inferred to have come from a volcanic-plutonic arc built on those same rocks. The depositional environment may have been that of a back-arc basin on thinned crust of the Alexander and Wrangellia terranes, of an accretionary wedge developed on the eastern edge of the Alexander and Wrangellia terranes as a subcontinental-size crustal block, or that of an intraplate rift of some type within the Alexander and Wrangellia terranes. The unmetamorphosed to low-grade metamorphosed Gravina assemblage rocks contain some volcanogenic massive sulfide deposits.

The graywacke, argillite, limestone, conglomerate and andesitic and basaltic volcanic rocks of the Wrangellia and Alexander terranes of Ordovician to Early Jurassic(?) age (unit S3 of Fig. 4) occur in three widely separated ares in southeastern Alaska. One is in the northern part; south, north and west of Haines; the second ison northwestern Kupreanof and northeastern Kuiu Islands; and the third is on western Gravina Island (Fig. 4). In all three areas, dominant middle Paleozoic to middle Mesozoic fine- and medium-grained clastic rocks, carbonates, and felsic and intermediate composition extrusive volcanic rocks are unmetamorphosed or only slightly metamorphosed. The carbonate and fine-grained clastic rocks indicate periods of relative stability during the continuing evolution of the long-lived Alexander and Wrangellia terranes volcanic arc, particularly in the late Paleozoic. All three areas have volcanogenic massive sulfide occurrences.

The graywacke, argillite, limestone, conglomerate, and minor volcanic rocks of the Alexander terrane of Ordovician to Carboniferous age (unit S2 of Fig. 4) occurs in two areas in southeastern Alaska. One is in Glacier Bay and on northeastern Chichagof Island; the other is on northern and western Prince of Wales Island and Kuiu Island (Fig. 4). Both areas are dominated by unmetamorphosed or slightly metamorphosed volcanic-detritus-rich turbidite system rocks of Ordovician to Late Silurian age. Thick carbonate units indicate periods of less volcanic activity and relative stability. Devonian rocks include some redbeds in both areas, but carbonate sedimentation was most common. Local uplifts contributed clastic debris in both areas and extrusive andesitic rocks were deposited locally in the Late Devonian. Some of the deeper basin deposits may be permissive for sedimentary exhalative sulfide deposits, but limited prospecting has not discovered any to date.

The volcanic rocks, greenstone, graywacke, and argillite of the Stikine terrane ofLate Paleozoic to Jurassic age (unit S1 of Fig 4) occur in two widely separated areas in southeastern Alaska. One area, near Hyder in easternmost southeastern Alaska (Fig. 4), is well known for abundant vein and other sulfide deposits in the Jurassic part of the stratigraphic section. These occurrences are in general similar to those currently being explored nearby in British Columbia. The other area is in a remote and inaccessible part of the Coast Mountains between Skagway and Juneau (Fig. 4). In this area slightly metamorphosed extrusive volcanic rocks, limestones, graywacke, and mudstone of Early to Late(?) Triassic age appear to overlie higher metamorphic grade amphibolite. No metallic mineral occurrences are known in any of these rocks in this area.

Major faults

Southeastern Alaska is a fault mosaic, with both crustal- and smaller-scale faults dividing the region into fault-bounded blocks of varying size (Fig. 4). Several of the crustal-scale faults, namely the Fairweather-Queen Charlotte Islands fault at and near the continental margin west of Chichagof and Baranof Islands, the Border Ranges fault in the Glacier Bay and Chichagof-northern Baranof Islands area, the Chatham Strait fault (which is part of the Denali fault system) in Lynn Canal and Chatham Strait, and the Clarence Strait fault between Prince of Wales and Revillagigedo Islands and its northward extensions both through eastern Admiralty Island and Kuiu Island, seem to have had little influence on the localization of mineral deposits. In contrast, both the Neva Strait fault, which extends through western Chichagof and Baranof Islands from near Yakobi Island on the northwest to the Chatham Strait fault to the southeast, and the Coast Range megalineament, which is near the western edge of the Coast plutonic-metamorphic complex and extends from near Berners Bay on the north-northwest to the British Columbia border to the south-southeast, are closely associated with major low-sulfide gold-quartz vein deposits. The Neva Strait system is a major factor in the localization of the veins in the Chichagof mining district and the Coast Range megalineament may be a large-scale control on all of the vein deposits in the Juneau gold belt. Some smaller faults, such as the Tongass Narrows fault at Ketchikan and the Canoe Pass fault on southern Etolin Island (which is too small to show on figure 4), may have influenced the localization of mineral occurrences in those areas.

METHODS

Introduction

Probabilistic assessment of undiscovered mineral resources involves a sequence of steps, starting with the acquisition of several types of data and ending with the numerical assessment and reporting of the procedures followed. The steps are: (1) definition of tracts that are permissive for the occurrence of one or more deposit types; (2) estimation of the numbers of undiscovered deposits of each type in each tract; (3) estimation of the expected tonnage and grade of of undiscovered deposits of each type; and (4) combination by computer simulation of (2) and (3) to produce a a probability distribution of the quantities of contained metal in the tract. Steps (1) and (2) are accomplished by geologists, geochemists, and geophysicists; step (3) is obtained from the grade and tonnage models in Cox and Singer (1986) and other sources; and step (4) is done by a simulator; in this case this U.S. Geological Survey MARK3 mineral-resource endowment simulator. Steps (1), (2), (3), and (4) for this assessment are described here; other descriptions are found in Drew and others (1986) and Brew and others (1989).

In general, the U.S. Geological Survey executes steps (1), (2), and (3) of the process using an "expert panel"-- a team of individuals who represent different geoscience subdisciplines and who have been actively engaged in the research required to acquire and interpret the data for the specific project. In the present Tongass National Forest regional study we relied heavily on local assessments at 1:250,000 scale prepared by teams concerned with different parts of southeastem Alaska. Both our initial Tongass team and the final authors of this report were selected for their knowledge of regional geology, of probabilisitic mineral-resource assessment methods, of economic geology in general, and of computer-based assessment procedures, including application of the U.S. Geological Survey MARK3 mineral-resource endowment simulator.

The basic information required for the interpretation and synthesis in a mineral-resource assessment includes the following components: regional bedrock geology, economic geology, bedrock geochemistry, stream-sediment and panned-concentrate geochemistry, aeromagnetic survey, aeroradioactivity survey, gravity survey, and (in some cases) telegeology. One or more basic and interpretative maps and reports are commonly prepared for each of these components, with two of the most used being (1) descriptions and locations of known mineral deposits and occurrences in the study area, and (2) a map showing which geologic units are permissive for the occurrence of different types of mineral deposits. Preparation of this latter map requires integration of regional-geologic, economic-geologic, and mineral-deposit-type information.

The present study draws heavily on pre-existing local 1:250,000-scale studies that already involved the use of such maps and other intermediate or interpretative material, therefore the only maps prepared specifically for this study are those showing the locations of known mineral deposits and occurrences. These maps (Plates 1 to 15) and the accompanying descriptions (Table 2) of 930 metal-bearing localities are a concise statement of the results of a century of mineral exploration and development in southeastern Alaska.

Several tracts in the Glacier Bay region were the focus of a joint USGS-USBM study some years ago (Brew and others, 1978). Estimates of undiscovered resources were made non-probabilistically for those tracts by the USGS and USBM together;we have incorporated those estimates rather than have the tracts re-done by the MARK3 simulator.

Definition of mineral-resource tracts

The mineral-resource tracts were defined by a combination of factors: (1) permissive geology for a specific type of mineral deposit was a necessary factor; then several of the following factors were required: (2) presence of a mine, with or without production, iofthat type of deposit; (3) presence of a prospect with metals appropriate to the deposit type; (4) presence of a mineralized occurrence with metals appropriate to the deposit type; (5) significant stream-sediment-geochemical anomalies with metals appropriate to the deposit type; (6) significant panned-concentrate-geochemical anomalies with metals appropriate to the deposit type; (7) significant bedrock geochemical anomalies with metals appropriate to the deposit type; (8) an aeromagnetic anomaly appropriate to the deposit type; (9) a gravity anomaly appropriate to the deposit type; and (10) an aeroradiometric anomaly appropriate to the deposit type. The boundaries were drawn using the limits of one or more of the above factors. We defined 125 tracts in this assessment; one of these is an oil and gas play, hoever, and does not contain locatable min[illegible]s.

There may be undiscovered mineral resources in areas not defined as tracts in this report. T[illegible] would be deposits of unsuspected, perhaps even as-yet-unknown, types. Our reconnaissance-scale studies may have overlooked some important features that are associated with mineral deposits, leading us to not evaluate a tract for all of the deposit types that could be present. We do not consider this situation to be an important factor for the purposes of this present study.

Estimation of numbers of undiscovered deposits in mineral-resource tracts

As stated above, each tract is considered likely to contain one or more different types of mineral deposits. For tracts where the available information provided a sufficient basis, the number of as-yet-undiscovered deposits of each type discoverable by conventional mineral exploration methods was estimated for each tract at the 0.95, 0.90, 0.50, 0.10, and 0.05 probability levels.

This estimation of the number of deposits of a given type in a tract is the single most-critical step in probabilistic mineral-resource assessment. It requires reevaluating all of the factors used in initially defining the tract, together with with three additional factors: (1) throroughness of exploration--tracts that are already relatively thoroughly explored are less likely to contain undiscovered deposits; (2) size of tracts--small tracts are llikely to contain fewer undiscovered deposits than are large ones; and (3) physical dimensions of deposit types--different types of deposits occupy different volumes of rocks; for example, a porphyry copper deposit is physically a much larger system than is a polymetallic vein.

The estimates applied to the 0.95, 0.90, 0.50, 0.10, and 0.05 probability levels were generally made by discussion among the group of experts. The process generally focusses first on a single undiscovered deposit and concensus is reached for that probability level. Then the higher and lower probability levels are estimated; this is sometimes done with "rules of thumb" for given deposit types. For example, minor podiform chromite deposits occur in clusters; thus one deposit at the 0.50 level might imply 10 deposits at the 0.95 level. In other cases, the maximum number of deposits inferred to be discoverable in a tract is assigned to other probability levels.

Some tracts have either minimum estimates or no estimates. For many tracts the estimate is the minimum possible; that is, one deposit at the 0.05 level. This estimate indicates a non-trivial probability of the occurrence of the deposit type in the tract. In some cases, this "default" estimate may result in the overestimation of the resource endowment, but we do not consider it to be a factor that significantly biases the overall results of the assessment. Many of the tracts defined in this study on the basis of permissive geology, known occurrences, or other factors were judged either too small or too well explored to justify any probabilistic estimate. They are, nevertheless, mineral-resource assessment tracts as defined in this report.

Function of the MARK3 mineral-resource endowment simulator

As discussed above, a quantitative assessment of the undiscovered mineral-resource endowment of an area includes: (1) identification of the types of mineral deposits that may be present in a given area or tract; (2) estimation of the numbers of undiscovered deposits for each deposit type; and (3) the commodity grades and ore-bearing tonnages estimated to be contained in the undiscovered deposits. The first two items are provided by the geologists, geochemists, geophysicists, and others. The third item is generated by resource assessment specialists using a simulation program that combines the material from the first two items with world-wide tonnage and grade information for different types of deposits. In the present study, 96of the 124 tracts were assessed quantitatively and 21 different deposit types that included 17 different metals were used.

The U.S. Geological Survey MARK3 simulator (Fig.8) combines estimates of the types and numbers of deposits with the historical grade/tonnage data to produce a probability distribution of the quantities of contained minerals in an area or tract. An earlier version of MARK3 was used in the study of U.S. Forest Service wilderness tracts in the western United States (Drew and others, 1986). The following paragraphs describe the assessors' input to the simulator, the output from the simulator, and the simulators's method of calculation. A more detailed description of the simulator is found in Root and Scott (1988) and in Root and othersothers (in preparation).

The geologists' input to the simulator is the geological, geochemical, and other work concerned with the mineral-resource characteristics of an area; this input is summarized in the estimates of the types and numbers of deposits that may be present. The geologists list the types of deposits that may be present and for each deposit type they report five points on the distribution of the number of deposits present: the greatest number of deposits present with probability at least 0.95 (N(0.95)), the greatest number of deposits present with a probability at least 0.90 (N(0.90)), and similarly for probabilities 0.50, 0.10, and 0.05. Note that in the default distribution the probability of N(0.95) or more deposits is greater than 0.95 and similarly for N(0.90), N(0.50), N(0.10), and N(0.05).

There is an infinite number of distributions of the numbers of deposits that are consistent with the five given points or values. The allocation of the unit probability among the non-negative integers that defines the default distribution of the number of deposits is described in the following rule. The five numbers, N(0.95), N(0.90), N(0.50), N(0.10), and N(0.05), divide the non-negative integers into six intervals: 0 to N(0.95), N(0.95) to N(0.90), N(0.90) to N(0.50), N(0.50) to N(0.10), N(0.10) to N(0.05), and N(0.05) to infinity. Integers in these six intervals receive respectively 5%, 5%, 40%, 40%, 5%, and 5% of the unit probability. For the purpose of allocating probability each of the five numbers is considered to be half in each of the two intervals of which they are endpoints and they receive probability for being in each interval but only half of what the interior points in the interval get. N(0.05) receives half of what an interior point to the interval N(0.10) to N(0.05) receives plus 0.05. The largest number that is given a non-zero probability is N(0.05).

The data library input to the simulator consists of a file giving the grades and tonnages of known deposits of each of the deposit types. The deposits within a type are grouped according to the suite of metals they contain. The possibility of different suites of metals being present is taken into account in the simulation. The suite of metals present in a simulated deposit is selected at random from the various possibilities in the data for the particular deposit type bring considered. The probability of a suite being selected is proportional to its frequency in the data for that deposit type. If a metal appears in two different suites, its grade usually will have different distributions in the two different suites. Also, the ore-bearing tonnage of the deposits usually will have a different distribution depending on which suite of metals is present.

The simulator works as follows: the distributions of grades and tonnages for a deposit type that are used are piecewise linear distributions chosen to approximate the data for deposits of that type. The deposits within a type are divided into groups according to the suite of metals present and each group is approximated separately. The approximating distributions have the same means as the mean tonnage and mean metal grades of the deposits within the group having the same suite of metals. The simulator also incorporates dependencies among the grades and between the grades and ore tonnages.

A flowchart for the simulator is shown in figure 8. The simulator selects a tract and a deposit type. For this deposit type and tract it selects, at random from the distribution described above, the number of deposits. For each of those deposits it randomly selects deposit tonnages and metal grades using distributions calculated from the deposit library for that deposit type. It then makes similar calulations for the second deposit type in the first tract. When the first tract is completed it moves on to the next tract until the last deposit type in the last tract is completed. It has then completed the first cycle. The whole process is repeated a total of 4,999 cycles.

At the end of each deposit calculation, the metal calculated is accumulated into totals for that cycle. Metals are combined if they are the the same metal in the same cycle but are not combined if from one cycle to the next. Finally, when all of the cycles have been completed, the simulator calculates for each possible amount of each metal the fraction of the 4,999 cycles it calculated that much metal or more. The table of those quantities of metal and fractions is the assessed distribution of the metals in the region being studied.

This Monte Carlo simulation produces a distribution of tonnages for each metal contained in each deposit type in a given tract; we have used the mean unconditional tonnage figure for each metal in our analysis. When aggregated over all deposit types, these distributions yield a probabilistic estimate of the undiscovered mineral resources in each tract.

In summary, the MARK3 Monte Carlo mineral-resource endowment simulator works from the geologists' judgements of the types of deposits that could occur in a given area or tract and their estimates of the range of the number of each type of deposit. The ore tonnages and metal grades of the undiscovered deposits are assumed to be distributed similarly to those of the known deposits of the same types. The simulator then produces a variety of assessments consistent with the geologic interpretation of the area or tract and the characteristics of known deposits of the types that are thought to be possible in the tract. This assessment can be made in the form of quantities of metal available in deposits of various grades and sizes.

The estimates made using the MARK3 simulator do not include all the metal contained in all of the mineral deposits inferred to occur in the region; this is because there is no world-wide tonnage and grade distribution information for several of the deposit types known to occur in southeastern Alaska. Thus this report underestimates the undiscovered mineral-resource endowment of the Tongass National Forest and adjacent lands to some unquantified extent.

EXPLANATION OF TABLES

Most of the information in this report is contained in the tables. The following explanations cover both the table headings and terms used in the tables themselves. The abbreviations used are explained in Appendix 3; most of them are directly from Kretz (1983). The term "significant" is used in several contexts in the tables; in every case, however, it means that the item or factor described differs enough from the norm for the whole population of items or factors that it appears to represent an unusual condition.

Table 2

Table 2 contains summary information for 970 metallic mineral deposits or occurrences, 3 marble deposits, 18 geothermal resource areas, 6 barite deposits, 9 industrial mineral occurrences and coal deposits, and 8 oil and gas localities on a 1:250,000-scale quadrangle-by-quadrangle basis.

Column 1 of the table contains a map number that relates the localitiy to the corresponding map (Plates 1 to 15). Column 2 contains a locality name; some of these are well established mine or claim names, others are established geographic names, and some have been created for this report in order that each locality have some kind of name. Column 3 is briefly explained in the table heading, but repeated here in more detail: "M*" indicates a mine with production; "M" indicates a mine without known production; "P" indicates a prospect; and "O" indicates a metallic mineral occurrence. The difference between a prospect and an occurrence is that the latter is represented by only a few surface samples at the most, and the former has had some degree of subsurface exploration, either drilling, trenching, or pitting. Column 4 contains latitude and longitude information, most of which is taken from other sources, but some of which was generated in this study. An entry in column 5 indicates that the locality has a record in the U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey, 1989). The commodities or resources given in column 6 as either a chemical symbol or name are those reported as occurring at the locality. A brief description of the locality's features is in column 7; many, but not all, of these are taken verbatim from Berg (1984). Column 7 also contains a note regarding discovered resource information recently reported by the U.S. Bureau of Mines (Coldwell, 1990); those undocumented figures will be included in the final published version of this report. Column 8 contains information on the mineral-deposit type at the locality, referring mainly to the classification of Cox and Singer (1986), but also including additional types. Table 1 and Appendix 2 contain a list and brief descriptions of all of the deposit types referred to in this table, respectively. A question mark by itself indicates that we are unsure as to the deposit type present. A question mark after a deposit-type number indicates a tentative assignment. The primary references for each locality are given in column 9.

In the cases of tables 2-JU and 2-TR we have not incorporated the new information reported for the Juneau Mining District by Kurtak and Maas (1988) and by Redman and others (1985, 1987), pending completion of the final report on these U.S. Bureau of Mines investigations (Baggs and others, 1990(?)).

Tables 3 and 4

Table 3 presents the mineral-resource information for individual tracts on a 1:250,000-scale quadrangle-by-quadrangle basis and Table 4 presents the same information and has exactly the same format, but aggregates the mineral-resource tract information for the individual tracts that adjoin on different 1:250,000-scale quadrangles; this gives a single listing of tracts and their supporting information. Columns 4, 5, 8 (land status percentages), and 12 commonly change in the aggregation process. Table 3 is included here to provide documentation of the process we followed; most readers will not find it necessary to refer to Table 3 at all.

The sources of the information used are given in the table headings. The map number in column 1 refers to the tract designator on Plates 1 to 15. The names in column 2 are in part new and in part derived from the previous assessments cited in the table headings. Some tracts are subdivided into subtracts designated (A), (B), (C), and so on; these are geographically separate areas that have the same geology and other characterisitics and are combined into one entity for the probabilistic assessment.

Column 3 contains a brief description of the geology and types of mineral deposits in the tract. The mines, prospects, and occurrences from table 2 that occur in each tract are listed in column 4. The designators "(A)", "(B)", and so so refer to subtracts as set up in column 2.

Production and discovered resource information derived from table 2 is summarized for each tract in column 5. That column includes many references to Coldwell (1990), which is a U.S. Bureau of Mines report containing new undocumented reserve figures for 171 localities in all of southeastern Alaska; 148 of the localities are within the Tongass National Forest. Those figures have been provided to the U.S. Forest Service Tongass Land Management Plan Revision Team (U.S. Forest Service, 1989, 1990), but were not available to us in time to incorporate in this report. We will update this part of the table before this report is published as a formal U.S. Geological Survey publication .

Column 6 contains information on the mineral-deposit type(s) expected in the tract, again referring mainly to the classification of Cox and Singer (1986), but also including additional types. Table 1 and Appendix 2 contain a list and brief descriptions of all of the deposit types referred to in this table, respectively. A question mark after a deposit-type number indicates a tentative assignment. The designators "a)", "b)", and so on, are used to differentiate deposit types within a tract; those designators correspond to those in column 10, which is described below.

Column 7 briefly summarizes the status of geological and geochemical studies and the exploration history of the tract. Accessibilty and other related factors are described in column 8. Here also are visual estimates of the percent of each tract in different ownership, administrative, or U.S. Forest Service land management categories; these estimates were made from comparing different maps and could be improved when all mineral-resource tract and land status information is in the Forest Service's GIS system. The designators "(A)", "(B)", and so so refer to subtracts as set up in column 2. The 23 Wilderness Areas recommended in House of Representatives Bill 987 (H.R. 987) were included in the estimates, but the Wilderness Areas finally established in October 1990 are not identified in this report. We will update this part of the table when the new information is available.

The factors pertinent to the definition of the individual tracts and to the estimation of the numbers of undiscovered deposits in each tract are summarized in column 9. Those estimates are given in column 10; the process by which they were derived is explained in the Methods section of this report . The designators "a)", "b)", and so on, are used for the different deposit types within a tract; those designators correspond to those in column 6. Column 11 states whether a grade and tonnage model is available for the deposit type. "Maybe" indicates that such a model is currently in preparation and may be available for use before this report is in final form.

The areas of all tracts and of any subtracts are in column 12; the designators "(A)", "(B)", and so so refer to subtracts as set up in column 2. Column 13 contains remarks, the most important of which link the resource estimates to those in an adjacent tract on another 1:250,000-scale quadrangle map.

Table 5

Table 5 presents the mineral endowment of the individual mineral-resource tracts described in Table 4. The figures given are calculated by the U.S. Geological Survey MARK3 mineral-resource simulator. Columns 1, 2, and 3 list the tract designator, the tract name, and the mineral-deposit type numbers, respectively. They are the same as on the plates and tables 3 and 4. Column 4 contains the total tonnage, in metric tonnes, of the deposit that MARK3 calculated for that deposit type. The tonnages reported are the averages, or means, for all of the simulations. The figures are rounded to three decimal places and are reported in the form of a base number and an exponent to base number 10. The commoditity or commodities which the deposit contains are given in column 5. The mean metal content, in metric tonnes, that MARK3 calculated for each commodity in each deposit type is in column 6; here again the figures are rounded to three decimal places and are reported in the form of a base number and an exponent.

Column 7 contains the grade of the commodity in the simulated deposit, reported as percent. This value is calculated from the metal tonnage figures. In some cases the deposit tonnages used as the denominator to calculate this ratio do not contain the metal that is in the numerator; this is because in some deposit types the simulations do not all contain all of the metals possible. Column 8 contains grade information for gold and silver recalculated into grams per metric ton. The aggregated figures for each commodity in the tract, combining the same metal from more than one deposit type, are given in column 9.

Table 7

Table 7 combines the aggregated metal commodity tonnage and grade information for each individual tract from table 5 with the commodity price data from table 6 to calculate gross-in-place values (GIPV) for each individual tract. Column 1 is the tract designator; column 2 the tract name; column 3 the tract total tonnage; column 4 the commodity; column 5 the metal content for that commodity in metric tonnes; column 6 contains the calculated gross-in-place value (GIPV) of the commodities in 1978-1987 dollars; and column 7 is the aggregated gross-in-place value (GIPV) of all of the commodities in the tract. This information was used in constructing figure 9. The total at the end of the table, $40.9 billion, is the GIPV of the estimated undiscovered mineral resources in all of southeastern Alaska.

Table 8

Table 8 presents the aggregated metal tonnages and gross-in-place value on a commodity-by-commodity basis for all of the undiscovered mineral resources in the Tongass National Forest and adjacent lands, southeastern Alaska. Column 1 is the commodity; column 2 the metal content in metric tonnes; column 3 is the price used in calculating column 4, which is the GIPV for that commodity. The total for all commodities is$40.9 billion, the same as calculated in table 7.

Table 9

Table 9 presents the GIPV of undiscovered mineral resources in individual tracts that are wholly or partially in parts of the Tongass National Forest. Column 1 is the tract designator; column 2 the tract name; column 3 is that part of the total tract tonnage; column 4 is the commodity; column 5 is the metal content for the commodities; column 5a is the commodity price information used in the calculation; column 6 is the GIPV of the commodities contained in each individual tract; and column 7 is the aggregated GIPV (gross-in-place value)of all of the commodities in the individual tract. The information used to define Tongass National Forest lands as compared with the non-Forest adjacent lands is in table 4. The GIPV's calculated here are thus for the estimated resources that are in Tongass National Forest lands and exclude all resources on non-Tongass lands. The 23 Wildemess Areas recommended in H.R. 987 are treated as non-wilderness in these calculations. The total at the end of the table, $28.6 billion, is the GIPV of the estimated undiscovered mineral resources in the whole Tongass National Forest.

Table 10

Table 10 presents the aggregated metal tonnages and gross-in-place value on a commodity-by-commodity basis for the undiscovered mineral resources in the Tongass National Forest. Column 1 is the commodity; column 2 the metal content in metric tonnes; column 3 is the price used in calculating column 4, which is the GIPV for that commodity. The total GIPV for all commodities is $28.7 billion; the difference between this total and that on table 9 is due to the rounding procedures used in constructing table 10..

Table 11

Table 11 presents the GIPV of undiscovered mineral resources in individual tracts that are wholly or partially in parts of the Tongass National Forest that are now open to mineral entry. Column 1 is the tract designator; column 2 the tract name; column 3 is the tract GIPV from table9; column 4 is the fraction of the individual tract that is now open to mineral entry; and column 6 is the GIPVof that part. The information used to define Tongass National Forest lands now open to mineral entry is in table 4. The GIPV's calculated here are thus for the estimated resources that are in Tongass National Forest lands that are not Wildemess Areas or Research Natural Areas. These figures also exclude all resources on non-Tongass lands. This information was used in constructing figure 10.The 23 Wilderness Areas recommended in H.R. 987 are treated as non-wilderness in these calculations. The total at the end of the table, $24.4 billion, is the GIPV of the estimated undiscovered mineral resources in the parts of the Tongass National Forest that are presently open to mineral entry.

Table 12

Table 12 presents the calculation of the ratio of GIPV (gross-in-place value) to area, in square kilometers, for all of the individual mineral-resource tracts that are wholly or partially in the Tongass National Forest. The information used is from tables 4, 7 and 9 of this report. Column 1 is the tract designator; column 2 the tract name; column 3 is the tract GIPV; column 4 is the tract area; and column 5 is the ratio between the values in column 3 and column 4. These ratios provide a basis for comparing the relative value of different tracts or parts of different tracts; they are used to construct the map that is figure 11.

PAST MINERAL-RESOURCE PRODUCTION

U.S. Geological Survey records indicate that at least some mineral-resource production has been reported for 104 different localities listed in table 2. About half of these are vague and non-specific reports and the remainder are fairly specific as to tonnage and grade. We have combined these two types of information in table 9, using the metal-price data in table 6 to calculate the value of the metals produced. In cases where past production was reported in then-current dollars, we have adjusted those values by applying a six percent per year inflation factor.

Depending on how vague a reference is, we have made different assumptions. For references that specify neither commodity or amount we have either (1) not inferred any production, or (2) inferred small production of the most likely commodity. This second category of references is small, but in these cases we have for gold deposits assumed a gold production of 250 ounces of gold and for silver deposits a production of 500 ounces. In cases where a test shipment is noted, we have assumed that it was one ton. If the test shipment reference gives no grade or definite commodity information, then we have not inferred any production. In other cases, the information provided is imprecise, but commodity and some kind of tonnage and(or) grade information is provided. In these cases, we have made what we consider to be reasonable estimates of both from the information given.

Although these estimates may be wrong in detail; we consider them, when aggregated, to be an adequate representation of the production from these vaguely described deposits and from other deposits which undoubtedly were worked but for which not even vague references have been made.

Past production of barite, marble, and limestone are not included in this analysis, although localities of these commodities are shown and described on the plates and in table 2. Data for past production are unavailable, due in part to vertical integration of the companies that explored for and produced these materials. Past production of sand and gravel are also not included.

The total value of mineral-resource production from southeastern Alaska for the period 1900 to 1989 is here estimated to be $2.459 billion (table 14).

PAST MINERAL-RESOURCE EXPLORATION AND DEVELOPMENT

Mineral-resource exploration activity has occurred in southeastern Alaska from the time of Russian ownership to the present. That activity increased when the United States purchased Alaska and has been ongoing, with the qualification that the level was lower during both the World War I and World War II years. Table 15 gives a year-by-year and a total value for mineral-exploration activities in the region. We have estimated the level of activity for most of this 90-year-long period, using (1) the knowledge of activities as summarized in reports prepared during the period by the U.S. Geological Survey, and (2) the figures compiled by the State of Alaska Division of Geology and Geophysical Surveys for the years from 1960 on (Bundtzen and others, 1982, 1983, 1986, 1987, 1988; Eakins and others, 1983, 1985; Green and others, 1989; Alaska DGGS Staff, 1972, 1974, 1976; Williams, 1960, 1961, 1965, 1966, 1968, 1969, 1971).

All values are calculated in 1989 dollars. All pre-1988 values are adjusted to reflect a 6 percent per year rate of inflation. (We realize that this could be adjusted more precisely, but the figures as calculated as considered a good approximation of the long-term real costs. Our general approach for those years where detailed figures are not available was to estimate: (1) the number of prospecting or exploration groups in the field to be 40 each year; (2) each season to be 100-days long, (3) each party to consist of 8 members; and (4) the current (1989) rate per person per day to be $150.00. We adjusted the figures for the War years downwards to reflect the low level of activity at that time.

The total estimated cost of mineral-resource exploration activities in southeastern Alaska from 1900 through 1988 is $427.26 million (table 15). We consider this a conservative estimate. We do not know how much of this expenditure contributed to the southeastern Alaska economy and how much went to other places, however.

The Alaska State Division of Geology and Geophysical Surveys references also provide an estimate of development costs for the period 1960-1988 for the Greens Creek and Quartz Hill mines. These are also shown in table 15; they total $120.56 million. In addition, development costs for the Alaska-Juneau mine to date are about $29 million (R. Frederickson, oral comm., 1990) and those for the Kensington mine are about $20 million (Simpson, 1990).

The combined figure for mineral-resource exploration and development in southeastern Alaska for the period 1900-1989 is thus estimated to be $596.82 million.

DISCUSSION AND CONCLUSIONS

We consider here some aspects of our analysis of the undiscovered locatable mineral-resource endowment of southeastern Alaska as a whole, of the Tongass National Forest part of the region, and of those parts of the Tongass that are presently open to mineral entry. Our data would also allow us to evaluate the value of undiscovered mineral resources in already designated Wilderness Areas, in areas proposed for Wilderness classification under H.R. 987, and in Wildlife Refuges, but we have not done those calculations.

This study was done sequentially and there have been no adjustments of tract boundaries, of deposit types identified for each tract, numbers of deposits, or of any other factors following the MARK3 process. This has led to recognition of two general situations involving the so-called "default" estimates of the numbers of deposits in a given tract. This estimate was used to indicate a non-trivial probability pf the occurrence of a deposit type in a tract. The default estimates specify that there is but one deposit at the 5 percent probability level. In the cases of tracts permissive for skarn- and(or) porphyry-deposit types, these have generated large tonnages (and correspondingly high GIPV's) in undiscovered deposits in some tracts where there are few, if any, direct signs of such deposits. We presently interpret these results to suggest that undiscovered deposits exist, but have not been sought or found. There is, however, the strong possibility that the default estimates overstate the mineral endowment for these tracts. Had it been possible for the estimators to specify one deposit at the 1 percent level, they might have done so; faced with the choice between (1) specifying at the 5 percent level or (2) not making an estimate for a large tract, the estimators chose the former course.

Nevertheless, we consider the estimates presented in this report to be conservative. We emphasize that there are mineral resources in the tracts that we have designated, the gross-in-place values of which are not included in our figures. Some of these resources are contained in mineral deposit types for which no grade and tonnage model exists, such as the Alaskan PGE and basaltic copper deposits. Other such resources include placer deposits of ilmenite for which no appropriate price figures are available.

The classification of mineral-resource assessment tracts according to their gross-in-place value (GIPV)revealed some unanticipated features in the analysis. As shown in figure 9, in the whole region the tracts in the highest category (GIPV greater than $1 billion) are mostly relatively poorly known, poorly explored, and are associated with granitic rocks that are inferred to have undiscovered porphyry deposits. When the analysis is restricted to those tracts wholly or partially in the Tongass National Forest that are open to mineral entry (Fig. 10), the same general pattern is still apparent. The classification of tracts wholly or partially in the Tongass National Forest based on the ratio of GIPV to area (Fig. 11) shows a more diverse pattern for the highest ratio first category tracts, but the second category is again dominated by tracts associated with granitic rocks that are inferred to have undiscovered porphyry deposits and (or) skarn deposits.

Our analysis of the distribution of undiscovered deposits in relation to those parts of the Tongass National Forest that are currently available to mineral entry indicates that the most of the value of the undiscovered deposits lies in the available parts of the Forest. The GIPV of those undiscovered deposits is $24.4 billion, which, when compared with the $40.9 billion GIPV for the whole region, indicates that about 40 percent (or $16.5 billion GIPV)of the undiscovered mineral-resource endowment of southeastern Alaska is in lands that are either presently unavailable or are State of Alaska or Native lands. The unavailable lands include USFWS Wildlife Refuges, USNPS Wilderness and other lands, and Tongass National Forest Wilderness.

The past 100-plus years of mineral resource exploration, development, and production in all of southeastern Alaska have generated a present-day value of at least about $3.056 billion. The current U.S. Bureau of Mines estimate of the GIPV of discovered mineral resources is $33.76 billion. Our estimate of the gross-in-place value (GIPV) of the undiscovered mineral resources in the region is $40.9 billion. Although these GIPV values do not reflect the costs of finding, developing, and mining either the discovered or the undiscovered deposits, they clearly indicate that mineral resources are an important factor in the future economic development of the region, just as they have been in the past.

REFERENCES

Alaska DGGS Staff, 1972, Annual Report 1971: Alaska Division of Geological and Geophysical Surveys Annual Report, p. 67-71.

______1974, Annual Report 1973: Alaska Division of Geological and Geophysical Surveys Annual Report, p. 39-42.

______1976, Biennial Report 1974--75: Alaska Division of Geological and Geophysical Surveys Biennial Report, p. 25-28.

Baggs, D.W., Gilbert, W.G., Still, J.C. Redman, E., Clough, A.H., and Forbes, R.B., 1990(?), Final Report on U.S. Bureau of Mines Studies in the Juneau Mining District, Alaska, including probabilistic assessment of mineral resources: U.S. Bureau of Mines Open-File Report XXX-90(?)

Barnes, D.F., 1977a, Bouguer gravity map of Alaska: U.S. Geological Survey Geophysical Investigation Map GP-913, 1 sheet.

______1977b, Gravity map of the eastern part of southern Alaska: U.S. Geological Survey Open-File Report 77-169-C, 1 map.

______1984, Interpretation of the available gravity data, in Mineral resources of the Tracy Arm-Fords Terror Wilderness Study Area and vicinity, Alaska: U.S. Geological Survey Bulletin 1525, p. 63-72.

Barnes, D.F., Brew, D.A., and Morin, R.L., 1989, Bouguer gravity map of the Petersburg quadrangle and parts of the Port Alexander, Sitka, and Sumdum quadrangles, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-1970-A 21 p., scale 1:250,000.

Barnes, D.F., Erwin, M.J., Holden, K.D., and Morin, R.L., 1975, USGS Alaskan gravity data maps of the Port Alexander, Sitka, Juneau, Mt. Fairweather and Skagway, l:250,000 quadrangles, Alaska Open-File Report: 75-6, 5 maps and 58 p.

Barnes, D.F., Morin, R.L., and Watts, R.D., 1984, Interpretation of the gravity and Ice-thickness data, in Mineral resources of the Glacier Bay National Monument Wilderness Study Area, Alaska: U.S. Geological Survey Open-File Report 78-494, p. B-51 - B-75.

Barnes, D.F., Olson, R.C., Holden, K.D., Morin, R.L., and Erwin, M.J., 1972a, Tabulated gravity data from southeastern Alaska obtained during the 1968 field season: U.S. Geological Survey Open-File Report, 82 p.

Barnes, D.F., Popenoe, Peter, Olson, R.C., MacKenzie, M.V., and Morin, R.L., 1972b, Tabulated gravity data from southeastern Alaska obtained during the 1969 field season, 91 p.

Beikman, H.M., 1974, Preliminary geologic map of the southeast quadrant of Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-0612, 1 sheet, scale 1:1,000,000.

______1975, Preliminary geologic map of southeastern Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-673, 2 sheets, scale 1:1,000,000.

Beikman, H.M., Holloway, C.D., and MacKevett, E.M., Jr., 1977, Generalized geologic map of the eastern part of southern Alaska: U.S. Geological Survey Open-File Report 77-169B.

Berg, H.C.,1980, The Alaska Mineral Resource Assessment Program: Guide to information about the geology and mineral resources of the Ketchikan and Prince Rupert quadrangles, southeastern Alaska: U.S. Geological Survey Open-File Report 80-794, 43 p.

______1982, The Alaska Mineral Resource Assessment Program; guide to information about the geology and mineral resources of the Ketchikan and Prince Rupert quadrangles, southeastern Alaska: U.S. Geological Survey Circular 855, 24 p.

______1984, Regional geologic summary, metallogenesis, and mineral resources of southeastern Alaska: U.S. Geological Survey Open-File Report 84-572, 298 p.

______1978b, Map and tables describing areas of metalliferous mineral resource potential in the Ketchikan and Prince Rupert quadrangles, Alaska: U.S. Geological Survey Open-File Report 78-73-M, 52 p., 1 sheet, scale 1:250,000.

______1988, Geologic map of the Ketchikan and Prince Rupert quadrangles, southeastern Alaska: U.S. Geological Survey Mineral Investigations Series Map MF-1807, scale 1:250,000, 27 p. pamphlet.

Berg, H.C., Decker, J.E., and Abramson, B.S., 1981, Metallic mineral deposits of southeastern Alaska: U.S. Geological Survey Open-File Report 81-122, 136 p., 1 map, scale 1:1,000,000.

Berg, H.C., Elliott, R.L., and Koch, R.D., 1978a, Table describing metalliferous and selected nonmetalliferous mineral deposits in the Ketchikan and Prince Rupert quadrangles, Alaska: U.S. Geological Survey Open-File Report 78-73B, 1 sheet, scale 1:250,000, 17 p. pamphlet.

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. Geological Survey Open-File Report 78-73A, 1 sheet, scale 1:250,000.

Berg, H.C., Elliott, R.L., Smith, J.G., Pittman, T.L., and Kimball, A.L., 1977, Mineral resources of the Granite Fiords Wilderness Study Area, Alaska: U.S. Geological Survey Bulletin 1403, 2 plates, scale 1:125,000, 151 p.

Berger, B.R., and Singer, D.A., 1987, Grade-tonnage model of hot-spring gold-silver: a supplement to U.S. Geological Survey Bulletin 1693: U.S. Geological Survey Open-File Report 87-272C, 5 p.

Bliss, J.D., 1983, Alaska, basic data for thermal springs and wells as recorded in GEOTHERM: U.S. Geological Survey Open-File Report 83-426, 113 p.

Brew, D.A., 1988, Latest Mesozoic and Cenozoic igneous rocks of southeastern Alaska—a synopsis: U.S. Geological Survey Open-File Report 88-405, 29 p., 24 figs.

Brew, D.A., 1990, The plate-tectonic setting of Glacier Bay Park and Preserve and of Admiralty Island National Monument: Second Glacier Bay Science Symposium Proceedings, USNPS Science Publications Office, Atlanta, GA, p. 1-5.

Brew, D.A., and Ford, A.B., 1985, Preliminary reconnaissance geologic map of the Juneau, Taku River, Atlin and part of the Skagway 1:250,000 quadrangles, southeastern Alaska: U.S. Geological Survey Open-File Report 85-395, scale 1:250,000, 2 sheets, 23 p. pamphlet.

Brew, D.A., Grybeck, D.J., Cathrall, J.B., Karl, S.M., Koch, R.D., Barnes, D.F., Newberry, R.J., Griscom, A., and Berg, H.C., 1989, Mineral-resource map of the Petersburg and parts of the Port Alexander and Sumdum 1:250,000 quadrangles, southeastern Alaska: U.S. Geological Survey MF-1970-B, scale 1:250,000, 1 sheet, 47 p. pamphlet.

Brew, D.A., and Grybeck, Donald, 1984, Geology of the Tracy Arm-Fords Terror Wilderness Study Area and vicinity, Alaska, in Mineral resources of the Tracy Arm-Fords Terror Wilderness Study Area and vicinity, Alaska: U.S. Geological Survey Bulletin 1525, p. 19-52.

Brew, D.A. Himmelberg, G.R., Loney, R.A., and Ford, A.B., in press a, Styles of metamorphism in the southeastern Alaska part of the Cordilleran orogen: Journal of Metamorphic Geology.

Brew, D.A., Johnson, B.R., Grybeck, Donald, Griscom, Andrew, Barnes, D.F., Kimball, AL.L, Still, J.C., and Rataj, J.L., 1978, Mineral resources of the Glacier Bay National Monument wilderness study area, Alaska: U.S. Geological Survey Open-File Report 78-494, 692 p., 4 pls., scale 1:125,000.

Brew, D.A., and Karl, S.M., 1988a, A re-examination of the contacts and other features of the Gravina belt, southeastern Alaska, in Galloway, J.P., and Hamilton, T.D., eds., Geologic studies in Alaska by the U.S. Geological Survey during 1987: U.S. Geological Survey Circular 1016, p. 143-146.

______1988b, A re-examination of the contacts and other features of the Gravina belt, southeastern Alaska, Supplemental data: U.S. Geological Survey Open-File Report 88-652, 8 p.

Brew, D.A., Karl, S.M., Barnes, D.F., Jachens, R.C., Ford, A.B., and Horner, R., in press b, A northern Cordilleran continent-ocean transect: Sitka Sound to Atlin Lake, British Columbia: Canadian Journal of Earth Sciences.

Brew, D.A., Kimball, A.L., Grybeck, D., and Still, J.C., 1984a, Mineral resources of the Tracy Arm-Fords Terror Wilderness Study Area and vicinity, Alaska--Summary, in Mineral resources of the Tracy Arm-Fords Terror Wilderness Study Area and vicinity, Alaska: U.S. Geological Survey Bulletin 1525, p. 1-7.

Brew, D.A., Loney, R.A., and Muffler, L.J.P., 1966, Tectonic history of southeastern Alaska: Canadian Institute of Mining and Metallurgy Special Volume 8, p. 149-170.

Brew, D.A., and Morrell, R.P., 1983, Intrusive rocks and plutonic belts in southeastern Alaska in Roddick, J.A., ed., Circum-Pacific plutonic terranes: Geological Society of America Memoir 159, p. 171-193.

Brew, D.A., Ovenshine, A.T., Karl, S.M., and Hunt, S.J., 1984b, Preliminary reconnaissance geologic map of Petersburg and parts of Port Alexander and Sumdum 1:250,000 quadrangles, southeastern Alaska: U.S. Geological Survey Open-File Report, 43 p., 2 sheets.

Brooks, A.H., and others, 1914, Mineral resources of Alaska, report on progress of investigations in 1913: U.S. Geological Survey Bulletin 592, ___ p.

Brooks, A.H., Mariner, R.H., Mabey, D.R., Swansen, J.R., Guffanti, M., and Muffler, L.J.P., 1979, Hydrothermal convection systems with reservoir temperatures >90°C, in Muffler, L.J.P., ed., Assissment of the geothermal resources of the United States--1978: U.S. Geological Survey Circular 790, p. 18-85.

Bruns, T.R., 1982, Structure and petroleum potential of the continental margin between Cross Sound and Icy Bay, northern Gulf of Alaska: U.S. Geological Survey Open-File Report 82-0929, 64 p.

______ 1983, Structure and petroleum potential of the Yakutat segment of the northern Gulf of Alaska continental margin: U.S. Geological Survey Map MF-1480, scale 1:500,000, 3 sheets, 22 p. pamphlet.

______ 1988a, Petroleum potential of southeastern Alaska: A report for the National Hydrocarbon Assessment Program: U.S. Geological Survey Open-File Report 88-450-I, 8 p.

______ 1988b, Petroleum geology and hydrocarbon plays of the Gulf of Alaska onshore province: A report for the National Hydrocarbon Assessment Program: U.S. Geological Survey Open-File Report 88-450-J, 30 p.

Bruns, T.R., and Carlson, P.R., 1987, Geology and petroleum potential of the southeast Alaska continental margin, in Scholl, D.W., Grantz, A., and Vedder, J.G., compilers and editors, Geology and resource potential of the continental margin of western North America and adjacent ocean basins--Beaufort Sea to Baja California: Houston, Texas, Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series, v. 6, p. 269-282.

Buddington, A.F., and Chapin, Theodore, 1929, Geology and mineral deposits of southeastern Alaska: U.S. Geological Survey Bulletin 800, 398 p.

Bundtzen, T.K., Eakins, G.R., and Conwell, C.N., 1982, Review of Alaska's Mineral Resources: Alaska Office of Mineral Development Report, 52 p.

Bundtzen, T.K., Eakins, G.R., Clough, J.G., Lueck, L.L., Green, C.B., Robinson, M.S., and Coleman, D.A., 1984, Alaska's Mineral Industry 1983: Alaska Division of Geological and Geophysical Surveys Special Report no. 39, p. 4-19.

Bundtzen, T.K., Eakins, G.R., Green, C.B. and Lueck, L.L.,1986, Alaska's Mineral Industry 1985: Alaska Division of Geological and Geophysical Surveys Special Report 39, p.3-19.

Bundtzen, T.K., Green, C.B., Deagen, James and Daniels, C.L., 1987, Alaska's Mineral Industry 1986: Alaska Division of Geological and Geophysical Surveys Special Report 40, p. 3-20.

Bundtzen, T.K., Green, C.B., Peterson, R.J., and Seward, A.F., 1988, Alaska's mineral industry, 1987: State of Alaska Division of Geological and Geophysical Surveys Special Report 41, p. 4-21.

Bundtzen, T.K., Swainbank, R.C., Deagen, J.R., and Moore, J.L., 1990, Alaska's mineral industry, 1989: State of Alaska Division of geological and Geophysical Surveys Special Report 44, 100 p.

Burchard, E.F., 1913, Marble resources of the Ketchikan and Wrangell districts: U.S. Geological Survey Bulletin 542, p. 52-77.

______1914, Marble resources of the Juneau, Skagway, and Sitka districts: U.S. Geological Survey Bulletin 592, p. 95-107.

______1920, Marble resources of southeastern Alaska: U.S. Geological Survey Bulletin 682, 118 p.

Campbell, R.B., 1983, Geology of the Yakutat map area, British Columbia: Geological Survey of Canada Open-File Report 927, map scale 1:125,000.

Campbell, R.B., and Dodds, C.J., 1983, Geology of the Tatshenshini River map area, British Columbia: Geological Survey of Canada Open-File Report 926, 114 p., map scale 1:125,000.

Christie, R.L., 1957, Bennett, Cassiar district, British Columbia: Geological Survey of Canada Preliminary Series Map 19-1957, scale 1:250,000.

Clark, A.L., Berg, H.C., Cobb, E.H., Eberlein, G.D., MacKevett, E.M., Jr., and Miller, T.P., 1972, Metal provinces of Alaska: U.S. Geological Survey Open-File Report 71-0069, 3 p., 3 pls., scale 1:250,000.

Clark, A.L., Berg, H.C., Grybeck, D., and Ovenshine, A.T., 1971, Reconnaissance geology and geochemistry of Forrester Island National Wildlife Refuge, Alaska: U.S. Geological Survey Open-File Report 71-67, 9 p., 1 sheet, scale 1:63,360.

Clark, A.L., Brew, D.A., Grybeck, D.A., and Wehr, R., 1970a, Analyses of rock and stream-sediment samples from the Sumdum A-3 quadrangle, Alaska: U.S. Geological Survey Open-File Report 70-71.

Clark, A.L.,1970b, Analyses of rock and stream-sediment samples from the Sumdum A-4 quadrangle, Alaska: U.S. Geological Survey Open-File Report 70-73.

______1970c, Analyses of rock and stream-sediment samples from the Sumdum B-3 quadrangle, Alaska: U.S. Geological Survey Open-File Report 70-73.

______1970d, Analyses of rock and stream-sediment samples from the Sumdum B-4 quadrangle, Alaska: U.S. Geological Survey Open-File Report 70-74.

______1970e, Analyses of rock and stream-sediment samples from the Sumdum B-5 quadrangle, Alaska: U.S. Geological Survey Open-File Report 70-75.

______1970f, Analyses of rock and stream-sediment samples from the Sumdum C-4 quadrangle, Alaska: U.S. Geological Survey Open-File Report 70-76.

Clark, A.L., and Greenwood, W.R., 1972, Geochemistry and distribution of platinum-group metals in mafic to ultramafic complexes of southern and southeastern Alaska, in Geological Survey Research: U.S. Geological Survey Professional Paper 800-C, p. C157-C160.

Clifton, H.E., and Luepke, G., 1987, Heavy-mineral placer deposits of the continental margin of Alaska and the Pacific coast states, in Scholl, D.W., Grantz, A., and Vedder, J.G., eds., Geology and resource potential of the continental margin of western North America and adjacent ocean basins: Beaufort Sea to Baja California: Houston, Texas, Circum-Pacific Council for Energy and Mineral Resources, Earth Science Series, v. 6, p. 691-738.

Clough, A.H., and Hayden, T.J., 1988, Mineral investigations in the southern Chilkat Range, southeast Alaska: U.S. Bureau of Mines Open-File Report 13-88, 25 p.

Cobb, E.H., 1972a, Metallic mineral resources map of the Bradfield Canal quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-418, 1 sheet, scale 1:250,000.

______1972b, Metallic mineral resources map of the Juneau quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-434, 1 sheet, scale 1:250,000.

_____ 1972c, Metallic mineral resources map of the Craig quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-433, 1 sheet, scale 1:250,000.

_____ 1972d, Metallic mineral resources map of the Dixon Entrance quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-434, 1 sheet, scale 1:250,000.

_____ 1972e, Metallic mineral resources map of the Juneau quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-435, 1 sheet, scale 1:250,000.

_____ 1972f, Metallic mineral resources map of the Ketchikan quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-420, 1 sheet, scale 1:250,000.

_____ 1972g, Metallic mineral resources map of the Petersburg, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-415, 1 sheet, scale 1:250,000.

_____ 1972h, Metallic mineral resources map of the Mount Fairweather quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-436, 1 sheet, scale 1:250,000.

_____ 1972i, Metallic mineral resources map of the Prince Rupert quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-437, 1 sheet, scale 1:250,000.

_____ 1972j, Metallic mineral resources map of the Port Alexander quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-464, 1 sheet, scale 1:250,000.

_____ 1972k, Metallic mineral resources map of the Skagway quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-0424, 1 sheet, scale 1:250,000.

_____ 1972l, Metallic mineral resources map of the Sitka quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-467, 1 sheet, scale 1:250,000.

_____ 1972m, Metallic mineral resources map of the Sumdum quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-425, 1 sheet, scale 1:250,000.

_____ 1972n, Metallic mineral resources map of the Taku River quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-407, 1 sheet, scale 1:250,000.

_____ 1972o, Metallic mineral resources map of the Juneau quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-434, 1 sheet, scale 1:250,000.

_____ 1972p, Metallic mineral resources map of the Yakutat quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-0408, 1 sheet, scale 1:250,000.

_____ 1974, Metal provinces of Alaska: U.S. Geological Survey Investigations Series Map I-0834, scale 1:5,000,000.

_____ 1978a, Summary of references to mineral occurrences (other than mineral fuels and construction materials) in the Bradfield Canal quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-922, 97 p.

_____ 1978b, Summary of references to mineral occurrences (other than mineral fuels and construction materials) in the Craig quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-869, 262 p.

_____ 1978c, Summary of references to mineral occurrences (other than mineral fuels and construction materials) in the Dixon Entrance quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-863, 34 p.

_____ 1978d, Summary of references to mineral occurrences (other than mineral fuels and construction materials) in the Juneau quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-374, 156 p.

_____ 1978e, Summary of references to mineral occurrences (other than mineral fuels and construction materials) in the Mount Fairweather and Skagway quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-316, 127 p.

_____ 1978f, Summary of references to mineral occurrences (other than mineral fuels and construction materials) in the Petersburg quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-870, 52 p.

______ 1978g, Summary of references to mineral occurrences (other than mineral fuels and construction materials) in the Port Alexander quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-787, 32 p.

______ 1978h, Summary of references to mineral occurrences (other than mineral fuels and construction materials) in the Sitka quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-0450, 124 p.

______ 1978i, Summary of references to mineral occurrences (other than mineral fuels and construction materials) in the Sumdum and Taku River quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-698, 64 p.

______ 1979, Summary of references to mineral occurrences (other than mineral fuels and construction materials) in the Bering Glacier, Icy Bay, Middleton Island, and Yakutat quadrangles, Alaska: U.S. Geological Survey Open-File Report 79-124b, 40 p.

______ 1981a, Summaries of data on and lists of references to metallic and selected nonmetallic mineral occurrences in the Skagway quadrangle, Alaska, Supplement to Open File Report 78-316: U.S. Geological Survey Open File Report 81-82A, 10 p.

______ 1981b, Summaries of data on and lists of references to metallic and selected nonmetallic mineral occurrences in the Skagway quadrangle, Alaska, supplement to Open-File Report 78-316, Part B - Lists of references to January 1, 1980: U.S. Geological Survey Open-File Report 81-82B, 9 p.

Cobb, E.H., and Elliott, R.L., 1980, Summaries of data and lists of references to metallic and selected nonmetallic mineral deposits in the Ketchikan and Prince Rupert quadrangles, Alaska: U.S. Geological Survey Open-File Report 80-1053, 156 p.

Cobb, E.H., Wanek, A.A., Grantz, A., and Carter, C., 1968, Summary report on the geology and mineral resources of the Bering Sea, Bogoslof, Simeonof, Semidi, Tuxedni, St. Lazaria, Hazy Islands, and Forrester Island National Wildlife Refuges, Alaska: U.S. Geological Survey Bulletin 1260-K, p. K1-K28.

Coldwell, J.R., 1990, An economic analysis—Tongass land management plan-mineral resource inventory-inferred (identified) reserves: Unpublished U.S. Bureau of Mines Report , 154 p. (This report is similar to that referred to as Coldwell (1989) in U.S. Forest Service (1990).)

Condon, W.H., 1961, Geology of the Craig quadrangle, Alaska: U.S. Geological Survey Bulletin 1108-B, p. B1-B43.

Cox, D.P., and Rytuba, J.J., 1987, Lihir Island gold: a supplement to U.S. Geological Survey Bulletin 1693: U.S. Geological Survey Open-File Report 87-2728, 4 p.

Cox, D.P., and Singer, D.A., 1986, Mineral deposit models: U.S. Geological Survey Bulletin 1693, 379 p.

Decker, John, 1979, Preliminary aeromagnetic map of southeastern Alaska: U.S. Geological Survey Open-File Report 79-1694, 1 sheet, scale 1:1,000,000.

Decker, John, and Karl, S., 1977, Preliminary aeromagnetic map of eastern part of southern Alaska: U.S. Geological Survey Open-File Report 77-169-E, 1 map, scale 1:000,000.

Decker, John, Mullen, M.W., and Schwab, C.E., 1981, Aeromagnetic profile map of southeastern Alaska: U.S. Geological Survey Open-File Report 82-505, scale 1:1,000,000.

Drew, L.J., Bliss, J.R., Bowen, R.W., Bridges, N.J., Cox, D.P., DeYoung, J.H., Jr., Houghton, J.C., Ludington, S., Menzie, W.D., Page, N.J., Root, D.H., and Singer, D.A., 1986, Quantitative estimation of undiscovered resources--a case study of U.S. Forest Service wilderness tracts in the Pacific Mountain System: Economic Geology, v. 81, p. 80-88.

Eakins, G.R., Bundtzen, T.K., Robinson, M.S., Clough, J.G., Green, C.B., Clautice, K.H., and Albanese, M.A., 1983, Alaska's Mineral Industry 1982: Alaska Division of Geological and Geophysical Surveys Special Report 31, p. 3-15.

Eakins, G.R., Bundtzen, T.K., Lueck, L.L., Green, C.B., Gallagher, J.L., and Robinson, M.S., 1985, Alaska Mineral Industry 1984: Alaska Division of Geological and Geophysical Surveys Special Report 38, p. 5-20.

Eberlein, G.D., Churkin, M., Jr., Carter, C., Berg, H.C., and Ovenshine, A.T., 1983, Geology of the Craig quadrangle, Alaska: U.S. Geological Survey Open-File Report 83-91, 53 p., 4 sheets, scale 1:250,000.

Elliott, R.L., Berg, H.C., and Karl, S.M., 1978, Map and table describing metalliferous and selected non-metalliferous mineral deposits, Ketchikan and Prince Rupert quadrangles, Alaska: U.S. Geological Survey Open-File Report 78-73-B, 18 p., 1 sheet, scale 1:250,000.

Elliott, R.L., and Koch, R.D., 1981, Mines, prospects, and selected metalliferous mineral occurrences in the Bradfield Canal quadrangle, Alaska: U.S. Geological Survey Open-File Report 81-728B, 24 p., 1 sheet, scale 1:250,000.

Flint, C.F., Jr., and Cobb, E.H., 1953, Gypsum deposits near Iyoukeen Cove, Chichagof Island, southeastern Alaska: U.S. Geological Survey Bulletin 989B, p. 27-37.

Ford, A.B., and Brew, D.A., 1987, The Wright Glacier volcanic plug and dike swarm, southeastern Alaska, in Hamilton, T.D., and Galloway, J.P., eds., Geologic studies in Alaska by the U.S. Geological Survey during 1986: U.S. Geological Survey Circular 998, p. 116-118.

Gault, H.R., Rossman, D.L., Flint, G.M., Jr., and Ray, R.G., 1953, Some lead-zinc deposits of the Wrangell district, Alaska: U.S. Geological Survey Bulletin 998-B, p. 15-58.

Gehrels, G.E., 1991, Geologic Map of Long Island and southern and central Dall Island southeastern Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-XXXX, 1 sheet, scale l:63,360. (In review).

Gehrels, G.E., and Berg, H.C., 1984, Geologic map of southeastern Alaska: U.S. Geological Survey Open-File Report 84-886, 28 p., 1 sheet, scale 1:600,000.

Gehrels, G.E., Berg, H.C., and Saleeby, J.B., 1983, Ordovician-Silurian volcanogenic marine sulfide deposits on the southern Prince of Wales Island and the barrier islands, southeastern Alaska: U.S. Geological Survey Open-File Report 83-318, 10 p., 1 sheet.

Gehrels, G.E., and Saleeby, J.B., 1986, Geologic map of southern Prince of Wales Island: U.S. Geological Survey Open-File Report 86-0275, scale 1:63,360, 33 p. pamphlet.

Gilbert, W.G., 1988, Preliminary geology of the northern Chilkat Range, southeastern Alaska: Alaska Division of Geological and Geophysical Surveys, Report of Investigations 88-8, 2 sheets, scale 1:36,200.

Gilbert, W.G., Burns, L.E., Redman, E.C., and Forbes, R.B., 1987, Preliminary bedrock geology and geochemistry of the Skagway B-3 quadrangle, Alaska: Alaska Division of Geological and Geophysical Surveys Report of Investigations 87-2, 2 tables, geologic maps, 2 sheets, scale 1:36,200.

Gilbert, W.G., Forbes, R.B., Redman, E.C., and Burns, L.E., 1988, Preliminary bedrock geology and geochemistry of the Kelsall River area, southeast Alaska: Alaska Division of Geological and Geophysical Surveys, Report of Investigations 88-4, 1 pls., scale 1:36,200.

Gilbert, W.G., and Redman, E.C., 1989, Lode deposits, prospects, and occurrences of the Porcupine mining area, southeast Alaska: U.S. Bureau of Mines Open-File Report 17-89, 1 sheet, scale 1:39,600.

Green, C.B., Bundtzen, T.K., Peterson, R.J., Seward, A.F., Deagen, J.R., and Burton J.E., 1989, Alaska Mineral Industry 1984: Alaska Division of Geological and Geophysical Surveys Special Report 43, p. 79.

Griscom, A., 1977, Interpretation of aeromagnetic data, in Mineral resources of the Granite Fiords Wilderness Study Area, Alaska: U.S. Geological Survey Bulletin 1403, p. 32-36.

______ 1984, Interpretation of aeromagnetic map of Glacier Bay National Monument, Alaska, in Mineral resources of the Glacier Bay National Monument Wilderness Study Area , Alaska: U.S. Geological Survey Open-File Report 74-494, p. B-22 - B-50.

Grybeck, Donald, Berg, H.C., and Karl, S.M., 1984a, Map and description of the mineral deposits in the Petersburg and eastern Port Alexander quadrangles, southeastern Alaska: U.S. Geological Survey Open-File Report 84-0837, 87 p., 1 sheet, scale 1:250,000.

Grybeck, Donald, Johnson, B.J., and Nutt, C.J., 1984b, Geochemistry of the Tracy Arm-Fords Terror Wilderness Study Area and vicinity, Alaska, in Mineral resources of the Tracy Arm-Fords Terror Wilderness Study Area and vicinity, Alaska: U.S. Geological Survey Bulletin 1525, p. 73-104.

Grybeck, Donald, Kimball, A.L., Brew, D.A., and Still, J.C., 1984c, Evaluation of mineral resources, in Mineral resources of the Tracy Arm-Fords Terror Wildemess Study Area and vicinity, Alaska: U.S. Geological Survey Bulletin 1525, p. 211-223.

Herreid, Gordon, Bundtzen, T.K., Tumer, D.L. (1979), Geology and geochemistry of the Craig A-2 quadrangle and vicinity, Prince of Wales Island, southeastern Alaska: Anchorage, Alaska Division of Geological and Geophysical Surveys Geologic Report 48, 49 p.

Himmelberg, G.R., Brew, D.A., and Ford, A.B., 1986, Chemical composition of olivine and orthopyroxene in peridotite in the Coast plutonic-metamorphic complex near Skagway, Alaska, in Bartsch-Winkler, S., ed., Geologic studies in Alaska by the U.S. Geological Survey during 1985: U.S. Geological Survey Circular 978, p. 95-98.

Himmelberg, G.R., Ford, A.B., and Brew, D.A., 1985, Ultramafic bodies in the Coast plutonic-metamorphic complex near Skagway, Alaska, in Bartsch-Winkler, S., ed., The United States Geological Survey in Alaska: Accomplishments during 1984: U.S. Geological Survey Circular 967, p. 92-93.

Himmelberg, G.R., and Loney, R.A., 1981, Petrology of the ultramafic and gabbroic rocks of the Brady Glacier nickel-copper deposit, Fairweather Range, southeastern Alaska: U.S. Geological Survey Professional Paper 1195, 26 p

Himmelberg, G.R., Loney, R.A., and Nabelek, P.I., 1987, Petrogenesis of gabbronorite at Yakobi and Northwest Chichagof Islands, Alaska: Geological Society of America Bulletin, v. 98, p. 265-279.

Horner, R., 1990, Seismicity in the Glacier Bay region of southeast Alaska and adjacent areas of British Columbia, Second Glacier Bay Science Proceedings Symposium,. USNPS, Science Publications Office, Atlanta, GA, p. 6-11.

Hudson, Travis, Plafker, George, and Lanphere, M.A., 1977, Intrusive rocks of the Yakutat-St. Elias area, south-central Alaska: U.S. Geological Survey Journal of Research, v. 5, no. 2, p. 155-172.

Jachens, R.C., 1984, Interpretation of the aeromagnetic data, in U.S. Geological Survey and U.S. Bureau of Mines, Mineral resources of the Tracy Arm-Fords Terror Wilderness Study Area and vicinity, Alaska: U.S. Geological Survey Bulletin 1525, p. 53-62.

Johnson, B.R., 1978, Statistical analysis of geochemical data from Glacier Bay National Monument, Alaska: U.S. Geological Survey Open-File Report 78-495, 16 p., 26 sheets, scale 1:250,000.

Johnson, B.R., and Karl, S.M., 1982, Reconnaissance geologic map of the western Chichagof and Yakobi Islands Wildemess Study Area, southeastem Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-1476-A, 1 sheet, scale 1:125,000,15 p. pamphlet.

Johnson, B.R., and Karl, S.M., 1985, Geologic map of westem Chichagof and Yakobi islands, southeastern Alaska: U.S. Geological Survey Miscellaneous Investigations Series Map I-1506, 1 sheet, scale 1:125,000.

Johnson, B.R., Kimball, A.L., and Still, J.C., 1982, Mineral resource potential of the western Chichagof and Yakobi Islands Wilderness Study Area, southeastern Alaska: Summary report: U.S. Geological Survey Miscellaneous Field Studies Map MF 1476-B, 1 sheet, scale 1:125,000.

Karl, S.M., Berg, H.C., Grybeck, D., and Abramson, B.S., 1980, Preliminary map and tables describing mines, prospects, and selected metalliferous mineral occurrences in the Petersburg and eastem Port Alexander quadrangles, Alaska: U.S. Geological Survey Open-File Report 80-793, 2 tables, 1 map, scale 1:250,000.

Karl, S.M., Dickey, C.F., and Brew, D.A., 1991, Preliminary geologic map of the Sitka quadrangle, Alaska: U.S. Geological Survey Open-File Report 91-XXX, 1 sheet, scale 1:250,000, 83 p. pamphlet. (In review.)

Karl, S.M., and Koch, R.D., 1990, Maps and preliminary interpretation of anomalous rock geochemical data from the Petersburg quadrangle, and parts of the Port Alexander, Sitka, and Sumdum quadrangles, southeastern Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-1970-C, 40 p., 7 sheets , scale 1:250,000.

Kennedy, G.C., 1953, Geology and mineral deposits of Jumbo basin, southeastern Alaska: U.S. Geological Survey Professional Paper 251, 46 p.

Kimball, A.L., Still, J.C., and Rataj, J.L., 1978, Mineral resources, in Brew and others, Mineral resources of the Glacier Bay National Monument Wilderness Study Area, Alaska: U.S. Geological Survey Open-File Report 78-494, p. C-1 to C-375.

Kimball, A.L., 1984, Mineral deposits and occurrences in the Tracy Arm-Fords Terror Wilderness Study Area and vicinity, Alaska, in Mineral resources of the Tracy Arm-Fords Terror Wilderness Study Area and vicinity, Alaska: U.S. Geological Survey Bulletin 1525, p. 105-210.

Kleeschulte, C., 1989, Kensington: Echo Bay's other mine: Juneau Empire, September l5, 1989, p. 7.

Koch, R.D., 1991a, Reconnaissance geologic map of the Bradfield Canal quadrangle, southeastern Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-____ (in press).

______ 1991b, Metalliferous mineral resource potential in the Bradfield Canal quadrangle, southeastern Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-___ (in press).

Koch, R.D., Brew, D.A., and Ford, A.B., 1987, Newly discovered molybdenite occurrence near Boundary Creek, Coast Mountains, southeastern Alaska, in Hamilton, T.D., and Galloway, J.P., eds., Geologic studies in Alaska by the U.S. Geological Survey during 1986: U.S. Geological Survey Circular 998, p. 124-125.

Kretz, R., 1983, Symbols for rock-forming minerals: American Mineralogist, v.68, p. 277-279.

Lathram, E.H., Pomeroy, J.S., Berg, H.C., and Loney, R.A., 1965, Reconnaissance geology of Admiralty Island, Alaska: U.S. Geological Survey Bulletin 1181-R, p. R1-R48, 2 maps, scale 1:250,000.

Loney, R.A., Brew, D.A., Muffler, L.J.P., and Pomeroy, J.S., 1975, Reconnaissance geology of Chichagof, Baranof, and Kruzof Islands, southeastern Alaska: U.S. Geological Survey Professional Paper 792, 105 p., map scale 1:250,000.

Loney, R.A., Berg, H.C., Pomeroy, J.S., and Brew, D.A., 1963, Reconnaissance geologic map of Chichagof Island and northwestern Baranof Island: U.S. Geological Survey Miscellaneous Geologic Investigations Map I-388, scale 1: 250,000, 1 sheet, 7 p. pamphlet.

MacKevett, E.M., Jr., 1971, Analyses of samples and preliminary geologic summary of barite-silver-base metal deposits near Glacier Creek, Skagway B-4 quadrangle, southeastern Alaska: U.S. Geological Survey Open-File Report 71-0195, 8 p.

MacKevett, E.M., Jr., Brew, D.A., Hawley, C.C., Huff, L.C., and Smith, J.G., 1971, Mineral resources of Glacier Bay National Monument, Alaska: U.S. Geological Survey Professional Paper 632, 90 p., map scale 1:250,000.

MacKevett, E.M., Jr., and Holloway, C.D., 1977, Table describing metalliferous and selected nonmetalliferous mineral deposits in eastern southern Alaska: U.S. Geological Survey Open-File Report 77-169A, 99 p., 1 map.

MacKevett, E.M., Jr., and Plafker, G., 1970, Geochemical and geophysical reconnaissance of parts of the Yakutat and Mount St. Elias quadrangles, Alaska: U.S. Geological Survey Bulletin 1312-L, 12 p.

MacKevett, E.M., Jr., Robertson, E.C., and Winkler, G.R., 1974, Geology of the Skagway B-3 and B-4 quadrangles, southeastern Alaska: U.S. Geological Survey Professional Paper 832, 33 p.

MacKevett, E.M., Jr., Singer, D.A., and Holloway, C.D., 1978, Maps and tables describing metalliferous mineral resource potential of southern Alaska: U.S. Geological Survey Open-File Report 78-1-E, 12 p., 2 pls.

McAllister, Kirk, 1989, Echo Bay lays out A-J plans: Juneau Empire, February 22, 1989, p. 1, 8.

Miller, D.J., Payne, T.G., and Gryc, George, 1959, Geology of possible petroleum provinces in Alaska: U.S. Geological Survey Bulletin 1094, 131 p.

Miller, T.P., 1973, Distribution and chemical analyses of thermal springs in Alaska: U.S. Geological Survey Open-File Map 570.

Motyka, R.J., and Moorman, M.A., 1987, Geothermal resources of southeastern Alaska: Alaska Division of Geologsical and Geophysical Surveys Professional Paper 93, scale 1:1,000,000.

Newberry, R.J. and Brew, D.A., 1989 Epigenetic hydrothermal origin of the Groundhog Basin-Glacier Basin, silver-tin-lead-zinc deposits; Southeastern Alaska in Galloway, J.P., and Dover, J.H., eds., Geologic studies in Alaska by the U.S. Bulletin 1903, p. 113-171.

Nokleberg, W.J., 1987, Significant metalliferous lode deposits and placer districts of Alaska: U.S. Geological Survey Bulletin 1786, 104 p., 2 pls.

Nokleberg, W.J., Bundtzen, T.K., Berg, H.C., Brew, D.A., Grybeck, D., Robinson, M.S., Smith, T.E., and Yeend, W., 1988, Metallogeny and major mineral deposits of Alaska: U.S. Geological Survey Open-File Report 88-73, 97 p., 2 pls.

Plafker, G., 1967, Geologic map of the Gulf of Alaska Tertiary province: U.S. Geological Survey Map I-484, 1 sheet, scale 1:500,000.

_____1971, Possible future petroleum resourcesof the Pacific margin basin, Alaska, in Cram, I.H., ed., Future petroleum provinces of the United States--their geology and potential: American Association of Petroleum Geologists Memoir 15, p. 120-135; also p. 152-159.

_____1990?, Geologic compilation of the southwestern corner of the Skagway quadrangle, in Dusel-Bacon, C., Brew, D.A., and Douglass, S.L., Metamorphic facies map of southeastern Alaska: U.S. Geological Survey Professional Paper (in press).

Plafker, G., Bruns, T.R., and Page, R.A., 1975, Interim report on petroleum resource potential and geologic hazards in the outer continental shelf of the Gulf of Alaska Tertiary province: U.S. Geological Survey Open-File Report 75-592, 74 p.

Redman, E.C., Gilbert, W.G., Jones, B.K., Rosenkrans, D., and Hickok, B.D., 1985, Preliminary bedrock-geologic map of the Skagway B-4 quadrangle, Alaska: Alaska Division of Geological and Geophysical Surveys Report of Investigations RI 85-6, 1 sheet, scale 1:63,360.

Redman, E.C., Retherford, R.M., and Hickok, B.D., 1984, Geology and geochemistry of the Skagway B-2 quadrangle, southeastern Alaska: Alaska Division of Geological and Geophysical Surveys Reports of Investigations 84-31, 34 p., 4 sheets, scale 1:40,000.

Redman, E.C., Roberts, W.S., Clough, Al. and Kurtak, Joseph, 1985, Juneau Gold Belt area—Preliminary mine, prospect, sample location maps and descriptions: U.S. Bureau of Mines Open-File Report 85-86, 68 p., 4 pls., scale 1:250,000 and 1:63,360.

Robinson, G.D., and Twenhofel, W.S., 1953, Some lead-zinc and zinc-copper deposits of the Ketchikan and Wales districts, Alaska: U.S. Geological Survey Bulletin 998-C, p. 59-84.

Root, D.H., and Scott, W.A., 1988, User manual for mineral simulation program: U.S. Geological Survey Open-File Report 88-15, 63 p.

Rossman, D.L., 1963, Geology of the eastern part of the Mount Fairweather quadrangle, Glacier Bay, Alaska: U.S. Geological Survey Bulletin 1121-K, 57 p.

Rossman, D.L., Henderson, J.R., and Walton, M.S., Jr., 1956 Reconnaissance total intensity aeromagnetic map of the southern part of Prince of Wales Island, Alaska: . Geological Survey Geophysical Investigations Map GP-135, scale 1:126,720.

Sainsbury, C.L.,1957, Some pegmatite deposits in southeastern Alaska: U.S. Geol. Survey Bull. 1024-G, p. G1141-G161.

_____ 1961, Geology of part of the Craig C-2 quadrangle and adjoining areas, Prince of Wales Island, southeastern Alaska: U.S. Geological Survey Bulletin 1058-H, p. 299-362.

Simpson, S., 1990, Kensington is Juneau's "other" mine: Juneau Empire, August 31, 1990, p. 7.

Smith, R.L., and Shaw, H.R., 1979, Igneous-related geothermal systems, in Muffler, L.J.P., ed. Assessment of the geothermal resources of the United States: U.S. Geological Survey Circular 790, p. 12-17.

Sonnevil, R.A., 1981, New data concerning the geology of the North Bradfield River iron prospect, southeastern Alaska, in Albert, N.R.D., and Hudson, Travis, eds., The United States Geological Survey in Alaska--Accomplishments during 1979: U.S. Geological Survey Circular 823-B, p. B117-B118.

Souther, J.G., 1971, Geology and ore deposits of Tulsequah map area, British Columbia: Geological Survey of Canada Memoir 362, 84 p., 1 pl., scale 1:250,000.

Souther, J.G., Brew, D.A., Okulitch, A. V., 1979, Iskut River 1:1,000,000 Geological Atlas, NTS 104, 114: Geological Survey of Canada Map1418A, scale l:l,000,000.

Still, J.C., 1988, Copper-gold mineralization of the Chilkat Peninsula and Islands: U.S. Bureau of Mines Open-File Report 49-88, 39 p.

Still, J.C., Gilbert, W.G., and Forbes, R.B., 1987, Final report of stream sediment, float, and bedrock sampling in the Porcupine mining area, southeast Alaska, 1983-85: U.S. Bureau of Mines Open-File Report 36-87, 34 p.

Taylor, H.P. Jr., 1967. The Zoned Ultrama fic complexes of Southeastern Alaska, in Wylie, AP.J., ed., ultra mafic and related rocks, John Wiley and Sons, New York, p. 97-121.

Tosdal, R.M., and Smith, D.B., 1987. Gneiss-hosted kyanite gold and gneiss-hosted epithermal gold: a supplement to U.S. Geological Survey BUlletin 1693: U.S. Geological Survey Open-File Report 87-272b, 7 p.

Twenhofel, W.S., 1953, Potential Alaskan mineral resources for proposed electrochemical and electrometallurgical industries in the upper Lynn Canal area, Alaska: U.S. Geological Survey Circular 252, 14 p.

U.S. Bureau of Mines, 1973, Alaska 1:250,000 scale quadrangle map overlays showing mineral deposit locations, principal minerals, and number and type of claims: U.S. Bur. Mines open-file Rept. 20-73.

_____ 1984, Mines Bureau reports mineral discoveries in Alaska's Chilkat Range: Press release, December 2, 1984, 1 p.

U.S. Forest Service, 1989, Tongass National Forest—Understanding the Past...Designing the Future: U.S. Government Printing Office, 1989-791-814, 62 p.

_____ 1990, Draft environmental impact statement for Tongass Forest Plan revision: U.S. Forest Service, Alaska Region, June 25, 1990, 6 plates, many p.

U.S. Geological Survey, 1976, Aeromagnetic maps of Granite Fiords Wilderness Study Area, Ketchikan and Bradfield Canal quadrangles, southeastern Alaska: U.S. Geological Survey Open-File Report 76-558, scale 1:63,360, 15 sheets.

_____ 1977, Aeromagnetic map of Ketchikan, Prince Rupert, and northeastern Craig quadrangles, Alaska: U.S. Geological Survey Open-File Report 77-359, 1 sheet, scale 1:250,000.

_____ 1979a, Aeromagnetic maps of parts of the Ketchikan, Prince Rupert, and Craig quadrangles, southeastern Alaska: U.S. Geological Survey Open-File Report 79-937, 19 sheets, scale 1:63,360.

_____ 1979b, Aeromagnetic maps of the Yakobi and Chichagof Islands, Alaska: U.S. Geological Survey Open-File Report 79-0529, 1 sheet, scale 1:250,0000.

_____ 1979c, Aeromagnetic profiles of the Bering Glacier, Mount St. Elias, and Yakutat 1° by 3° quadrangles, Alaska: U.S. Geological Survey Open-File Report 79-0224, 2 sheets, scale 1:250,000.

_____ 1979d, Aeroradioactivity map of Cone Mountain, Alaska: U.S. Geological Survey Open-File Report 79-830, 1 sheet, scale 1:63,360.

_____ 1979e, Aeroradioactivity map of Kosciusko Island, Alaska: U.S. Geological Survey Open-File Report 79-831, 1 sheet, scale 1:63,360.

_____ 1979f, Aeromagnetic map of the Petersburg area, Alaska: U.S. Geological Survey Open-File Report 79-832, 1 sheet, scale 1:250,000.

_____ 1984a, Aeromagnetic map of the Craig area, Alaska: U.S. Geological Survey Open-File Report 84-666, 3 sheets, scale 1:250,000.

_____ 1984b, Aeromagnetic map of the Juneau area, Alaska: U.S. Geological Survey Open-File Report 84-0296, 1 sheet, scale 1:250,000.

_____ 1989, Mineral Resources Data System (MRDS), Branch of Resource Analysis, Mail Stop 920, Reston, VA 22092.

Von Huene, R., Lathram, E.H., and Reimnitz, E., 1971, Possible petroleum resources of offshore Pacific-margin Tertiary basin, Alaska, in Cram, E.H., ed., Future petroleum provinces of the United States--their geology and potential: American Association of Petroleum Geologists Memoir 15, v.. 1, p. 136-159.

Warner, L.A., Goddard, E.N., and others, 1961, Iron and copper deposits of Kasaan Peninsula, Prince of Wales Island, southeastern Alaska: U.S. Geological Survey Bulletin 1090, 136 p.

Wells, D.E., Pittman, T.L., Brew, D.A., and Douglass, S.L., 1986, Map and description of the mineral deposits in the Juneau, Taku River, Atlin, and part of the Skagway quadrangles, Alaska: U.S. Geological Survey Open-File Report 85-717, 332 p., 1 pl.

Williams, J.A., 1960, Report of the Division of Mines and Minerals for the year 1959: Alaska Department of Natural Resources Annual Report, p. 21-24.

_____ 1961, Division of Mines and Minerals Report for the Year 1961: Alaska Division Mines and Minerals Annual Report, p. 26-45.

_____ 1965, Division of Mines and Minerals Report for the Year 1964: Alaska Division of Mines and Minerals Annual Report, p. 12-15.

_____ 1966, Division of Mines and Minerals Report for the Year 1965: Alaska Division of Mines and Minerals Annual Report, p. 11-16.

_____ 1968, Division of Mines and Minerals Report for the Year 1967: Alaska Division of Mines and Minerals Annual Report, p. 11-15.

_____ 1969, Division of Mines and Minerals Report for the Year 1968: Alaska Division of Mines and Minerals Annual Report, p. 8-15.

_____ 1971, Division of Mines and Minerals Report for the Year 1970: Alaska Division of Mines and Minerals Annual Report, p. 4-1, 4-5.

Appendix 1. Lists of reference materials pertinent to southeastern Alaska as a whole and to the individual fifteen 1:250,000-scale quadrangles covered by the study. (Asterisk indicates that some type of mineral-resource assessment is included.)

SOUTHEAST ALASKA - GENERAL

GEOLOGY:	Buddington and Chapin, 1929, USGS Bull. 800 Beikman, 1975, USGS MF-0673 Gehrels and Berg, 1984, USGS OF 84-0886
MINERAL DEPOSITS:	Burchard, 1920, USGS Bull. 0682 Buddington and Chapin, 1929, USGS Bull. 800 Twenhofel, 1953, USGS Circ. 0252 Clark and others, 1972, USGS OF-72-0069 Clark and others, 1975, USGS I-0834 *Berg, 1984, USGS OF 84-0572 Clifton and Luepke, 1987 Nokleberg and others, 1988, USGS Bull. 1779 Nokleberg and others, 1988, USGS OF-88-0073
GEOPHYSICS:	Decker, 1979, USGS OF-79-1694 Decker and others, 1981, USGS OF 81-0505
GEOTHERMAL:	Bliss, 1983, USGS OF-83-0426 Motyka and Moorman, 1987, AK DGGS PR 93
PETROLEUM:	Miller and others, 1959 Bruns, 1988a

(AL)-ATLIN

GEOLOGY:	Brew and others, unpub. data
MINERAL DEPOSITS AND GEOCHEMISTRY:*	Bailey and others, 1985, USGS OF 85-0437 Wells and others, 1986, USGS OF 86-0717 Baggs and others, 1989, USBM OF

(BC)-BRADFIELD CANAL

GEOLOGY:	Koch, 1990, USGS MF-___ (in press)
MINERAL DEPOSITS AND	Cobb, 1972, USGS MF-0418 Elliott and Koch, 1981, USGS OF 81-0728-B Sonnevil, 1981, USGS Circ. 823-B *Koch, 1990, USGS MF-___ (in press)
GEOPHYSICS:	U.S. Geol. Survey, 1976, USGS OF-76-0558 U.S. Geol. Survey, 1979, USGS OF 79-0830 U.S. Geol. Survey, 1979, USGS OF 79-0832

(CR)-CRAIG

GEOLOGY:	Condon, 1961, USGS Bull. 1108-B Clark and others, 1971, USGS OF 71-0067 Forester Is. Eberlein and others, 1983, USGS OF 83-0091
MINERAL DEPOSITS AND GEOCHEMISTRY	Burchard, 1913, USGS Bull. 0542-D Kennedy, 1953, USGS PP 0251 Robinson and Twenhofel, 1953, USGS Bull. 0998-C Warner and others, 1961, USGS Bull. 1090 Sainsbury, 1963, USGS Bull. 1058-H Cobb, 1968, USGS Bull. 1260-K Cobb, 1972, USGS MF-0433 Cobb, 1978, USGS OF 78-0869 Gehrels and others, 1983, USGS OF 83-0318 Grybeck, D.G., in prep., USGS OFR
GEOPHYSICS:	Rossman and others, 1956, USGS GP-0135 U.S. Geol. Survey, 1977, USGS OF 77-0359 U.S. Geol. Survey, 1979, USGS OF 79-0937 U.S. Geol. Survey, 1984, USGS OF 84-0666

(DE)-DIXON ENTRANCE

GEOLOGY:	Gehrels and Saleeby, 1986, USGS OF 86-0275
MINERAL DEPOSITS AND GEOCHEMISTRY:	Cobb, 1972, USGS MF-0434 Cobb, 1978, USGS OF 78-0863 Gehrels and others, 1983, USGS OF 83-0318
GEOPHYSICS:	Rossman and others, 1956, USGS GP-0135 U.S. Geol. Survey, 1984, USGS OF 84-0666

(JU)-JUNEAU

GEOLOGY:	Lathram and others, 1965, USGS Bull. 1181-R Loney and others, 1976, USGS PP 792 Brew and Ford, 1986, USGS OF 85-0395
MINERAL DEPOSITS AND GEOCHEMISTRY	Burchard, 1914, USGS Bull. 0592-C (MB) MacKevett and others, 1971, USGS PP 632 Cobb, 1973, USGS MF-0435 Loney and others, 1976, USGS PP 792 Brew and others, 1978, USGS OF 78-494 Cobb, 1978, USGS OF 78-0374 Johnson, 1978, USGS OF 78-495 Bailey and others, 1985, USGS OF 85-0437 Wells and others, 1986, USGS OF 85-0717 Clough and Hayden, 1988, USBM OF 13-88 Bundtzen and others, 1988, AKDDGS Spec. Rept. 41 *Baggs and others, 1989, USBM OF-(in press) McAllister, 1989, Junean Empire
GEOPHYSICS:	Barnes, 1975, USGS OF-75-0006 Barnes, 1978, USGS OF 78-494 Griscom, 1978, USGS OF 78-494 U.S. Geol. Survey, 1984, USGS OF 84-0296

(KC)-KETCHIKAN

GEOLOGY:	Berg and others, 1978, USGS OF 78-0073-A Berg and others, 1988, USGS Map I-1807
MINERAL DEPOSITS AND GEOCHEMISTRY:	Burchard, 1913, USGS Bull. 0542-B Cobb, 1972, USGS MF-0420 Berg and others, 1978a, USGS OF 78-0073-B *Berg and others, 1978, USGS OF 78-0073-M Elliott and others, USGS OF 78-73B Berg, 1980, USGS OF 80-0794 Cobb and Elliott, 1980, USGS OF 80-1053 Berg and others, 1982, USGS Circ. 0855
GEOPHYSICS:	U.S. Geol. Survey, 1977, USGS OF 77-0359 U.S. Geol. Survey, 1979, USGS OF 79-0937

(MF)-MOUNT FAIRWEATHER

GEOLOGY:	Loney and others, 1976, USGS PP 792 Brew and others, 1978, USGS OF 78-494 Johnson and Karl, 1982, USGS Map MF-1476-A Johnson and Karl, 1985, USGS Map I-1506
MINERAL DEPOSITS AND GEOCHEMISTRY:	MacKevett and others, 1971, USGS PP 632 Cobb, 1972, USGS MF-0436 Plafker and others, 1975, USGS OF-75-0592 Loney and others, 1976, USGS PP 792 Brew and others, 1978, USGS OF-78-494 Cobb, 1978, USGS OF 78-5316 Johnson, 1978, USGS OF 78-495 Cobb, 1981a, USGS OF 81-0249-A Cobb, 1981b, USGS OF 81-0249-B Johnson and others, 1982, USGS MF 1476-B Himmelberg and Loney, 1981, USGS PP 1195 Baggs and others, 1989, USBM OF- (in press)
GEOPHYSICS:	Barnes, 1975, USGS OF-75-0006 Barnes, 1978, USGS OF 78-494 Griscom, 1978, USGS OF 78-494 U.S. Geol. Survey, 1979, USGS OF 79-0529
PETROLEUM:	Plafker, 1967, USGS Map I-484 Plafker, 1971, AAPG Memoir Von Huene and others, 1971, AAPG Memoir Bruns, 1982, USGS OF 82-0929 Bruns and Carlson, 1987 Bruns, 1988a, USGS OF 88-0450-I Bruns, 1988b, USGS OF 88-0450-J

(PA)-PORT ALEXANDER

GEOLOGY:	Loney and others, 1976, USGS PP 792 Brew and others, 1984, USGS OF 84-405
MINERAL DEPOSITS AND GEOCHEMISTRY:	Cobb, 1972, USGS MF-0464 Loney and others, 1976, USGS PP 792 Cobb, 1978, USGS OF 78-0787 Bundtzen and others, 1984, AK DGGS Spec. Rept. 33 Karl and others, 1980, USGS OF 80-0793 Grybeck and others, 1984, USGS OF 84-0837 *Brew and others, 1990, USGS MF-1970-C (in press)
GEOPHYSICS:	Barnes, 1975, USGS OF 75-0006 Barnes and others, 1990, USGS MF-1970-A (in press)
GEOTHERMAL	Miller, 1973, USGS OF 73-570 Brooks and others, 1979, USGS Circ 790 Smith and Shaw, 1979, USGS Circ. 970 Motyka and Moorman, 1987, ADGGS Prof. Rept. 93

(PE)-PETERSBURG

GEOLOGY:	Brew and others, 1984, USGS OF 84-0405
MINERAL DEPOSITS AND GEOCHEMISTRY	*Gault and others, 1953, USGS Bull. 998-B Cobb, 1972, USGS MF-0415 Clark and Greenwood, 1972, USGS PP 800-C, p. 157 Cobb, 1978, USGS OF 78-0870 Karl and others, 1980, USGS OF 80-0793 Grybeck and others, 1984, USGS OF 84-0837 *Brew and others, 1990, USGS MF-1970-C (in press)
GEOPHYSICS	U.S. Geol. Survey, 1979, USGS OF 79-0831 U.S. Geol. Survey, 1979, USGS OF 79-0832 Barnes and others, 1990, USGS MF 1970-A (in press)
GEOTHERMAL	Miller, 1973, USGS OF 73-570 Brooks and others, 1979, USGS Circ. 790 Motyka and Moorman, 1987, ADGGS Prof. Rept. 93

(PR)-PRINCE RUPERT

GEOLOGY:	Berg and others, 1978, USGS OF 78-0023-A Berg and others, 1988, USGS Map I-1807
MINERAL DEPOSITS AND GEOCHEMISTRY:*	Cobb, 1972, USGS MF-0437 Berg and others, 1978a, USGS OF 78-0073-B Berg and others, 1978, USGS OF 78-0073-M Berg, 1980, USGS OF 80-0794 Cobb and Elliott, 1980, USGS OF 80-1053 Berg and others, 1982, USGS Circ. 0855
GEOPHYSICS:	U.S. Geol. Survey, 1977, USGS OF 77-0359 U.S. Geol. Survey, 1979, USGS OF 79-0937

(SD)-SUMDUM

GEOLOGY:	Lathram and others, 1965, USGS Bull. 1181-R Brew and Grybeck, 1984, USGS Bull. 1525 Brew and Grybeck, 1984, USGS OF 84-0405
MINERAL DEPOSITS AND GEOCHEMISTRY:	Clark and others, 1970a-f, USGS OF 70-071 through 70-076 Cobb, 1972, USGS MF-0425 Cobb, 1978, USGS OF 78-0698 *Brew and others, 1984, USGS Bull. 1525, p. 1-7 *Grybeck and others, 1984, USGS Bull. 1525, p. 211-223 Grybeck and others, 1984, USGS Bull. 1525, p. 73-104 Kimball and others, 1984, USGS Bull. 1525, p/ 105-210. *Baggs and others, 1989, USBM OF-___ (in press) *Brew and others, 1990, USGS MF-1970-B Karl and Koch, 1990, USGS MF-1970-C
GEOPHYSICS:	Barnes, 1984, USGS Bull. 1525 Jachens, 1984, USGS Bull. 1525 Barnes and others, 1990, USGS MF 1970-A

(SI)-SITKA

GEOLOGY:	Lathram and others, 1965, USGS Bull. 1181-R Loney and others, 1976, USGS PP 792 Johnson and Karl, 1983, USGS Map MF-1746-AJ Brew and others, 1984, USGS OF 84-0405 Johnson and Karl, 1985, USGS Map I-1506
MINERAL DEPOSITS AND GEOCHEMISTRY:	Burchard, 1914, USGS Bull 0592-C (MB) Flint and Cobb, 1953, USGS Bull. 09813 Loney and others, 1963, USGS I-388 Cobb, 1968, USGS Bull. 1260-K Cobb, 1972, USGS MF-0467 Loney and others, 1976, USGS PP 792 Cobb, 1978, USGS OF 78-0450 Johnson and others, 1982, USGS MF-1476-B *Ford and others, 1989, unpub. data Himmelberg and others, 1987, GSA Bull. Bundtzen and others, 1984, AK DGGS Spec. Rept. 33
GEOPHYSICS:	Barnes, 1975, USGS OF 75-0006 U.S. Geol. Survey, 1979, USGS OF 79-0529
GEOTHERMAL	Miller, 1973, USGS OF 73-0570 Brooks and others, 1979, USGS Circ. 790 Smith and Shaw, 1979, USGS Circ. 790 Motyka and Moorman, ADGGS Prof. Rept. 93

(SK-SKAGWAY)

GEOLOGY:

Christie, 1957, GSC Map 19-1957
MacKevett and others, 1974, USGS PP 832
Brew and others, 1978, USGS OFR 78-494
Campbell and Dodds, 1983, GSC OF 926
Campbell and Dodds, 1983, GSC OF 927
Redman and others, 1984, ADGGS RI 84-31
Redman and others, 1985, ADGGS RI 85-6
Barker and others, 1986, Amer. Min., 71, 632-643
Brew and Ford, 1986, USGS OF 85-0395
Gilbert and others, 1987, ADGGS RI 87-2
Gilbert, 1988, ADGGS RI 88-8
Gilbert and others, 1988, ADGGS RI 88-4
Plafker, 199_, in Dusel-Bacon and others, USGS PP (in press)

MINERAL DEPOSITS AND GEOCHEMISTRY

Burchard, 1914, USGS Bull. 0592-C (MB)
MacKevett, 1971, USGS OF 71-0195
MacKevett and others, 1971, USGS PP 0632
Cobb, 1972e, USGS MF-0424
MacKevett and others, 1974, USGS PP 832
Cobb, 1978, USGS OF 78-316
*Brew and others, 1978, USGS OF 78-494
Kimball and others, 1978, USGS OF 78-494
Johnson, 1978, USGS OF 78-495
Cobb, 1981a, USGS OF 81-0082-A
Cobb, 1981b, USGS OF 81-0082-B
Bailey and others, 1985, USGS OF 85-0437
Wells and others, 1986, USGS OF 85-0717
Still and others, 1987, USBM OF 36-87
Still, 1988, USBM OF-49-88
Gilbert, 1988, AK DGGS RI 88-8
Gilbert and others, 1988, AK DGGS RI 88-4
*Baggs and others, 1989, USBM OF
Gilbert and Redman, 1989, USBM OF 17-89

GEOPHYSICS:

Barnes, 1975, USGS OF 75-0006
Barnes, 1978, USGS OF-78-494
Griscom, 1978, USGS OF-78-494

(TR)-TAKU RIVER

GEOLOGY:	Souther, 1971, GSC Memoir 362 Brew and Grybeck, 1984, USGS Bull. 1525 Brew and Ford, 1986, USGS OF 85-0395 Brew and others, unpub.
MINERAL DEPOSITS AND GEOCHEMISTRY:*	Cobb, 1972, USGS MF-0407 Cobb, 1978, USGS OF 78-0698 Brew and others, 1984, USGS BULL. 1525, P. 1-7. *Grybeck and others, 1984, USGS Bull. 1525, p. 211-223 Grybeck and others, 1984, USGS Bull. 1525, p. 73-104 Kimball and others, 1984, USGS Bull. 1525 Bailey and others, 1985, USGS OF 85-0437 Wells and others, 1986, USGS OF 85-0717 Ford and Brew, 1987, USGS Circ. 998, p. 116-118. Koch and others, 1987, USGS Circ. 998, p. 124-125 Baggs and others, 1989, USBM OF-__(in press)
GEOPHYSICS:	Barnes, 1984, USGS Bull. 1525 Jachens, 1984, USGS Bull. 1525 U.S. Geol. Survey, 1984, USGS OF 84-0296

(YA)-YAKUTAT

GEOLOGY:	Beikman, 1975, USGS MF-0612 Beikman and others, 1977, USGS OF 77-0169-B Hudson and others, 1977, USGS JR, 5, p. 155-172 Campbell and Dodds, 1983, GSC OF 926 Campbell and Dodds, 1983, GSC OF 927
MINERAL DEPOSITS AND	MacKevett and Plafker, 1970, USGS Bull. 1312-L CPlafker and others, 1975, USGS OF-75-0592 MacKevett and others, 1977, USGS OF 78-0169-A MacKevett and others, 1978, USGS OF 78-0001E Cobb, 1979, USGS OF 79-1246
GEOPHYSICS:	MacKevett and Plafker, 1970, USGS Bull. 1312-L Barnes, 1977, USGS OF 77-0169-C Decker and Karl, 1977, USGS OF 77-0169-E U.S. Geol. Survey, 1979, USGS OF-79-0224
PETROLEUM:	Plafker, 1967, USGS Map I-484 Plafker, 1971, AAPG Memoir Von Huene and others, 1971, AAPG Memoir Plafker and others, 1975 Bruns, 1982, USGS OF 82-0929 Bruns and Carlson, 1987 Bruns, 1988a, USGS OF 88-0450-J

Appendix 2. Brief descriptions of mineral-deposit types referred to in this report. (Modified from Brew and others (1989), which in turn were modified from Nokleberg and others (1988), which in turn were based largely on Cox and Singer (1986).

GABBROIC Ni-Cu DEPOSIT

(Adapted from N.J Page's synorogenic-synvolcanic Ni-Cu deposit, no. 7a; in Cox and Singer , 1986, p.28; by Nokleberg and others, 1987, p. 6; and Brew and others, 1989, p.42)

This deposit type consists of massive lenses and disseminated sulfides in small- to medium-size gabbroic intrusions in metamorphic belts of metasedimentary and metavolcanic rocks. In most of Alaska, the depositional environment consistts of post-metamorphic intermediate-level intrusions of norite, gabbronorite, and ultramafic rocks. Common minerals include pyrrhotite, pentlandite, chalcopyrite, and, in some cases, pyrite, Ti- or Cr-magnetite, PGE minerals and alloys, and accessory cobalt-bearing minerals. Examples in Alaska are Funter Bay, Brady Glacier, Bohemia Basin, and Mirror Harbor, all in southeastern Alaska.

PODIFORM CHROMITE DEPOSIT

(Adapted from J.P. Alber's podiform chromite deposit, no. 8a; in Cox and Singer , 1986, p.34; by Nokleberg and others, 1987, p. 6)

This deposit type consists of podlike masses of chromite in the ultramafic parts of ophiolite complexes. Host rocks are dunite and harzburgite, commonly serpentinized. The depositional environment consists of magmatic cumulates in elongate magma pockets. Common minerals are magnetite and PGE minerals and alloys. Examples in Alaska are Iyikrok Mountain, Misheguk Mountain, and Ayan in the northwestern Brooks Range; and Halibut Bay, Claim Point, and Red Mountain in southern Alaska.

ZONED MAFIC-ULTRAMAFIC Cr-Pt (+/- Cu, Ni, Co, Ti, Fe) DEPOSIT

(Adapted from N.J Page and F. Gray's Alaskan PGE deposit, no. 9; in Cox and Singer , 1986, p.49; by Nokleberg and others, 1987, p. 6; and Brew and others, 1989, p.42)

This deposit type consists of veins and disseminations in crosscutting ultramafic to mafic plutons taht are more or less concentrically zoned. The depositional environment consists of postmetamorphic and postdeformational, intermediate-intrusion-level, mafic and(or) ultramafic plutons. Common minerals are chromite, native PGE, PGE minerals and alloys, pentlandite, pyrrhotite, bornite, chalcopyrite, and Ti-V magnetite. Examples in Alaska are the Kemuk Mountain in west-central Alaska; and Union Bay, Duke Island, Klukwan, and Snettisham, all in southeastern Alaska.

CARBONATITE DEPOSIT

(Adapted from D.A. Singer's carbonatite deposit, no. 10; in Cox and Singer , 1986, p.51; by Brew and others, 1989, p.42)

This deposit type consists of a variety of REE-bearing and other carbonate minerals in and associated with carbonatite dikes, sills, breccis, sheets, veins, and masses. The depositional environments are interpreted to be associated with multiple stages of igneous, deuteric, and metasomatic crystallization in carbonatite magma. Tectonically, most carbonatite deposits are on continental shields and are associated with fault lineaments and(or) alkaline volcanism. A wide variety of mieral may be present, including the common minerals barite,strontianite, siderite, rhodochrosite, ankerite, bastnaesite, chlorites, together with chalcopyrite, pyrite, galena, and other minerals. Alteration is commonly fenitization and, locally, chloritization. Possible examples in southeastern Alaska are Salmon Bay and Cornwallis Penir[illegible].

Sn GREISEN, REPLACEMENT Sn, Sn VEIN, Sn SKARN, W VEIN, and W SKARN DEPOSITS

(Adapted from B.L. Reed and D.P. Cox's Sn skarn, no. 14b; B.L. Reed's replacement Sn, Sn vein andSn greisen , nos. 14c, 15b and15c; D.P. Cox's W skarn, no. 14a; and D.P. Cox and W.C. Bagby's W vein, no. 14a, deposits; in Cox and Singer , 1986, p.58, 61, 67, 70, 55, and 64, respectively; by Nokleberg and others, 1987, p. 5; Brew and others, 1989, p.42-43; and this report)

The three Sn deposit types commonly occur in the same area and, in some cases, grade into one another. The Sn greisen type consists of disseminated cassiterite, cassiterite- and Sn-sulfosalt-bearing veinlets in stockworks, lenses, pipes, and breccia in greisenized biotite and(or) muscovite leucogranite emplaced in mesozonal to deep volcanic environments. Sn greisens are associated with late-stage, fractionated magmas. Other minerals include molybdenite, arsenopyrite, beryl, scheelite, and wolframite. Alteration minerals include quartz, muscovite, tourmaline, and fluorite. Examples in Alaska are the Kougarok on the Seward Peninsula and Coal Creek in southern Alaska.

The Sn vein type consists of simple to complex fissure fillings or replacements in and near felsic plutonic rocks, mainly mesozonal to hypabyssal plutons with associated dike swarms. The deposits tend to occur in or above the apices of granitic cusps and ridges. Minerals include cassiterite, wolframite, arsenopyrite, molybdenite, scheelite, and beryl. Alteration minerals are sericite, tourmaline, quartz, chlorite, and hematite. One possible example is the Lime Peak in east-central Alaska.

The Sn skam deposit type consists of Sn, W, and Be mineals in skarns, veins, stockworks, and greisen near intrusive contacts between epizonal(?) granitic plutons and limestone. Minerals include cassiterite (in some cases with scheelite), sphalerite, chalcopyrite, pyrrhotite, magnetite, and fluorite. Alteration consists of greisenization near pluton margins and metasomatic development of andradite, idocrase, amphibole, chlorite, chrysoberyl, and mica in skam. An example is the Lost River on the Seward Peninsula.

The W skarn deposit type consists of scheelite in calc-silicate skarns that replace carbonate rocks along or near contacts of quartz diorite to granite plutons. The depositional environment is along contacts and in roof pendants of batholiths and in the thermal aureoles of stocks that intrude carbonate rocks. Minerals include molybdenite, pyrrhotite, sphalerite, chalcopyrite, bornite, pyrite, and magnetite. Metasomatic replacements consist of a wide variety of calc-silicate and related minerals. Examples are in the Gilmore Dome area in east-central Alaska.

The W vein deposit type consists of massive quartz veins in swarms cutting granitic rocks or sedimentary rocks near igneous contacts. Minerals include wolframite, molybdenite, bismuthinite, pyrite, pyrrhotite, arsenopyrite, bornite, chalcopyrite, scheelite, cassiterite, beryl, and fluorite. Alteration includes chloritization and pervasive albitization in deepest zones, K-spar both pervasive and as vein selvages in higher zones, and vein selvages of dark-gray muscovite and zinnwaldite in highest zones. An example is the Riverside in southern southeastern Alaska.

Cu-Zn-Pb (+/- Au, Ag) and Fe (+/- Au) SKARN DEPOSITS

(Adapted from D.P. Cox and T.G. Theodore's Cu skarn, no. 18b; D.P. Cox's Zn-Pb skarn, no. 18c; and Fe skam, no. 18d, deposits; in Cox and Singer, 1986, p. 86, 90, and 94, respectively; by Nokleberg and others, 1987, p.5; and Brew and others, 1989, p. 43)

The Cu-Pb-Zn skarn deposit type consists of chalcopyrite, sphalerite and galena in calc-silicate skarns that replace carbonate rocks along intrusive contacts with quartz dioritic to granitic and dioritic to syenitic plutons. Zn-Pb-rich skarns tend to occur farther from, and Cu- and Au-rich skarns closer to, the intrusions. The depositional environment is mainly calacareous sedimentary sequences intruded by felsic to intermediate granitic plutons. Other minerals present include pyrite, hematite, magnetite, bornite, arsenopyrite, and pyrrhotite. Metasomatic replacement minerals are a wide variety of calc-silicate and related minerals. Examples of Cu-Zn-Pb skam deposits are the Bowser Creek, Rat Fork, Sheep Creek, and Tin Creek. Examples of Cu-Au and Au skarn deposits are the Nixon Fork-Medfra in west-central Alaska and the Jumbo in southeastern Alaska.

The Fe skarn deposit type consists of magnetite and (or) Fe sulfides in calc-silicate skarns that replace carbonate or calcareous clastic rocks along intrusive contacts with diorite, granodiorite, granite, and coeval volcanic rocks. The depositional environment is along intrusive contacts. The other main mineral present is chalcopyrite and metasomatic replacements consist of a wide variety of calc-silicate and related minerals. Examples are the Medfra in west-central Alaska, the Rambler and Nabesna in southern Alaska, and the Kasaan Peninsula deposits in southeastern Alaska.

PORPHYRY Cu, PORPHYRY Cu-Mo, and PORPHYRY Mo DEPOSITS

(Adapted from D.P. Cox 's porphyry Cu and porphyry Cu-Mo deposits, nos. 17 and 21a; and T.G. Theodore's porphyry Mo deposit, no. 21b; in Cox and Singer, 1986, p. 76, 115, and 120, respectively; by Nokleberg and others, 1987, p.5-6; and Brew and others, 1989, p. 43)

The porphyry Cu deposit type consists of chalcopyrite in stockworks veinlets in hydrothermally altered porphyry and adjacent country rock. The porphyries range in composition from tonalite to monzogranite to syenite. The depositional environment is epizonal intrusive rocks with abundant dikes, breccia pipes, cupolas of batholiths, and faults. Other minerals present are pyrite, molybdenite, magnetite, and bomite. Alteration is sodic, potassic, phyllic,argillic, and propylitic. An example is the Margerie in southeastern Alaska.

The porphyry Cu-Mo type deposit consists of stockwork veinlets of quartz, chalcopyrite, and molybdenite in or near porphyritic intermediate to felsic intrusions. The intrusions are mainly stocks and breccia pipes that intrude batholithic,volcanic, or sedimentary rocks. The depositional environment is high-level intrusive porphyries that are contemporaneous with abundant dikes, faults, and breccia pipes. Other minerals include pyrite,, sphalerite, galena, and gold. Alteration minerals are quartz, K-sfeldpar, and biotite or chlorite. Examples are the Taurus in east-central Alaska; the Orange Hill, Bond Creek, Baultoff, Horsfeld, and Carl Creek in southern Alaska; and the Pyramid on the Alaska Peninsula.

The porphyry Mo deposit type consists of quartz-molybdenite stockwork veinlets in granitic porphyry and adjacent country rock. The porphyries range in composition from tonalite to granodiorite to monzogranite The depositional environment is epizonal. Other minerals present are pyrite, scheelite, chalcopyrite, and tetrahedrite. Alteration is potassic, grading outward to propylitic, i some cases with phyllic and argillic overprint. Examples are the Bear Mountain in the northeastern Brooks Range and Quartz Hill in southeastem Alaska.

POLYMETALLIC REPLACEMENT and POLYMETALLIC VEIN DEPOSITS

(Adapted from H.T. Morris' polymetallic replacement deposit, no. 19a; and D.P. Cox's polymetallic vein deposit;i n Cox and Singer, 1986, p. 99 and 125, respectively; by Nokleberg and others, 1987, p.4; Brew and others, 1989, p. 43-44; and this report)

The polymetallic replacement type deposit consists of Ag, Pb, Zn, and Cu minerals in massive lenses, pipes, and veins in limestone, dolomite, or other soluble rock near igneous intrusions. The depositional environment is the above rock types and shale overlain by volcanic rocks and intruded by porphyritic calcalkaline plutons; situated in broad sedimentary basins. Minerals are in zones, from inward outwards: enargite, sphalerite, argentite, tetrahedrite, digenite, chalcopyrite; galena, sphalerite, argentite, tetrahedrite, proustite, pyrargyrite; sphalerite and rhodochrosite. Quartz, pyrite, barite, and marcasite are common. Alteration is silicification to jasperoid and dolomitization in carbonate rocks, and chloritization and argillization in shale and igneous rocks.

The polymetallic vein deposit type consists of quartz-carbonate veins, commonly carrying silver and gold, and with base-metal sulfides. The veins are related to hypabyssal intrusions in sedimentary and metamorphic terranes. The intrusions range in composition from calcalkaline to alkaline and also occur as dike swarms and small- to moderate-size, intermediate to felsic plutons that are locally associated with rhyolite to andesite flows. The depositional environment is near-surface fractures and breccias within thermal aureoles of the intrusions. Minerals include native gold electrum, pyrite, sphalerite, and, in some cases, chalcopyrite, galena, aresenopyrite, tetrahedrite, Ag sulfosalts,, and argentite. Alteration consists of wide prophylitic zones and narrow argillic and sericitic zones. Examples are the Independence, Golden Horn, Broken Shovel, and Beaver Creek in west-central Alaska; the Quigley Ridge, Banjo, Spruce Creek, Stampede, Cleary Summit, and Ester Dome in east-central Alaska; the Sedanka and Bonanza Hills on the Alaska Peninsula; the Golden Zone of south-central Alaska, and the Riverside-Mountain View in southeastern Alaska.

FELSIC PLUTONIC U-REE DEPOSIT

(Adapted from Nokleberg and others, 1987, p. 6; and Brew and others, 1989,p. 44)

The felsic plutonic U-REE deposit type consists ofdisseminated U, Th, and REE minerals in fissure veins and alkalic granite dikes in or along the margins of of alkalic, calcalkalic, and peralkalic granitic plutons, including granite, alkali granite, granodiorite, syenite, and monzonite. The depositional environment is the margins of epizonal to mesozonal plutons. Minerals include allanite, thorite, uraninite, bastnaesite, monazite, uranothorianite, xenotime, and, in some cases, galena and fluorite. Examples are the Mount prindle in east-central Alaska and the Bokan Mountain in southeastern Alaska.

CYPRUS MASSIVE SULFIDE DEPOSIT

(Adapted from D.A. Singer's Cyprus massive sulfide deposit, no. 24a, in Cox and Singer, 1986, p. 131; by Nokleberg and others, 1987, p. 2-3; and Brew and others, 1989,p. 44)

The Cyprus massive sulfide deposit type consists of massive sulfide minerals in pillow basalt. The depositional environment is submarine hot springs along an axial graben in oceanic or back-arc spreading ridges, or hot springs related to submarine seamount volcanoes. The pillow basalt hosts are associated with tectonized dunite, harzburgite, gabbro, sheeted diabase dikes, and fine-grained sedimentary rocks of ophiolite assemblages.Minerals present are pyrite, sphalerite, chalcopyrite, and lesser marcasite and pyrrhotite. In some cases, stringer or stockwork pyrite, pyrrhotite, chalcopyrite, and sphalerite occur below the massive sulfides. The sulfide minerals are locally brecciated and recemented. Alteration in the stringer zone is abundant quartz, chalcedony, chlorite, and some illite and calcite. Some deposits are overlain by Fe-rich and Mn-poor ochre. Examples are the Threeman, Knight Island, and Copper Bullion, all in coastal southern Alaska.

BESSHI MASSIVE SULFIDE DEPOSIT

(Adapted from D.P. Cox's Besshi massive sulfide deposit, no. 24b, in Cox and Singer, 1986, p. 136; by Nokleberg and others, 1987, p. 2; and Brew and others, 1989,p. 44)

The Besshi massive sulfide deposit type consists ofthin, sheetlike bodies of massive to well-laminated pyrite, pyrrhotite, chalcoptrite, and lesser other sulfide minerals in thinly laminated clastic sedimentary rocks and mafic tuffs. The rock types are mainly marine clastic sedimentary rocks, basaltic and lesser andesitic tuff and breccia, and local black shale and red chert. The depositional environment is uncertain, but may possibly be submarine hot springs related to basaltic volcanism. Other minerals include sphalerite, magnetite, galena,bornite, and tetrahedrite with gangue of quartz, carbonate, albite, white mica, and chlorite. Examples are the Midas, Latouche, Beatson, Ellamar, and Fidalgo, all in coastal southern Alaska.

EPITHERMAL VEIN DEPOSIT

(Adapted from Mosier and others' Creede (no. 25b), Comstock (no. 25c), and Sado (no. 25d) epithermal vein deposits; in Cox and Singer, 1986, p. 145, 150, and 154, respectively; by Nokleberg and others, 1987, p. 4; and Brew and others, 1989,p. 44-45)

The epithermal vein deposit types consist of quartz-carbonate-pyrite veins containing a wide variety of minerals, including gold, silver sulfosalts, chalcopyrite, argentite galena, sphalerite, and arsenopyrite. The veins occur in intermediate to felsic volcanic rocks, in some cases overlying older volcanic sequences or intrusive igneous rocks. The Creede type of deposit has high Pb, Zn, and Ag, low Au, and in some cases high Cu. The Sado type has high Au, moderate to low Ag, in some cases high Cu, and generally low Pb and Zn. The Comstock type is high in Au and Ag. The depositional environment is intermediate to felsic volcanic arcs and centers. Other minerals include electrum, chalcopyrite, copper and silver sulfosalts, and some tellurides and bornite. Alteration minerals include quartz, kaolinite, montmorillonite, illite, and zeolites. Examples are the Aquila, Shumagin, and Apollo-Sitka, all in the Alaska Peninsula region.

KUROKO AND SIERRAN MASSIVE SULFIDE DEPOSITS

(Adapted from D.A. Singer's Kuroko massive sulfide deposit, no. 28a; in Cox and Singer, 1986, p. 189; and D.A. Singer's Sierran massive sulfide deposit (manuscript in preparation); by Nokleberg and others, 1987, p. 2; Brew and others, 1989,p. 45; and this report)

These deposit types consist of volcanogenic massive to disseminated sulfide minerals that occur in marine felsic to inremediate volcanic flows and pyroclastic rocks and interbedded sedimentary rocks. The volcanic rocks are mainly rhyolite and dacite with subordinate basalt and andesite. The depositinal environment is mainly hot springs related to marine volcanism in island-acrc or in extensional regimes. Minerals present include pyrite, chalcopyrite, sphalerite, barite, galena, tetrahedrite, tennantite, and magnetite. Local alteration minerals are zeolites, montmorillonite, silica, chlorite, and sericite. Examples are the Arctic, Smucker, and Sun in the Brooks Range; the WTF, Red Mountain, and Delta in east-central Alaska; and the Glacier Creek, Greens Creek, Khayyam, and Orange Point in southeastern Alaska.

The Sierran massive sulfide deposit type is generally similar to the Kuroko, but consist of smaller tonnage bodies in Mesozoic rocks.

SANDSTONE U DEPOSIT

(Adapted from C. E. Turner-Peterson and C.A. Hodges' sandstone U deposit, no. 30c; in Cox and Singer, 1986, p. 209; by Nokleberg and others, 1987, p. 3; and Brew and others, 1989, p. 45)

The sandstone U deposit type consists of concentrations of U oxides and related uranium minerals i localized, reduced environments in medium- to coarse-grained feldspathic or tuffaceous sandstone, arkose, mudstone, and conglomerate. The depositional environment is continental basin margins, fluvial channels, fluvial fans, or stable coastal plains, in some cases with nearby felsic plutons or volcanic rocks. Minerals present include pitchblende, coffinite, camotite, and pyrite. An example is the Death Valley in west-central Alaska.

SEDIMENTARY EXHALATIVE Zn-Pb DEPOSIT

(Adapted from J.A. Briskey's sedimentary exhalative Zn-Pb deposit, no. 31a; in Cox and Singer, 1986, p. 211; by Nokleberg and others, 1987, p. 3; and Brew and others, 1989, p. 45)

The sedimentary exhalative Zn-Pb deposit type consists of stratiform, massive to disseminated sulfides in sheet- or lens-like tabular bodies that are interbedded with euxinic marine sedimentary rocks, including dark shale, siltstone, limestone, chert, and sandstone. The depositional environment consists of mainly marine epicratonic embayments and intracratonic basins, and smaller local restricted basins. Minerals include pyrite, pyrrhotite, sphalerite, galena, barite, and chalcopyrite. Extensive alteration may be present and include stockwork and disseminated sulfides, silica, albite, and chlorite. Examples are the Lik and Red Dog Creek in west-central Alaska.

BEDDED BARITE DEPOSIT

(Adapted from G.J. Orris' bedded barite deposit, no.31b; in Cox and Singer, 1986, p. 216; by Nokleberg and others, 1987, p. 3; and Brew and others, 1989, p. 45)

The bedded barite deposit type consists ofstratiform, massive barite interbedded with marine cherty and calcareous sedimetary rocks, mainly dark chert, shale, mudstone, and dolomite, but also with quartzite, argillite, and greenstone. The depositional environment consists of epicratonic marine embayments or basins, and smaller local restricted basins. The association of bedded barite deposits with sedimentary exhalative Zn-Pb and Kuroko massive sulfide deposits (described above) suggests that the deposits may also form in extensional and island-arc environments. Minerals include witherite, pyrite, sphalerite, and galena. Alteration consists of secondary barite veining and local, weak to moderate sericite replacement. Examples are the Nimiuktuk in the northwestern Brooks Range and Castle Island in southeastern Alaska. Minerals include pyrite, pyrrhotite, sphalerite, galena, LOW-SULFIDE Au-QUARTZ VEIN DEPOSIT

(Adapted from B.R. Berger's low-sulfide Au-quartz vein deposit, no. 36a; in Cox and Singer, 1986, p. 239; by Nokleberg and others, 1987, p. 4; and Brew and others, 1989, p. 45-46)

The low-sulfide Au-quartz vein deposit type consists of gold in massive, persistent quartz veins in regionally metamorphosed volcanic rocks, metamorphosed graywacke, chert, and shale. The depositional environment consists of low-grade metamorphic rock belts within about 10 km of a regional fault or shear zone. The veins are generally late synmetamorphic to postmetamorphic and locally cut granitic rocks. Other minerals present are pyrite, galena, sphalerite, chalcopyrite, arsenopyrite, and pyrrhotite. Examples are the Big Hurrah on the Seward Peninsula; Chandalar district in the southem Brooks Range; Willow Creek district, Nuka Bay, Monarch, Jewel, Granite, and Cliff in southern Alaska; and the Alask-Juneau, Jualin, Kensington, Sumdum Chief, Treadwell, El Nido, and Chichagoff in southeastern Alaska.

METAMORPHOSED SULFIDE DEPOSIT

(Adapted from Nokleberg and others, 1987, p. 3; and Brew and others, 1989, p. 46)

The metamorphosed sulfide deposit consists of stratiform, massive to disseminated sulfides in moderately to highly deformed and metamorphosed metavolcanic and metasedimentary rocks. The metamorphism and deformation postdate the mineralization and have obscured both the original characteristics of the deposits and of the host rocks to the extent that the original deposit type can not be determined. In general, the host rocks are felsic to mafic metavolcanic rocks and metasedimentary or metavolcanic schist and gneiss. Most of the original deposits were probably Kuroko or Sierran massive sulfide deposits. Common minerals are chalcopyrite, sphalerite, galena, bomite, pyrite, magnetite, and hematite. Alteration is obscured by the metamorphism. This deposit type has been proposed to cover massive sulfide deposits in the western metamorphic belt of the Coast plutonic-metamorphic complex in souteastem Alaska. Examples are the Sweetheart Ridge, Sumdum Glacier, Sulphide, and Moth Bay deposits.

Appendix 3. Abbreviations used in this report

Abbreviations other than mineral names:

ADGGS- State of Alaska Division of Geological and Geophysical Surveys
tr - trace
USBM - U.S. Bureau of Mines
USFS - U.S. Forest Service
USGS - U.S. Geological Survey
USNPS- U.S. National Park Service

Abbreviations for mineral, etc., names other than those in Kretz (1983):
(Asterisk indicates an abbreviation that is different than that recommended by Kretz (1983).)

Az - azurite
Fld - feldspar
Lcx - leucoxene
Mal - malachite
Mol* - molybdenite
PGE - platinum-group elements
Pnt* - pentlandite
Pow - powellite
Px - pyroxene
Pyr - pyrolusite
RA - radioactive materials
REE - rare-earth elements
REO - rare-earth oxides
Sch - scheelite
Ser - sericite
Stt* - stilbite
Td - tetrahedrite

Abbreviations for mineral names from Kretz (1983, p. 278, Table 1):
(Not all names in this list are used in this report.)

Acm	acmite	Elb	elbaite	Ntr	natrolite
Act	actinolite	En	enstatite (ortho)	Ne	nepheline
Agt	aegirine-augite	Ep	epidote	Nrb	norbergite
Ak	åkermanite	Fst	fassite	Nsn	nosean
Ab	albite	Fa	fayalite	Ol	olivine
Aln	allanite	Fac	ferroactinolite	Omp	omphacite
Alm	almandine	Fed	ferroedenite	Oam	orthoamphibole
Anl	analcite	Fs	ferrosilite (ortho)	Or	orthoclase
Ant	anatase	Fts	ferrotschermakite	Opx	orthopyroxene
And	andalusite	Fl	fluorite	Pg	paragonite
Adr	andradite	Fo	forsterite	Prg	pargasite
Anh	anhydrite	Gn	galena	Pct	pectolite
Ank	ankerite	Grt	garnet	Pn	pentlandite
Ann	annite	Ged	gedrite	Per	periclase
An	anorthite	Gh	gehlenite	Prv	perovskite
Atg	antigorite	Gbs	gibbsite	Phl	phlogopite
Ath	anthophyllite	Glt	glauconite	Pgt	pigeonite
Ap	apatite	Gln	glaucophane	Pl	plagioclase
Apo	apophyllite	Gt	geothite	Prh	prehnite
Arg	aragonite	Gr	graphite	Pen	protoenstatite
Arf	arfvedsonite	Grs	grossularite	Pmp	pumpellyite
Apy	arsenopyrite	Gru	grunerite	Py	pyrite
Aug	augite	Gp	gypsum	Prp	pyrope
Ax	axinite	Hl	halite	Prl	pyrophyllite
Brt	barite	Hs	hastingsite	Po	pyrrhotite
Brl	beryl	Hyn	haüyne	Qtz	quartz
Bt	biotite	Hd	hedenbergite	Rbk	riebeckite
Bhm	boehmite	Hem	hematite	Rds	rhodochrosite
Bn	bornite	Hc	hercynite	Rdn	rhodonite
Brk	brookite	Hul	heulandite	Rt	rutile
Brc	brucite	Hbl	hornblende	Sa	sanidine
Bst	bustamite	Hu	humite	Spr	sapphirine
Cam	Ca clinoamphibole	Ill	illite	Scp	scapolite
Cpx	Ca clinopyroxene	Ilm	ilmenite	Srl	schorl
Cal	calcite	Jd	jadeite	Srp	serpentine
Ccn	cancrinite	Jh	johannsenite	Sd	siderite
Crn	carnegieite	Krs	kaersutite	Sil	sillimanite
Cst	cassiterite	Kls	kalsilite	Sdl	sodalite
Cls	celestite	Kln	kaolinite	Sps	spessartine
Cbz	chabazite	Ktp	kataphorite	Sp	sphalerite
Cc	chalcocite	Kfs	K feldspar	Spn	sphene
Ccp	chalcopyrite	Krn	kornerupine	Spl	spinel
Chl	chlorite	Ky	kyanite	Spd	spodumene
Cld	chloritoid	Lmt	laumontite	St	staurolite
Chn	chondrodite	Lws	lawsonite	Stb	stilbite
Chr	chromite	Lpd	lepidolite	Stp	stilpnomelane
Ccl	chrysocolla	Lct	leucite	Str	strontianite
Ctl	chrysotile	Lm	limonite	Tlc	talc
Cen	clinoenstatite	Lz	lizardite	Tmp	thompsonite
Cfs	clinoferrosilite	Lo	loellingite	Ttn	titanite
Chu	clinohumite	Mgh	maghemite	Toz	topaz
Czo	clinozoisite	Mkt	magnesiokatophorite	Tur	tourmaline
Crd	cordierite	Mrb	magnesioriebeckite	Tr	tremolite
Crn	corundum	Mgs	magnesite	Trd	tridymite
Cv	covellite	Mag	magnetite	Tro	troilite
Crs	cristoballite	Mrg	margarite	Ts	tschermakite
Cum	cummingtonite	Mel	melilite	Usp	ulvöspinel
Dsp	diaspore	Mc	microcline	Vrm	vermiculite
Dg	diginite	Mo	molybdenite	Ves	vesuvianite
Di	diopside	Mnz	monazite	Wth	witherite
Dol	dolomite	Mtc	monticellite	Wo	wollastonite
Drv	dravite	Mnt	montmorillonite	Wus	wüstite
Eck	eckermannite	Mul	mullite	Zrn	zircon
Ed	edenite	Ms	muscovite	Zo	zoisite

Abbreviations (symbols) for chemical elements:

Symbol	Chemical Element(s)
Ag	Silver
As	Arsenic
Au	Gold
Ba	Barium
Be	Beryllium
Bi	Bismuth
Co	Cobalt
Cr	Chromium
Cu	Copper
F	Fluorine
Fe	Iron
La	Lanthanum
Mo	Molybdenum
Nb	Niobium
Pb	Lead
Pt	Platinum
Sb	Antimony
Sn	Tin
Sr	Strontium
Th	Thorium
Ti	Titanium
U	Uranium
V	Vanadium
W	Tungsten
Y	Yttrium
Zn	Zinc

Table 1. Mineral-deposit models used in Tongass National Forest and adjacent lands mineral-resource assessment. All models are from Cox and Singer (1986) except as noted.

Deposit model number	Model	Page numbers in Cox and Singer (1986)
Deposits related to mafic-ultramafic rocks in unstable areas		
7a	Descriptive model of synorogenic-synvolcanic Ni-Cu, by Norman J Page	24
	Grade and tonnage model of synorogenic-synvolcanic Ni-Cu, by Donald A. Singer, Norman J Page, and W. David Menzie	28
8a	Descriptive model of podiform chromite, by John P. Albers	34
	Grade and tonnage model of podiform chromite, by Donald A. Singer and Norman J Page	34
9	Descriptive model of Alaskan PGE, by Norman J Page and Floyd Gray	49
Deposits related to alkaline intrusions		
10	Descriptive model of carbonatite deposits, by Donald A. Singer	51
	Grade and tonnage model of carbonatite deposits, by Donald A. Singer	52
AP/THRE	Descriptive model of Th-RE veins, by Mortimer H. Staatz (in prep.)	
	Grade and tonnage model of Th-RE veins, by James D. Bliss and others (in prep.)	
Deposits related to felsic phanerocrystalline intrusive rocks		
14a	Descriptive model of W skarn deposits, by Dennis P. Cox	55
	Grade and tonnage model of W skarn deposits, by W. David Menzie and Gail M. Jones	55
14c	Descriptive model of replacement Sn, by Bruce L. Reed	61
	Grade and tonnage model of replacement Sn, by W. David Menzie and Bruce L. Reed	62
15a	Descriptive model of W vein deposits, by Dennis P. Cox and William C. Bagby	64
	Grade and tonnage model of W vein deposits, by Gail M. Jones and W. David Menzie	65
Deposits related to felsic porphyroaphanitic intrusions		
16	Descriptive model of Climax Mo deposits, by Stephen D. Ludington	73
	Grade and tonnage model of Climax Mo deposits, by Donald A. Singer, Ted G. Theodore, and Dan L. Mosier	73
17	Descriptive model of porphyry Cu, by Dennis P. Cox	76
	Grade and tonnage model of porphyry Cu, by Donald A. Singer, Dan L. Mosier, and Dennis P. Cox	77

[\tongass\tgsmisc1]

Table 2-AL. Summary mine, prospect, and mineral-occurrence information for Atlin quadrangle, southeastern Alaska.

(See text for complete explanation of headings. Categories in column 3 are: M = mine, P= prospect, O= occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No.,	Commodities/	Brief description	Deposit-	Reference(s)
			Latitude	Longitude	if any	resources		Type No.	

THERE ARE NO MINES, PROSPECTS, OR OCCURRENCES IN THE ATLIN QUADRANGLE.

Table 2-BC. Summary mine, prospect, and mineral-occurrence information for Bradfield Canal quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
BC001	Barnes Lake Hot Spring	N.A.	56-40-48	131-52-54	None	Geothermal	Low reservoir temperature system; discharge temp. 26 degrees C.; flow rate of all springs present > 30 l/min.	N.A.	Motyka and Moorman, 1987; Bliss, 1983, p.9-10.
BC002	Spud	P	56-28-40	131-59-00	A010214	Ag,Pb,Zn	Replacement deposit in marble.	19a	Berg, 1984, p. 77; Elliott and Koch, 1981, p.7.
BC003	Copper King	P(?)	56-28-10	131-58-45	A010213	Ag,Au,Cu,Pb, Zn	Sulfide-bearing vein reported to contain Cu, Pb, Zn, Au, Ag.	22c	Berg, 1984, p. 77; Elliott and Koch, 1981, p.7.
BC004	Cone Mountain	P	56-30-50	131-44-00	A010211	U(?),Th(?), REE(?)	Late Tertiary alkali granite stock has associated Ag, Be, Mo, Nb, Pb, Sn, Y, REE stream-sediment, panned-concentrate, and bedrock geochemical anomalies.	FP/UREE (?), FP/THRE (?)	Berg, 1984, p. 77; Elliott and Koch, 1981, p.7.
BC005	North Bradfield River	P	56-23-10	131-23-25	None!	Cu,Fe	Crudely stratiform deposit up to 12 m thick in marble and paragneiss screen in Qtz monzonite contains Mag, Po, Ccp; deposit probably contains 50 to 65% Fe, 0.1 to 0.5% Cu. Reserves: USBM has inferred estimate, but it is not yet available.	18d	Berg, 1984, p. 78; Elliott and Koch, 1981, p.8; Sonnevil, 1981.
BC006	Craig	P(?)	56-27-55	131-16-00	A010216	Cu	Metasedimentary rocks contain disseminated Ccp, Py, Po; Ccp also in thin veinlets; skarn float contains Mag, Ccp.	?	Berg, 1984, p. 79; Elliott and Koch, 1981, p.8.
BC007	Bradfield Canal Hot Spring	N.A.	56-13-54	131-16-12	None	Geothermal	Intermediate reservoir temperature system; discharge temp. 57 degrees C.; flow rate < 40 l/min.	N.A.	Motyka and Moorman, 1987; Bliss, 1983, p.14.
BC008	79SK762	O	56-07-00	131-10-15	None	Mo	Small irregular pods of Grt-Di skarn contain 1.0% disseminated Mol.	18c(?)	Berg, 1984, p. 78; Elliott and Koch, 1981, p.8.
BC009	79MH089	O	56-23-15	131-59-00	A010204	Mo	Aplite rubble contains up to about 5% disseminated Mol.	21b(?)	Berg, 1984, p. 79; Elliott and Koch, 1981, p.8.
BC010	Unuk River	O(?)	56-20-00	131-46-10	A010217	Cu	60 cm wide vein contains Py, Po, Ccp.	?	Berg, 1984, p. 79; Elliott and Koch, 1981, p.8.
BC011	Gracey Creek Glacier	O	56-11-06	130-37-40	None	Ag	Qtz-Ep veinlets in Hbl gneiss contain up to 2.0 ppm Ag.	?	Berg, 1984, p. 79.
BC012	Joker	P(?)	56-12-05	130-27-15	A010208	Mo(?)	Qtz-Cal fissure veinlets in schist contain Py, Mol(?); Fe stain near aplite dikes that cut schist.	?	Berg, 1984, p. 79; Elliott and Koch, 1981, p.8.
BC013	Goat	P	56-01-25	130-25-35	None	Ag,Au,Cu	Qtz-Cal veins up to 15 cm thick in hornfelsed graywacke contain Po, Ccp, Au, Ag.	22c(?)	Berg, 1984, p. 80; Elliott and Koch, 1981, p.9.
BC014	Cub	P	56-01-15	130-25-05	A010210	Cu	Qtz-Cal veins up to 15 cm thick in banded hornfels and argillite contain Po, Ccp.	22c(?)	Berg, 1984, p. 80; Elliott and Koch, 1981, p.9.
BC015	Chickamin Glacier Snout	P	56-02-50	130-23-35	A010205	Ag,Au,Cu,Pb	Qtz pod in Fe-stained metagraywacke contains Po, Ccp; sample of richest rock contained 1,200 ppm Cu, 1.5 ppm Ag.	22c(?)	Berg, 1984, p. 80;
BC016	Glacier	P	56-02-30	130-23-55	None	Ag,Au,Cu,Pb	Qtz fissure veins up to 30 cm thick in graywacke, andesite, and lamprophyre dikes contain Py, Po, Ccp, Gn; assays showed 0.04 oz/T Au, 6.0 oz/T Ag.	22c(?)	Berg, 1984, p. 80; Elliott and Koch, 1981, p.9.
BC017	Marmot Basin	P	56-01-30	130-21-00	A010199	Ag,Au,Cu,Mo, Pb,Zn	Qtz veins up to 45 cm thick and massive sulfide stringers up to 15 cm thick in hornfels, phyllite, and schist intruded by dikes contain Py, Mol, Gn, Sp, Ccp; samples contained up to 5.8 oz/T Ag, tr Au.	22c(?)	Berg, 1984, p. 80; Elliott and Koch, 1981, p.9.

Table 2-BC. Summary mine, prospect, and mineral-occurrence information for Bradfield Canal quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No.,	Commodities/	Brief description	Deposit-Type No.	Reference(s)
			Latitude	Longitude	if any	resources			
·BC018	Edelweiss Basin	P	56-01-30	130-21-00	A010200	Ag,Au,Pb	Qtz fissure vein in "bedded" rocks contains Gn, Py; selected sample contained 1.55 oz/T Au, 10.2 oz/T Ag. Reserves: USBM has inferred estimate, but it is not yet available.	22c	Berg, 1984, p. 81; Elliott and Koch, 1981, p.9.
BC019	Jumbo, Banded Mountain	P	56-01-10	130-21-00	A010201	Mo,Pb	Qtz fissure veins 15 to 60 cm thick in graywacke contain Py, Gn, Mol.	22c(?)	Berg, 1984, p. 81; Elliott and Koch, 1981, p.10.
BC020	Galena	P	56-02-15	130-20-15	A010202	Ag,Cu,Mo,Pb, Zn	Qtz fissure veinlets in hornfels contain Py, Gn, Mol, Sp, Ccp; composite samples contained 8.7 oz/T Ag, 0.05% Mo, 0.65% Pb, 0.20% Zn, 0.03% Cu.	22c(?)	Berg, 1984, p. 81; Elliott and Koch, 1981, p.10.
BC021	Greenpoint	P	56-01-30	130-19-45	A010309	Ag,Cu,Mo,Pb	Qtz-Cal fissure veins up to 15 cm thick in hornfels contain Py, Mol, Gn, Ccp; samples contained up to 30 ppm Ag. Reserves: USBM has inferred estimate, but it is not yet available.	22c(?)	Berg, 1984, p. 81; Elliott and Koch, 1981, p.10.
BC022	Heckla	M*	56-00-45	130-19-45	A010220	Ag,Au,Cu,Mo, Pb,Zn	Qtz fissure veins up to 1.5 m thick in hornfelsed graywacke contain Py, Po, Gn, Sp, Mol, Ccp, Dg, Cv, Mal; selected sample contained 0.08 pz/T Au, 53.4 oz/T Ag, 21.6% Pb, 32.1% Zn, 4.1% Cu. Production: one T ore shipped in 1925. Reserves: USBM has inferred estimate, but it is not yet available.	22c	Berg, 1984, p. 81; Elliott and Koch, 1981, p.10.
BC023	Swennings Greenpoint	P	56-00-55	130-17-30	A010308	Ag,Mo,Pb	Qtz veins in hornfels at contact with Qtz monzonite contain "knots" of Gn, Mol; samples contained up to 4.0% Pb, 0.1% Zn, 0.2% Mo, 100 ppm Ag. Reserves: USBM has inferred estimate, but it is not yet available.	22c(?)	Berg, 1984, p. 84; Elliott and Koch, 1981, p.12.
BC024	Hummel Canyon	P	56-02-40	130-17-30	A010198	Ag(?)	Py-bearing siliceous zone in layered hornfels. Reserves: USBM has inferred estimate, but it is not yet available.	?	Berg, 1984, p. 83; Elliott and Koch, 1981, p.12.
BC025	Cathedral	P	56-04-30	130-17-05	A010194	Ag,Au,Cu,Pb, Zn	Qtz veins up to 2 m thick in graywacke contain layers of Sp, Gn, Py, Po, Ccp; samples contained up to 20.4 oz/T Ag, tr Au.	22c(?)	Berg, 1984, p. 82; Elliott and Koch, 1981, p.11.
BC026	Marietta	M*	56-04-35	130-15-30	A010193	Ag,Au,Cu,Pb	Au-bearing Qtz(?) or sulfide-bearing(?) fissure veins beneath glacier. Production: 300 to 400 oz Au and electrum produced before WWII.	?	Berg, 1984, p. 83; Elliott and Koch, 1981, p.11.
BC027	Chickamin	P	56-04-15	130-16-20	A010192	Cu,Pb,Zn	Qtz fissure veinlets in graywacke contain Gn, Sp, Ccp, Py, Po, Td.	22c(?)	Berg, 1984, p. 82; Elliott and Koch, 1981, p.11.
BC028	Silver King	P	56-04-05	130-16-00	A010191	Ag,Au,Cu,Pb, Zn,Brt	Qtz fissure vein 15 to 75 cm thick in graywacke and slate contains 5 to 20 cm zone of massive Sp, Gn, Py, Ccp, Td, Apy, Brt; sample reported to have contained 1.28 oz/T Au, 5.96 oz/T Ag, 55.2% Pb, 2.2% Cu.	22c	Berg, 1984, p. 83; Elliott and Koch, 1981, p.11.
BC029	Double Anchor	P	56-03-45	130-15-30	A010189	Ag,Au,Cu,Pb, Zn	Qtz breccia zones in graywacke and argillite contain Py, Gn, Sp, Ccp, Po; reported contain 3.5 oz/T Ag, 0.022 oz/T Au. Reserves: USBM has inferred estimate, but it is not yet available.	?	Berg, 1984, p. 82; Elliott and Koch, 1981, p.11.
BC030	Stampede	P	56-03-45	130-16-15	A010203	Ag,Au,Cu,Pb, Zn	Qtz fissure veins and sulfide stringers in brecciated graywacke , slate, and aplite contain Gn, Sp, Ccp, Ag, Au.	?	Berg, 1984, p. 82; Elliott and Koch, 1981, p.12.
BC031	Lake	P	56-03-25	130-16-25	A010197	Cu,Pb	Qtz fissure vein about 15 cm thick in graywacke contains Gn, Py, Ccp.	?	Berg, 1984, p. 83; Elliott and Koch, 1981, p.12.
BC032	Blasher	P	56-03-20	130-15-55	A010195	Ag,Au,Cu,Mo.	Qtz vein 12 to 61 cm thick in siliceous	22c(?)	Berg, 1984, p. 83;

Table 2-BC. Summary mine, prospect, and mineral-occurrence information for Bradfield Canal quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
						Pb,Zn	hornfels and Qtz monzonite contains Ccp, Gn, Po, Sp, Py, Mol. Reserves: USBM has inferred estimate, but it is not yet available.		Elliott and Koch, 1981, p.12.
BC033	Morning	P	56-03-10	130-16-05	A010196	Pb	Qtz vein 0.6 to 1.3 m thick in granodiorite contains Py, Gn.	?	Berg, 1984, p. 83; Elliott and Koch, 1981, p.12.
BC034	Texas Creek Comstock	P	56-02-30	130-15-05	A010307	Ag,Au,Cu,Mo, Pb,Zn,Brt	Qtz-Brt-Cal fissure veins in Qtz diorite and in graywacke and tuff contain Gn, Py, Ccp, Sp, Po, Td, Mol; samples contained 3.6 to 16.9 oz/T Ag, tr to 0.18 oz/T Au.	22c	Berg, 1984, p. 84; Elliott and Koch, 1981, p.13.
BC035	Keno	P	56-01-50	130-13-55	A010240	Ag,Au,Cu,Mo, Pb,Zn,Brt	Qtz-Brt fissure veins in granodiorite contain masses up to 18 cm thick of Gn, Py, Ccp, Sp, Td; one sample contained 0.6 oz/T Au, 3.0 oz/T Ag. Reserves: USBM has inferred estimate, but it is not yet available.	22c(?)	Berg, 1984, p. 84; Elliott and Koch, 1981, p.13.
BC036	Juneau	P	56-01-30	130-12-50	A010243	Cu,Pb	Qtz veins 1 to 2 m thick in granodiorite contain Gn, Py, Ccp.	?	Berg, 1984, p. 84; Elliott and Koch, 1981, p.13.
BC037	Sunset	P	56-01-20	130-12-35	A010238	Pb	Qtz veins up to 1 m thick in granodiorite locally have lenses up to 4 m long of massive Py, Gn, Brt.	?	Berg, 1984, p. 84; Elliott and Koch, 1981, p.13.
BC038	Northstar	P	56-02-50	130-13-20	A010241	Pb	Qtz fissure vein up to 75 cm thick in graywacke near contact with granodiorite contains small masses of Gn, Py.	?	Berg, 1984, p. 85; Elliott and Koch, 1981, p.13.
BC039	Engineer	P	56-02-40	130-13-05	A010237	Ag,Au,Cu,Pb, W	Qtz vein 60 to 130 cm thick in granodiorite contains sparse Sch and small masses of Gn, Ccp, Py; samples of masses contained 0.04 to 0.64 oz/T Au, 7.6 to 26.0 oz/T Ag, 11.3 to 55.3% Pb.	22c(?)	Berg, 1984, p. 85; Elliott and Koch, 1981, p.13.
BC040	Jumbo, Texas Creek	P	56-03-10	130-12-25	A010242	Cu,Pb,Zn	Qtz veins up to 60 cm thick in intersecting fault zones and breccias in graywacke roof pendant in granodiorite contain Gn, Py, Ccp, Sp; some disseminated Py, Ccp in country rocks. Reserves: USBM has separate inferred estimates for the Jumbo and the Texas Creek, but they are not yet available.	?	Berg, 1984, p. 85; Elliott and Koch, 1981, p.13.
BC041	Iron Cap	P	56-04-05	130-12-50	A010243	Ag,Au,Cu,Zn	Qtz and sulfide fissure veins up to 60 cm thick in a 3.4 m wide zone of slate and graywacke above contact with granodiorite contains Po, Ccp, Sp, Apy; one sample contained 0.04 oz/T Au, 6.28 oz/T Ag, 2.0% Cu.	22c(?)	Berg, 1984, p. 86; Elliott and Koch, 1981, p.14.
BC042	Silver Bell	P	56-04-30	130-12-10	A010244	Ag(?),Au,Cu, Zn	Qtz fissure vein up to 60 cm thick in brecciated argillite and graywacke contains disseminated and small masses of Py, Ccp, Gn, Sp, Td.	22c(?)	Berg, 1984, p. 86; Elliott and Koch, 1981, p.14.
BC043	Texas Discovery	P	56-03-50	130-11-50	A010282	Ag,Au,Cu,Pb	Qtz fissure vein up to 35 cm thick in granodiorite contains Py, Gn, Po, Ccp; selected sample reported to have contained 30.0% Pb, about 1.06 oz/T Au, some Ag.	22c(?)	Berg, 1984, p. 86; Elliott and Koch, 1981, p.14.
BC044	Silver Star	P	56-04-15	130-11-30	A010283	Au,Pb,Zn	Qtz veins and veinlets in granodiorite and argillite contain Gn, Py, Sp, Po, Apy, freibergite; selected sample reported to have contained 1.0 oz/T Au.	22c(?)	Berg, 1984, p. 86; Elliott and Koch, 1981, p.14.
BC045	Ibex	P	56-04-35	130-10-50	A010251	Au,Cu,Pb,Zn	Qtz fissure vein up to 60 cm thick in argillite, quartzite, and in granite porphyry and granodiorite dikes contains Sp, Gn, Py, Ccp, Td; selected samples reported to have had high Au, Cu, and Pb values.	22c(?)	Berg, 1984, p. 87; Elliott and Koch, 1981, p.14.
BC046	Silver Coin	P	56-04-40	130-10-00	A010252	Cu,Pb	Qtz fissure vein up to 1.5 m thick in grano-	?	Berg, 1984, p. 87;

Table 2-BC. Summary mine, prospect, and mineral-occurrence information for Bradfield Canal quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							diorite contains Gn, Py, Ccp.		Elliott and Koch, 1981, p.14.
BC047	Homestake	M	56-04-30	130-10-10	A010245	Ag,Au,Cu,Pb, Zn	Qtz fissure vein up to 1.5 m thick in granodiorite contains Gn, Py, Ccp, Sp. Production: early 1900's test shipment contained 50.0% Pb, 0.7% Zn, 22.87%5 oz/T Ag, 0.29 oz/T Au; sorted ore. , Reserves: USBM has inferred estimate, but it is not yet available.	22c	Berg, 1984, p. 87; Elliott and Koch, 1981, p.14.
BC048	Evening Star	P	56-04-10	130-10-15	A010250	Pb	Stringer of Gn in granodiorite.	?	Berg, 1984, p. 86; Elliott and Koch, 1981, p.14.
BC049	Nothiger	P	56-03-05	130-10-40	A010249	Pb	Qtz fissure veins up to 2 m thick in granodiorite contain Gn, Py.	?	Berg, 1984, p. 87; Elliott and Koch, 1981, p.15.
BC050	Liberty	P	56-03-15	130-10-15	A010248	Pb	Qtz vein up to 60 cm thick in granodiorite contains small masses of Gn.	?	Berg, 1984, p. 87; Elliott and Koch, 1981, p.15.
BC051	Silver Bar	P	56-03-40	130-08-40	A010247	Cu,Pb,Brt	Qtz fissure vein up to 1 m thick in granodiorite locally contains small masses of Ccp, Gn, Py, Brt.	22c(?)	Berg, 1984, p. 87; Elliott and Koch, 1981, p.15.
BC052	Bartholf	P	56-05-15	130-04-10	A010246	Cu,Pb	Qtz vein up to 30 cm thick in granodiorite contains disseminations and small masses of Ccp, Py, Gn.	22c(?)	Berg, 1984, p. 88; Elliott and Koch, 1981, p.15.
BC053	Cantu	M	56-04-35	130-03-50	A010218	Ag,Au,Cu,Pb, Zn,Brt	Qtz veins up to 1 m thick in granodiorite cut by Qtz porphyry dikes contain Gn, Sp, Td, Py, Ccp, Brt. Production: test shipment of best ore in 1925 contained 0.175 to 0.30 oz/T Au, 13.8 to 31.05 oz/T Ag, 37.2 to 44.1% Pb, 5.6 to 12.2% Zn. Reserves: USBM has inferred estimate, but it is not yet available.	22c	Berg, 1984, p. 88; Elliott and Koch, 1981, p.15.
BC054	Charles, Nelson, and Pitcher	P	56-03-15	130-04-05	A010224	Ag,Au,Cu,Pb, Zn	Sp, Gn, Py, Ccp disseminated in sheared silicified porphyry; small amounts of Au, Ag reported in samples.	?	Berg, 1984, p. 88; Elliott and Koch, 1981, p.15.
BC055	Gold Cliff Premier	P	56-03-10	130-02-40	A010224	Ag,Au,Cu,Pb, Zn	Qtz-Cal veins in Py-bearing sheared hornfels and slate cut by porphyry dikes contain Gn, Sp, Ccp, Td, Po; early 1900's assays reported to be up to 1.0 oz/T Au, 4.0 oz/T Ag.	22c(?)	Berg, 1984, p. 89; Elliott and Koch, 1981, p.16.
BC056	Ninety-six	P	56-02-35	130-04-00	A010221	Cu,Pb,Zn	1.6 m thick Qtz breccia vein in granodiorite dike in slate and quartzite contains Gn, Sp, Td, Py, Ccp. Reserves: USBM has inferred estimate, but it is not yet available.	?	Berg, 1984, p. 88; Elliott and Koch, 1981, p.15.
BC057	Border	P	56-02-45	130-02-10	A010223	Cu,Pb,Zn	Qtz fissure veins in slate and graywacke between granodiortie and porphyry dikes contain Qtz and up to 15 cm thick masses of Gn, Sp, Py, Ccp.	22c(?)	Berg, 1984, p. 88; Elliott and Koch, 1981, p.15.
BC058	Virginia	P	56-02-25	130-02-30	A010225	Au,Cu,Pb,Zn	Lenticular body of massive sulfide a few m wide in greenstone contains Po, Sp, Py, Gn, Td in Qtz gangue; selected samples contained up to 4.5 oz/T Au; greenstone nearby contains disseminated Gn, Py, Sp, Ccp, Po. Reserves: USBM has inferred estimate, but it is not yet available.	24a(?)	Berg, 1984, p. 92; Elliott and Koch, 1981, p.16.
BC059	Lower Daly-Alaska	M	56-01-55	130-02-35	A010305	Ag,Au,Cu,Pb, Zn	Qtz-Cal veinlets and sulfide stringers in shear or breccia zone in altered and silicified greenstone; sulfides are Po, Sp, Gn, Py, Td, Ccp; high Ag values reported to be present. Reserves: USBM has inferred estimate, but	?	Berg, 1984, p. 90; Elliott and Koch, 1981, p.16.

Table 2-BC. Summary mine, prospect, and mineral-occurrence information for Bradfield Canal quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to table 1 and to Cox and Singer (1986).

1 Map No.	2 Name	3 Category	4 Location Latitude	Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							it is not yet available.		
BC060	Stoner	P	56-02-05	130-01-45	A010226	Ag,Au,Pb,Zn	Qtz-Cal veins and disseminated sulfides in greenstone; also Qtz fissure veins at or near contacts between slate and granitic dikes; also sulfide seams, disseminations, and fracture coatings in Qtz porphyry dikes; sulfides present are Py, Sp, Gn, Td, Ccp; early 1900's report of up to 0.5 oz/T Au, 20.5 oz/T Ag. Reserves: USBM has inferred estimate, but it is not yet available.	?	Berg, 1984, p. 91; Elliott and Koch, 1981, p.16.
BC061	Stoner-Clegg-O'Rourke	P	56-01-55	130-02-00	A010227	Cu,Pb,Zn	Cal veinlets in greenstone contain Sp, Py, Gn, Po, Ccp, Td; also disseminated Py, Po in greenstone.	?	Berg, 1984, p. 91; Elliott and Koch, 1981, p.16.
BC062	Upper Daly-Alaska	M	56-01-45	130-02-15	A010306	Ag,Au,Cu,Pb, Zn	Fracture zones in silicified and locally Ca-bearing greenstone, tuff, Qtz porphyry contain disseminated Py, Cal veinlets, Qtz-filled gash veinlets, and layers and masses of sulfides; sulfides are Sp, Gn, Py, Td, Ccp, Po, Apy.	?	Berg, 1984, p. 90; Elliott and Koch, 1981, p.17.
BC063	Alaska-Premier, north workings	P	56-01-35	130-02-30	A010228	Ag,Au,Cu,Pb, Zn	Qtz veinlets in sheared and altered felsite in greenstone, slate, and graywacke contain Py, Sp, Gn, Ccp, Po; high Au values reported for selected samples; shear zone contains Py, Gn, Sp, Ccp, Td, Po, Apy. Reserves: USBM has inferred estimate, but it is not yet available.	?	Berg, 1984, p. 90; Elliott and Koch, 1981, p.17.
BC064	Cripple Creek	P	56-01-30	130-04-00	A010229	Cu,Pb,Zn	Large Qtz vein in granodiorite, breccia with Qtz veinlets in Py-impregnated granodiorite, and several fissure zones in granodiorite all contain Py, Gn, Sp, Ccp, Td. Reserves: USBM has inferred estimate, but it is not yet available.	?	Berg, 1984, p. 89; Elliott and Koch, 1981, p.17.
BC065	Portland	P	56-01-20	130-03-10	A010230	Cu,Pb,Zn	Qtz vein about 1 m thick in slate contains disseminations and small blebs of Py, Gn, Sp, Ccp.	22c(?)	Berg, 1984, p. 91; Elliott and Koch, 1981, p.17.
BC066	Hobo	P	56-01-15	130-02-40	A010233	Ag,Au,Cu,Pb, Zn	Qtz and sulfide fissure or replacement veins in greenstone(?) contain Py, Po, Sp, Ccp, Gn, Apy; selected sample contained 0.2 to 0.58 oz/T Au. Reserves: USBM has inferred estimate, but it is not yet available.	?	Berg, 1984, p. 90; Elliott and Koch, 1981, p.17.
BC067	Butte-Brigadier	P	56-01-00	130-04-00	A010231	Ag,Au,Pb,W	Qtz veins up to 1 m thick in granodiorite contain Au, Ag, Gn, Py, Sch; two samples contained 11.4 to 14.1% Pb, 0.24 to 0.6 oz/T Au, 10.2 to 20.6 oz/T Ag.	22c(?)	Berg, 1984, p. 90; Elliott and Koch, 1981, p.17.
BC068	Crest	P	56-01-00	130-03-45	A010232	Au,Cu,Pb	Qtz veins and stringers in fissure zone in granodiorite contain Gn, Py, Ccp, Au; granodiorite locally contains disseminated Py; samples of some Qtz stringers contained up to 5 oz/T Au. Reserves: USBM has inferred estimate, but it is not yet available.	20c(?)	Berg, 1984, p. 89; Elliott and Koch, 1981, p.18.
BC069	Bluebird	P	56-00-55	130-03-15	A010234	Cu,Pb,Mo,W	Qtz vein 10 cm thick in granodiorite contains disseminated Py, Ccp, Sch, Mol; one sample contained an estimated 0.5% WO3.	22c(?)	Berg, 1984, p. 89; Elliott and Koch, 1981, p.18.
BC070	Alaska-Premier, south workings	P(?)	56-00-40	130-02-30	A010219	Ag,Au,Cu,Pb, W,Zn	Sch reported; see BC063 for general description.	?	Berg, 1984, p. 90; Elliott and Koch, 1981, p.18.
BC071	Hyder Skookum	P	56-00-40	130-02-10	A010235	Cu	Massive sulfide body in greenstone near contact with porphyry dike contains Po, Ccp, Apy. Reserves: USBM has inferred estimate, but it is not yet available.	?	Berg, 1984, p. 93; Elliott and Koch, 1981, p.18.

Table 2-BC. Summary mine, prospect, and mineral-occurrence information for Bradfield Canal quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
BC072	Titan	P	56-00-40	130-01-20	A0102236	Ag,Au,Cu,Pb, Zn	Qtz veins up to 60 cm thick in a shear zone in an altered Py-bearing porphyry dike contain Sp, Gn, Py, Ccp; selected samples reported to have contained Au, Ag; shear zone in nearby greenstone contains Apy, Gn. Reserves: USBM has inferred estimate, but it is not yet available.	20c(?)	Berg, 1984, p. 94; Elliott and Koch, 1981, p.18.
BC073	Monarch	P	56-00-25	130-03-20	A010304	Ag,Au,Cu,Pb, W,Zn,Brt	Qtz veins in granodiorite contain sparse Sch and, locally, Brt and masses of Gn, Py, Td, Sp, Ccp; samples from one vein contained up to 1.5 oz/T Au.	22c(?)	Berg, 1984, p. 93; Elliott and Koch, 1981, p.19.
BC074	Riverside	M	56-00-10	130-04-10	A010314	Ag,Au,Cu,Pb, W,Zn	Qtz fissure vein and replacement deposits in Texas Creek granodiorite contain Sch, Gn, Py, Td, Po, Ccp, Sp, Au. Production: from 1925 to 1951 was about 30,000 T with 3,000 oz Au, 100,000 oz Ag, 100,000 lbs Cu, 250,000 lbs Pb, 20,000 T Zn, 3,500 units (70,000 lbs.) WO3. (70,000 lbs) WO3. Reserves: USBM has inferred estimate, but it is not yet available.	22c, 19a	Berg, 1984, p. 92; Elliott and Koch, 1981, p.20.
BC075	Fish Creek	M	56-00-10	130-02-40	A010187	Ag,Au,Cu,Pb, Zn	Massive sulfide body in greenstone contains mainly Po, also Py, Apy, Ccp, Qtz; samples contained 0.36 oz/T Au, 4.0 oz/T Ag; also a Qtz fissure vein up to 3 m thick in granodiorite contains disseminations and stringers of massive Td, Ccp, Apy; early 1900's samples contained up to 1.42 oz/T Au, 94.8 oz/T Ag, 14.5% Pb, 2.0% Cu. Reserves: USBM has inferred estimate, but it is not yet available.	?, 22c	Berg, 1984, p. 93; Elliott and Koch, 1981, p.19.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No., if any	Commodities/ resources	Brief description	Deposit-Type No.	Reference(s)
			Latitude	Longitude					
CR001	Coronation island	M*	55-54-50	134-19-50	A010072	Pb,Zn	Small lenticular mases of Gn, Sp, some secondary Pb, Zn minerals occur along fault zone in Silurian carbonate rocks. Production: >100 T ore shipped in early 1900's.	19a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.95.
CR002	Tokeen	P; Quarry*	55-59-45	133-27-00	A010063	Pb; marble	Small Gn vein near contact of diorite body with Silurian limestone/marble; marble di- Production: none from vein; marble dimension stone quarried near vein locality and also 1.6 to 2.3 km S between 1900 and 1930.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.95; Burchard, 1920, p.66-67.
CR003	McCullough	M*	55-58-40	132-59-50	A010002	Cu,Zn	Qtz breccia vein in graywacke and argillite contains Ccp, Py, Sp; samples contained 0.7 to 3.3% Cu. Production: small test shipment reported.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.96.
CR004	Noyes Island, loc. 1	P	55-33-00	133-42-00	None	Cu,Mo(?)	Diamond-drill core evidence indicates that hornfelsed andesite contains disseminated and irregular masses of Ccp, Py, Mol(?); altered Qtz monzonite intersected by some drill holes; Fe-stained, Py-bearing rocks at surface nearby.	21a(?)	D.J. Grybeck, 1989, unpub. data.
CR005	Noyes Island, loc. 2	O	55-31-40	133-38-05	A010032	Cu,Mo,Ni	Qtz vein reported at contact of granite pluton and bedded Paleozoic rocks contains Ccp, Po; recent work, however, indicates that no pluton is present in the area.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.96.
CR006	Saint Nicholas Channel	O	55-29-00	133-38-00	None	Cu	Qtz lens in argillite contains Ccp.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.96.
CR007	Cape Addington	O	55-27-25	133-48-50	A010173	Ag,Cu	Irregular skarn masses occur in Heceta Limestone within a few m of the contact with a Qtz monzonite to granodiorite pluton; selected samples with Ccp contain up to 50 ppm Ag.	18b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.96.
CR008	Dalton Hot Springs	N.A.	55-20-03	133-38-27	N.A.	Geothermal	Thermal springs associated with granitic intrusive rocks of unknown age; dominant bedrock is Ordovician to Silurian sedimentary rock.	N.A.	Motyka and Moorman, 1987.
CR009	Port San Antonio	P	55-21-20	133-38-30	A010066	Au,Pb,Zn	Qtz veinlet stockwork in argillite contains Sp, Gn, Py; high(?) Au values reported.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.97.
CR010	Baker Island	P	55-19-20	133-34-35	A010155	Au(?),Mo	Qtz veinlets in intensely silicified and brecciated zones in Qtz diorite contain Mol.	21b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.97.
CR011	Cape Chirikof, SE of	O	55-16-00	133-38-00	A010179	Cu	Ccp,Fe sulfides occur in clastic sedimentary rocks.	30b(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.97.
CR012	Saint Ignace	O	55-25-30	133-25-20	A010033	Brt	Narrow stringers of white Brt occur in sand-	?	D.J. Grybeck, 1989,

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
	Island						stone and conglomerate.		unpub. data; Berg, 1984, p.96.
CR013	San Juan Bautista Island, loc. 1	P	55-24-20	133-18-00	A010177	Cu	Skarn near contact with granodiorite contains Ccp; veins below contact contain Sp, Po, gudmundite (FeSbS); slighty altered granodiorite contains disseminated Ccp.	18b(?) or 18c(?); 22c; 17	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.97.
CR014	San Juan Bautista Island, loc. 2	O	55-25-35	133-15-20	A010175	Cu	Diorite contains minor disseminated Py, Ccp.	17	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.97.
CR015	Klawak Lake	O	55-29-48	132-56-06	None	Cu(?)	Prominent roadcrop of orange rhyolite contains disseminated Py, minor Ccp.	?	D.J. Grybeck, 1989, unpub. data.
CR016	Saxe	P	55-29-30	132-59-30	A010152	Ag,Au,Cu,Pb, Zn	Qtz-carbonate vein 60 cm wide in andesite porphyry breccia contains Gn, Py, Sp, Ccp; samples contained up to 0.07 oz/T Au, 1.96 oz/T Ag.	?	D.J. Grybeck, 1989, unpub. data.
CR017	Klawak Lake, NE of	P	55-30-18	132-52-30	None	Mo(?)	Diamond-drill-hole site in Silurian and(or) Ordovician Andesite porphyry breccia unit; target reported to be a porphyry Mo system.	21b	D.J. Grybeck, 1989, unpub. data.
CR018	Black Bear Lake	O	55-31-00	132-50-10	None	Cu	Veins, joint coatings, disseminations of Po, Ccp, Bn(?) in diorite or altered andesite.	?	Berg, 1984, p.98.
CR019	Independent	P	55-31-45	132-50-10	A010055	Au,Cu,Pb,Zn	Qtz vein 30 cm wide in altered and graywacke contains Ccp, Gn, Sp; high Au values reported; location approximate.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.99.
CR020	Constitution	P	55-32-25	132-48-10	A010031	Au,Cu,Pb,Zn	Qtz vein crosscutting gabbro and amphibolite contains Py, Ccp, Gn, Sp; Au values to 9.7 oz/T reported.	36a(?), 22c(?)	D.J. Grybeck, 1989, unpub. data.
CR021	Pin Peak	O	55-31-00	132-50-00	None	Cu,Mo	Disseminated(?) sulfide minerals in diorite.	?	Berg, 1984, p.98.
CR022	Gervis	P	55-31-05	132-49-15	A010107	Au(?)	Au-bearing(?) Qtz vein near Lucky Nell mine (CR023); may actually be the same as the Lucky Nell.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.100.
CR023	Lucky Nell	M*	55-30-36	132-48-42	A010074	Ag,Au,Cu,Pb, Zn	Qtz veins up to 1.3 m thick in diorite porphyry contain abundant Py, Apy, Gn; Au values to several oz/T reported. Production: probably <100 T ore.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.100.
CR024	Dew Drop(?)	P	55-31-05	132-47-20	A010037	Ag,Au	Qtz(?) fissure vein 15 to 35 cm thick along fault in basic intrusive rock reported to contain Au, Ag.	22c(?)	Berg, 1984, p.99.
CR025	Harris River	O	55-27-50	132-48-35	A010174	Cu	Greenstone contains disseminated(?) Py, Ccp.	23(?)	D.J. Grybeck, 1989, unpub. data.
CR026	Granite Mountain, W of	P	55-30-55	132-44-05	A010184 (?)	Cu,Pb	30 m wide zone in black slate and argillite contains numerous Py-Qtz lenses and thin Qtz-carbonate veins that contain Po, Ccp, Gn.	?	Berg, 1984, p.103.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
CR027	Copper (Granite Mountain)	P(?)	55-32-00	132-41-00	None	Au	Qtz fissure veins in granitic pluton contain sulfides, Au.	22c	Berg, 1984, p.105.
CR028	Bendigo	P(?)	55-31-45	132-42-00	A010121	Au	Qtz fissure veins in granitic pluton contain sulfides, Au.	22c	Berg, 1984, p.105.
CR029	Buckhorn, etc., loc. 1	P	55-31-40	132-41-00	A010001	Au(?),Pb,Zn	Qtz veins in granite contain Py, Gn, Sp; some veins associated with diabase dikes.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.103.
CR030	Go-By	P	55-33-20	132-41-15	A010106	Au(?),Pb,Zn	Qtz veins in granite contain Py, Gn, Sp; some veins associated with diabase dikes.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.104.
CR031	Juneau	P	55-33-10	132-40-40	A010087	Au(?),Pb,Zn	Qtz veins in granite contain Py, Gn, Sp; some veins associated with diabase dikes.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.104.
CR032	Buckhorn, etc., loc. 2	P	55-32-05	132-40-50	A010043	Au(?),Pb,Zn	Qtz veins in granite contain Py, Gn, Sp; some veins associated with diabase dikes.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.103.
CR033	Flagstaff	M*	55-32-10	132-39-45	A010040	Au,Cu,Pb,Zn	Au-bearing Qtz vein >1.6 km long along diabase dike in diorite contains Gn, Ccp, Py, Sp. Production: amount produced not known.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.104.
CR034	Cutter	P	55-31-40	132-40-10	A010034	Au(?),Pb,Zn	Qtz veins in granite contain Py, Gn, Sp; some veins associated with diabase dikes.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.104.
CR035	Lookout	P	55-03-23	132-08-30	A010000	Au(?),Pb,Zn	Qtz veins in granite contain Py, Gn, Sp; some veins associated with diabase dikes.	22c	D.J. Grybeck, 1989, unpub. data.
CR036	Copper	P	55-31-20	132-40-40	A010115	Au(?),Pb,Zn	Qtz veins in granite contain Py, Gn, Sp; some veins associated with diabase dikes.	22c	D.J. Grybeck, 1989, unpub. data.
CR037	Clipper	P	55-31-20	132-39-50	A010078	Au(?),Pb,Zn	Qtz veins in granite contain Py, Gn, Sp; some veins associated with diabase dikes.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.103.
CR038	Puyallup	M*	55-30-00	132-42-06	A010133	Au,Cu,Pb,Zn	Qtz vein follows hanging wall of thin porphyritic dike in metasedimentary and metavolcanic rocks and contains sulfides and reported tellurides; samples contained up to 53.2 oz/T Au. Production: from 1901 to at least 1940, but amount produced not known.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.102.
CR039	Copper Hill	P	55-29-45	132-41-00	A010114	Cu	Shear zone in greenstone tuff contains network of Ccp veinlets and localizes disseminated Ccp.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.101.
CR040	Stella	P	55-30-10	132-38-25	A010148	Au,Pb,Zn	Qtz vein about 1 m thick along contact between diorite porphyry and black slate contains Py, Gn, Sp; low Au values reported.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.103.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
CR041	Monday	P	55-30-20	132-37-50	A010008	Ag,Au,Pb	Qtz vein 10 to 35 cm thick in shear zone in slate contains Gn, Py; samples contained 15.0 oz/T Ag, 0.24 to 0.39 oz/T Au.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.103.
CR042	Harris Peak, NE of	P	55-29-06	132-43-36	A010181	Au,Cu,Pb,Zn	1 to 12 cm thick Qtz vein in granodiorite contains Gn, Ccp, Sp, Py; samples contained up to 0.88 oz/T Au.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.102.
CR043	Cascade	M*	55-28-30	132-44-06	A010051	Au,Cu,Pb,Zn	Qtz veinlets and lenses in fracture zone in altered mafic intrusive rock contains Au, Py, Sp, Gn, Ccp. Production: small amount of Au produced in early 1900's.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.102.
CR044	Cracker Jack	M*	55-29-18	132-48-48	A010076	Au,Cu,Pb,Zn	Au-bearing Qtz veins follow porphyry sills parallel to bedding in black slate and contain Py, Ccp, Gn, Sp, Td. Production: some production in early 1900's.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.101.
CR045	Snowdrift	P	55-28-50	132-42-20	A010150	Au(?)	Qtz(?) vein 60 cm wide reported early 1900's.	?	Berg, 1984, p.100.
CR046	Burke and Lange	O	55-29-20	132-39-05	A010118	Au(?)	Qtz vein about 6 m wide parallel to strike of greenstone tuff.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.102.
CR047	Harris Creek	M*	55-28-06	132-42-12	A010157	Au	Au-bearing Qtz veins in Gr-bearing schist associated with fine-grained, light-colored dikes; possible continuation of Dawson(CR048) zone. Production: uncertain amount of Au, 1914-1918.	22c(?)	D.J. Grybeck, 1989, unpub. data.,
CR048	Dawson	M*	55-27-36	132-43-30	A010163	Ag,Au,Cu,Pb, Zn	Qtz stringers and veins up to 2 m wide in 300 m long zone in black schist often associated with Py-bearing, fine-grained, intermediate dikes contain Au, Gn, Ccp, Sp. Production: probably several thousand oz Au and Ag from 1900 to 1948.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.101.
CR049	Shelton	P	55-25-50	132-39-15	A010123	Ag,Au,Cu	Qtz-Cal vein in fractured limestone contains 1.0 to 2.0% Py; low Ag, Au values reported.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.118.
CR050	Big Harbor	M*	55-22-30	132-58-42	A010014	Ag,Au,Cu,Zn	Lenses of Py, ccp, Sp along contact of greenschist and Qtz-mica schist; selected samples from dump reported to contain up to 150 ppm Ag, 1.5 ppm Au. Production: 136 T ore shipped in 1913-1916 contained 6.0 to 7.0% Cu.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.119.
CR051	Trocadero Bay, NE of	O	55-22-40	132-52-10	A010176	Cu	Greenschist contains Py, Ccp.	?	D.J. Grybeck, 1989, unpub. data.
CR052	Trocadero Bay, ENE of	O	55-22-18	132-48-18	A010178	Cu	Greenschist contains Py, minor Ccp.	?	D.J. Grybeck, 1989, unpub. data.
CR053	Nancy	P	55-21-06	132-49-54	A010102	Cu	Qtz stringers in silicified shear zone about 7.5 m wide contain Ccp, Py.	?	D.J. Grybeck, 1989, unpub. data.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
CR054	Cave Creek, W of	O	55-18-42	132-46-30	A010182	Cu	Calcareous greenstone contains Py, minor Ccp.	?	D.J. Grybeck, 1989, unpub. data.
CR055	Marble Heart	P	55-19-45	132-45-30	A010006	Pb	Small Gn vein in limestone.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.119.
CR056	Dolly Varden	O	55-19-42	132-44-06	A010038	Ag,Au,Cu	Discontinuous small Qtz veins in marble interlayered with metasedimentary and metavolcanic rocks contain Td altered to Az, Mal; selected samples contained 0.06 oz/T Au, 8.64 oz/T Ag.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.120.
CR057	Twelve Mile Creek, loc. 1	O	55-18-00	132-41-54	A010180	Cu	Limestone in two quarries contains Py, Ccp.	?	D.J. Grybeck, 1989, unpub. data.
CR058	Twelve Mile Creek, loc. 2	O	55-18-36	132-41-18	None	Cu	2.5 cm thick Qtz vein in deformed greenstone contains Ccp.	?	D.J. Grybeck, 1989, unpub. data.
CR059	Yellowstone	P	55-06-00	133-07-00	None	Ag,Au,Cu,W, Zn	Au-bearing Qtz Cal vein (in limestone?) contains Ccp, Po; also small pods of skarn minerals in limestone; selected samples of Ccp-rich rock from dumps contained up to 30 ppm Ag, 1500 ppm W, >1.0% Zn.	22c(?), 18b(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.140.
CR060	View Cove marble	Quarry*	55-05-00	133-00-53	None	Marble	Gray and variegated marble quarried in 1920's for cement manufacture.	N.A.	Burchard, 1920, p.80.
CR061	Shellhouse, Miller	P	55-03-15	133-04-10	A010166	Cu	Qtz-Cal veins in limestone and Qtz-rich schist contain Ccp, Py.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.140.
CR062	Silver Star	P	55-03-25	133-04-20	A010151	Ag,Au,Cu,Pb, Zn	Two parallel veins in limestone contain Sp, Gn, Ccp, also Ag, Au.	19a(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.141.
CR063	Salmon Lake	P	55-34-42	132-38-30	A010028	Cu,Pb,W	Zone along contact of Qtz diorite and schist contains Qtz veins and disseminated sulfides; minerals are Py, Po, Ccp, Gn, Sch.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.105.
CR064	Paul Young Creek, Venus, Young	P	55-36-40	133-36-35	A010069	Ag,Au,Cu,Zn	Three separate deposits- Paul Young Creek: Veins and disseminations of Py, Ccp, Qtz, Cal; Young: Cal veins and adjacent black slate in shear zone next to porphyry dike contain Ccp, Py; Venus: Au-, Ag-bearing Qtz-Cal vein in shear zone in greenstone contains Po, Ccp, Sp.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.105-106.
CR065	North Pole Hill	P	55-37-30	132-35-50	A010068	Au,Cu	Gabbro or pyroxenite contains disseminated Bn; probably same as Salt Chuck (CR067) deposit; also samples of Py-bearing Qtz veins contained up to 0.2 oz/T Au.	7a(?), 22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.106.
CR066	Rush and Brown	M*	55-37-30	132-35-12	A010127, A010128	Ag,Au,Cu,Fe	Two types of deposits-(1) replacement at contact of diorite and and greenstone with calcareous sedimentary rocks contains Mag, Ccp; (2) lenses and network of veins in shear	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.106.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							zone in greenstone contain Ccp, Py, Po; Production: uncertain amount of hand-sorted ore mined 1906 to 1923 contained 10.5% Cu, 0.26 oz/T Au.		
CR067	Salt Chuck, Leibrant	M*	55-38-12	132-34-18	A010047	Ag,Au,Cu,PGE	Pipe-like body of gabbro and pyroxenite contains disseminated Mag, Bn, Ccp; some secondary Cu minerals along fractures and in dilatant zones. Production: 1905 to 1941, about 326,000 T ore with 0.95% Cu, 0.036 oz/T Au, 0.17 oz/T Ag, 0.063 oz/T Pd. Reserves: USBM has an inferred estimate, but it is not yet available.	7a(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.107; Coldwell, 1990.
CR068	Stevens	P	55-37-00	132-33-00	A010146, A010147	Cu	Stringers and small masses of Bn in fractures in diorite.	7a(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.108.
CR069	Copper Center	P	55-37-06	132-30-06	A010092	Ag,Au,Cu,Fe	Small irregular pods of Mag, Py, Ccp in greenstone; largest pod is 0.3 to 1.0 m wide and about 6 m long; "above-average" ore reported to contain 4.1 to 4.7% Cu, 0.030 to 0.345 oz/T Au, 0.35 oz/T Ag.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.108.
CR070	Haida	M*	55-36-18	132-29-24	A010056	Ag,Au,Cu,Fe, Mo	Mag, Ccp occur in Grt-Ep skarn and greenstone with remnant lenses of limestone; Mol reported. Production: small shipment of ore in 1907.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.108.
CR071	Charles	P	55-36-12	132-28-18	A010035	Cu,Fe	Tactite contains Ccp, Py, Mag.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.108.
CR072	Brown and Metzdorf	M*	55-35-18	132-28-42	A010022	Ag,Au,Cu,Fe, Mo	Grt-Ep tactite contains Ccp, Py, Mol; samples reported to contain 0.027 oz/T Au. Production: small ore shipment before 1937.	18b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.109.
CR073	Alarm	M*	55-35-00	132-28-06	A010064	Cu,Fe	Tactite in marble a couple 100 m from diorite intrusive contains Py, Ccp, Mag. Production: if any, was small.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.109.
CR074	Reed	O	55-34-50	132-28-40	A010131	Ag,Au,Cu,Mo	Tactite next to marble lenses near irregular dikes of diorite, gabbro, and fine-grained igneous rocks contain Ccp, Py, Mol, Hem.	18b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.110.
CR075	It	M*	55-34-36	132-27-54	A010159	Ag,Au,Cu,Mo	Tactite next to marble lenses near irregular dikes of diorite, gabbro, and fine-grained igneous rocks contain Ccp, Py, Mol, Hem. Production: >$1 million 1908 to 1918 that contained about 3.99% Cu, 0.685 oz/T Au, 0.478 oz/T Ag.	18b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.110.
CR076	Morning Star	P	55-33-30	132-26-54	A010007	Au,Cu,Fe	Mag, Ccp in greenstone; similar to Poorman (CR077).	18b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.112.
CR077	Poorman	P	55-33-40	132-26-10	A010134	Ag,Au,Cu,Fe	Mag, Ccp occur in fault zone in greenstone; ore body is about 460 m long, 25 m wide, and	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg,

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							probably 60 m deep. Reserves: USBM has an inferred estimate, but it is not yet available.		1984, p.112; Coldwell, 1990.
CR078	Copper King	P	55-33-25	132-26-15	A010023	Au,Cu,Fe	Skarn contains Py, Mag, Ccp.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.112.
CR079	Sunny Day, or Iron King No. 1	P	55-33-15	132-23-20	A010142	Ag,Au,Cu,Fe	Skarn(?) in greenstone and associated rocks that are cut by syenite, andesite, and basalt dikes contain Mag, Ccp, Py. Reserves: USBM may have an inferred estimate, but it is not yet available.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.111; Coldwell, 1990.
CR080	Copper Queen	P	55-32-00	132-22-54	A010086	Cu,Fe	Grt-Ep skarn contains irregular mass of Ccp, Py, Mag; dates from 1867 and may be the first lode location in Alaska.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.112.
CR081	Uncle Sam	M*	55-31-54	132-21-18	A010139	Au,Cu,Fe	Skarn in altered greenstone/tuff intruded by syenite and felsic and mafic dikes contains irregular masses of Mag, Ccp, Py. Production: at least 350 T ore shipped in 1906.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.113.
CR082	Elm City, Skookum	P	55-31-42	132-20-42	A010082	Cu	Fault-bounded zone 1 m wide in Ep-rich diorite contains Py, Ccp.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.113.
CR083	Rich Hill	M*	55-31-06	132-20-12	A010129	Cu,Fe,Mo	Skarn and fault zone cut by numerous dikes contains Ccp, Mag, Py. Production: lens of high-grade Ccp mined out in 1917-1918. Reserves: USBM may have an inferred estimate, but it is not yet available.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.114; Coldwell, 1990.
CR084	Tacoma, Peacock	M*	55-31-25	132-19-25	A010096	Cu,Fe,Mo	Grt-Ep skarn contains Ccp, Mag, Mol. Production: some ore mined from both deposits and shipped(?) in 1905.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.114.
CR085	Hole-In-The-Wall	P	55-32-00	132-18-00	A010021	Cu,Fe	Contact metamorphosed limestone adjacent to diorite intrusive contains Ccp, Mag.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.115.
CR086	Mamie	M*	55-31-20	132-16-50	A010042, A010682	Ag,Au,Cu,Fe	Carbonate layers in greenstone intruded by diorite and more alkaline granitic rock contain contorted tabular bodies of skarn minerals,Mag, Ccp, Py; several large Ccp masses next to Mag bodies mined. Production: Mamie (CR086), Mount Andrew (CR087), and Stevenstown (CR088) all together produced more than 270,000 T ore that contained 12,817,000 lbs Cu, 6,939 oz Au, 55,930 oz Ag in 1905 to 1918; Fe reserve in Mag remains. Reserves: USBM has an inferred estimate, but it is not yet available.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.116; Coldwell, 1990.
CR087	Mount Andrew	M*	55-30-55	132-18-10	A010103	Ag,Au,Cu,Fe	Skarn deposit contains massive Mag, Ccp; see CR086 for production information.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg,

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							Reserves: USBM has an inferred estimate, but it is not yet available.		1984, p.115; Coldwell, 1990.
CR088	Stevenstown	M*	55-30-50	132-17-25	A010145	Ag,Au,Cu,Fe	Skarn deposit near diorite body and intermediate dike rocks contains Ccp, Mag; see CR086 for production information. Reserves: USBM may have an inferred estimate, but it is not yet available.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.117; Coldwell, 1990.
CR089	Big Six	P	55-27-36	132-10-42	A010081	Cu,Fe	Altered limestone along fault contact with greenstone contains disseminated(?) Py, Ccp.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.117.
CR090	Cachelot	P	55-28-06	132-09-18	A010117	Ag,Au,Cu	Vein 0.3 to 1.0 m thick in sheared diorite contains Ccp; grab sample contained 0.41 oz/T Ag, 0.14 oz/T Au.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.117.
CR091	Big Five	P	55-39-10	132-24-45	A010090	Cu,Fe	Skarn in limestone near diorite dike contains small pods and stringers of Po, Mag, Ccp.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.110.
CR092	Iron Cap	P	55-38-54	132-23-24	A010105	Ag,Au,Cu,Fe	Grt-Ep skarn in greenstone and metamorphosed clastic sedimentary rocks cut by granite pluton contains lenses of Mag, Ccp, Py, Po; samples contained Tr Au and up to 0.6 oz/T Ag. Reserves: inferred reserve of 112,000 T with up to 40.0% Fe, 0.25% Cu.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data
CR093	Wallace	P	55-38-42	132-22-12	A010137	Cu,Fe	Grt-Ep skarn contains small scattered masses of Ccp.	18b	D.J. Grybeck, 1989, unpub. data
CR094	Tolstoi	P	55-38-25	132-22-20	A010141	Cu,Fe	Grt-Ep skarn in greenstone and metamorphosed clastic sedimentary rocks cut by granite pluton contains lenses of Mag, Ccp, Py, Po.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data
CR095	Outer Point Peninsula	O	55-30-45	132-31-45	A010018	Cu	Qtz-mica schist contains up to 5.0% disseminated Po; also Grt-Ep skarn with Py, Po near Qtz diorite; also 15 cm wide Qtz vein in skarn contains disseminated Ccp.	18b	D.J. Grybeck, 1989, unpub. data; Sainsbury, 1961, p. 353.
CR096	Sunny Day	P	55-30-40-	132-25-35	A010083	Ag,Au,Cu	Vein adjacent to porphyry dike contains Ccp; Ag, Au values reported.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.118.
CR097	Baker Point	O	55-31-00	132-25-00	None	Fe?	Layered chert and argillite associated with altered dike or flow contain small pods and lenses of Mag; greenstone dike or flow also contains Mag.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.118.
CR098	Kina Cove	O	55-29-05	132-31-35	A010024	Cu	Recrystallized limestone bed 1.3 to 2.0 m thick contains 2.0% Po.	?	D.J. Grybeck, 1989, unpub. data; Sainsbury, 1961, p. 352-353.
CR099	Hatchet	P	55-26-12	132-27-30	A010019	Au	Qtz(?) vein about 10 cm thick in carbonaceous Py-bearing slate; sample contained <0.048 oz/T Au.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.118.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
CR100	McKenzie Inlet	P	55-20-18	132-23-42	A010079	Ag,Au,Cu,Pb, Zn	Orange-weathering felsic volcanic rocks contain 1.0 to 2.0% Py; irregular lenses and layers up to 12 cm thick of massive Py, Sp, Ccp; selected grab samples contained up to 0.6 ppm Au, 150 ppm Ag, 1.0% Cu, major . Pb, Zn	28a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.123.
CR101	Sultana	P	55-17-06	132-33-30	A010144	Co(?),Cu, Ni(?)	Grt-Di-Ep skarn near limestone-granite contact contains small masses and disseminations of Ccp, Py; sample of Po contained 0.2% Ni, Tr Co.	18b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.121.
CR102	Khayyam	M*	55-17-54	132-23-12	A010158	Ag,Au,Cu,Zn	Amphibolite facies felsic, intermediate, and mafic metamorphic rocks contain stacked lenses of massive Py, Ccp. Production: 280,000 T ore mined 1901 to 1907 contained 7.04 million lbs Cu, 1,180 oz Au, 1,540 oz Ag. Reserves: USBM has an inferred estimate, but it is not yet available.	28a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.122; Coldwell, 1990.
CR103	Bertha, Hecla, Red Rose	O	55-17-30	132-23-25	A010070	Cu(?)	May be similar to Khayyam (CR102); three parallel masses of Ccp, Py have total thickness of 15 m.	28a(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.122.
CR104	Stumble-On	M	55-17-00	132-21-00	None	Cu	Amphibolite facies felsic, intermediate, and mafic metamorphic rocks contained a single lens of massive Py, Ccp 2 m thick and 170 m long.	28a(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.123.
CR105	Fowlkes	P	55-16-20	132-18-05	A010110	Cu	4 m wide zone in gneiss and schist contains Ccp.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.123.
CR106	Gould Island	P	55-16-42	132-36-42	A010052	Cu,Pb,Zn	Grt-Ep-Wo skarn in limestone, slate, and shale unit near granodiorite contact contains small veinlets and disseminations of Gn, Sp, Ccp.	18b(?), 18c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.120.
CR107	Campbell	P	55-15-50	132-38-35	A010164	Ag(?),Au(?), Cu	Marble contains small pods of Po, Ccp.	19a(?)	Herreid and others, 1978, p.38-39.
CR108	Mount Jumbo	P	55-15-42	132-37-54	A010136	Ag,Cu,Zn	Skarn contains Po, Ccp, marcasite; grab sample contained 4.2% Cu, 3.2 oz/T Ag, 850 ppm Zn.	18b	D.J. Grybeck, 1989, unpub. data.
CR109	Houghton	P	55-15-42	132-37-12	A010112	Cu,Fe	Skarn near limestone-granite contact contains Ccp, Mag, Po, Py.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.124.
CR110	Upper Magnetite	P	55-15-25	132-37-10	A010183	Cu,Fe	Five bodies of Mag, Ccp in marble surrounded by granodiorite.	18b(?), 18d(?)	Kennedy, 1953, p.39-40.
CR111	Gonnanson	O	55-15-10	132-37-40	A010165	Cu,Fe	Skarn contains Ccp, Mag.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data.
CR112	Jumbo	M*	55-15-50	13237-10	A010160	Au,Cu,Fe,Mo	Skarn near limestone-granodiorite contact contains Mag, Ccp, minor Mol. Production: 1907 to 1923 about 123,000 T ore	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.125;

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							that contained 10,194,264 lbs Cu, 7,076 oz Au, 87,778 oz Ag; several large Mag bodies remain unmined. Reserves: USBM has an inferred estimate, but it is not yet available.		Coldwell, 1990.
CR113	Corbin	M*	55-13-54	132-38-54	A010071	Ag,Au,Cu	Ms schist (metarhyolite?) contains stratiform massive Py lens up to 1 m thick. Production: possible small.	28a(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.124.
CR114	Copper Mountain	M	55-13-55	132-36-40	A010091	Ag,Au,Cu,Fe	Skarn near limestone-granite contact contains Ccp, Bn, Mal, Az; possible small production.	18b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.125.
CR115	Green Monster	M	55-14-45	132-32-30	A010085	Au(?),Cu,Fe, Mo;Ep	Skarn along contact of limestone and Qtz diorite stock contains Ccp, Mag, minor Mol; no production of metallic minerals, but well-known Ep crystal locality.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.127.
CR116	Rex	P	55-14-20	132-32-05	A010130	Cu,Fe	Grt-Di-Ep skarn at limestone-Qtz diorite contact contains Ccp, Mag.	18b(?), 18d(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.127.
CR117	Earl No.1 or Anderson	O	55-15-05 Redo lat and long	132-28-45	A010080, A010079	Au(?)	Py-bearing disseminated Qtz blebs in quartzite associated with Gr-bearing phyllite. ?	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.101(?).
CR118	Russian Bear	P	55-13-40	132-35-40	A010126	Cu	Skarn contains Cu minerals.	18b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.126.
CR119	Paris	P	55-13-06	132-36-06	A010097	Au,Cu	Qtz vein in quartzite reported to contain Au, Cu.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.126.
CR120	Gould	P	55-12-50	132-36-10	A010025	Cu	Skarn at contact of quartzite and granodiorite contains Cu minerals.	18b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.126.
CR121	Hetta Mountain	P	55-12-00	132-34-00	A010027	Ag,Cu,Zn	Shear zone 25 m wide in marble contains Ccp, Lm-altered skarn; also three short, en echelon pods of Py, Po, Ccp; grab sample contained 2.2% Cu, 0.74% Zn, 12.3 oz/T Ag, 0.10 oz/T Au.	18b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.126.
CR122	Marion	P	55-08-42	132-29-00	A010005	Cu,Pb	Qtz-Cal vein in schist contains Py, Ccp, Gn.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.129.
CR123	Copper City	M*	55-08-06	132-36-42	A010075	Ag,Au,Cu,Zn	Metakeratophyre, metaspilite, Qtz-Ser schist contain lenses 15 cm to 1.3 m thick of Ccp, Py, Sp, Hem. Production: 1904 to 1910, amount unknown; ore contained 0.15 to 0.30 oz/T Au, and about $1 to $3 in Ag/T=1.7 to 5.0 oz/T Ag.	28a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.130.
CR124	Flat Island	M*	55-05-20	132-41-35	A010073	Au	Production: in 1880's, a few 100 oz Au produced from a small rich outcrop of uncertain type on the beach.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.141.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No., if any	Commodities/ resources	Brief description	Deposit-Type No.	Reference(s)
			Latitude	Longitude					
CR125	Keete Inlet, N of	O	55-05-18	132-29-24	A010067	Cu	Shear zone and Qtz veins in siliceous greenschist contains disseminated grains and lenses of Ccp, Py, Bn(?).	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.129.
CR126	Lime Point barite	P	55-03-18	132-38-00	A010030	Brt	Prominent massive Brt lens about 30 m long and 3.5 to 9 m wide in limestone; Brt may replace limestone. Reserves: USBM has an inferred estimate, but it is not yet available.	31b(?), 28a(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.130; Coldwell, 1990.
CR127	Gould	P	55-00-05	132-46-05	A010088	Cu	Py-bearing schist near granite contact contain stratiform stringers and lenses of Ccp, Po.	28a(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.141.
CR128	Hope	P	55-09-45	132-22-50	A010057	Ag,Pb,Zn	Marble and Cal lenses in schist replaced by Sp, Gn, Ep, Grt.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.129.
CR129	Ketchikan Copper Co.	P	55-12-47	132-19-17	A010046	Ag,Au,Cu	Py-bearing schist contains zones of Py, Ccp, secondary minerals.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.129.
CR130	Moonshine	M*	55-10-30	132-23-00	A010049	Ag,Cu,Pb,Sb, Zn	Massive Gn lenses to a few m thick contain some Py, Sp, Ccp and replace limestone; selected samples reported to contain up 2,000 ppm Ag, 7,000 ppm Sb. Production: probably some small production.	19a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.128.
CR131	Friendship	P	55-13-06	132-18-42	A010109	Au,Cu,REE(?)	Irregular masses of Ccp, Bn at schist-marble contact; ore reported to contain 0.05 oz/T Au; sample of a vein contained 300 ppm Y.	19a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.128.
CR132	Dora Bay	O	55-10-00	132-15-00	None	REE	Eudialyte-bearing Ne syenite and associated pegmatites.	FP/UREE	Berg, 1984, p.128.
CR133	Saco	P	55-13-33	132-03-30	A010125	Ag,Au,Cu	Qtz(?) veins 5 cm to 1.3 m wide contain Ccp, Py; reported to contain low Au values.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.137.
CR134	Equator	P	55-13-18	132-02-29	A010111	Au,Cu	Qtz vein 1 m thick contains Ccp, Py, inclusions of limestone; reported to contain low Au values.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.137.
CR135	Gladstone	P	55-12-41	132-03-30	A010026	Ag,Au,Cu	Qtz-Cal veins 0.3 to 1.3 m wide in limestone contain Py, Ccp; diabase dike on hanging wall of one vein.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.137.
CR136	Snowdrift, Parkview	P	55-12-02	132-03-34	A010095	Au,Cu	1.5 m wide zone in schist contains Qtz, Cal, disseminated Py, Ccp; may be Au-bearing.	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.137.
CR137	O.K.	P	55-12-00	132-03-00	A010099	Au,Cu,Pb,Zn	Qtz vein 1.0 to 1.3 m thick contains Ccp, Py, Sp, Gn, Au(?).	22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.137.
CR138	Lucky Boy	P	55-09-30	132-14-06	A010156	Ag,Au,Cu,Pb, Zn	At least four Qtz-Cal breccia veins in argillite and limestone contain Sp, Ccp, Gn, some Ag, Au values; veins may be remobilized	22c(?), 31a(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.131.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							from stratiform Pb-Zn lenses in metamorphic rocks nearby.		
CR139	Washington	P	55-10-16	132-08-41	A010167	Au,Cu	3 mi wide layer of brecciated limestone and schist contains a network of Qtz veinlets that contain Py, Ccp,Sp, with Au values up to 0.23 oz/T.	?	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.132.
CR140	Oregon	P	55-10-00	132-08-30	A010098	Au,Cu	Reported to be similar to CR139.	?	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.132.
CR141	Kid (Fawn)	P	55-09-50	132-07-44	A010065	Au,Cu,Pb,Zn	Qtz(?) veins in schist with interlayered limestone/marble contain Sp, Gn,Py, Ccp, some Au values.	?	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.132.
CR142	Frisco	P	55-09-41	132-07-59	A010108	Au	Qtz(?) vein 4 m wide in schist and limestone/ marble reported to contain low Au values.	22c(?), 36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.132.
CR143	Croesus	P	55-08-58	132-10-42	A010093	Au,Cu	Qtz veins up to 1.3 m thick in greenschist and limestone contain Cu, Ccp, some Au values.	22c(?), 36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.131.
CR144	Cymru	M*	55-08-00	132-11-42	A010089	Ag,Au,Cu	Four veins or lenses of Qtz-Cal in marble and Chl-bearing schist contain Py, Ccp. Production: 1906 to 1916, at least 155,000 lbs. Cu, 1,500 oz Ag, and a little Au.	30b(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.131.
CR145	Navaho	P	55-06-35	132-09-28	A010101	Au	Qtz vein in silicified diorite and/or Chl schist contains Py, Ccp; values up to 1.9 oz/T Au reported.	22c(?), 36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.138.
CR146	Westlake	P	55-06-10	132-09-40	A010172	Au,Pb,Zn	Qtz veins near contact of granite and schist contain Au, Gn, Sp, Py.	22c(?), 36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.138.
CR147	Wakefield	P	55-04-18	132-10-54	A010138	Cu	Greenschist, slate, and very coarse-grained sandstone contains mass of Ccp 3 m wide; low Ag, Au values reported.	28a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.138.
CR148	Westcott	P	55-04-13	132-09-00	A010171	Cu	Body of siliceous Py-bearing rock 40 m wide contains Ccp.	28a(?)	Berg, 1984, p.139.
CR149	Niblack	M*	55-04-01	132-08-48	A010135	Ag,Au,Cu,Zn	Greenschist and Qtz-sericite schist contain large lenticular bodies or lenses of Py, Ccp, Sp, Gn, Hem. Production: 1902 to 1909, at least 1.4 million lbs Cu, 1,100 oz Au, 15,000 oz Ag.	28a	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.139.
CR150	Edith M.	P	55-03-45	132-08-01	A010013	Ag,Au,Cu	Two mineralized zones: one about 2.4 m thick contains Py; the other 30 cm thick contains Py, Ccp, and has about 0.25 oz/T Au; new discoveries on Lookout (CR151) may extend to this locality.	28a	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.139.
CR151	Lookout	P	55-03-23	132-08-30	A010000	Ag,Au,Cu	Qtz veins and small masses of Cu-bearing sulfides occur in zones in schist; Au values up to 0.20 oz/T and Ag values up to 2.31 oz/T	28a	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.140.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							reported; current exploration has found Cu-Zn-Au-Ag in several horizons in felsic volcanoclastic rocks.		
CR152	Dama, Cutter	P	55-03-18	132-07-18	A010034	Ag,Au,Cu	Greenschist contains lenticular bodies of Py, Ccp, with some Au.	28a	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.140.
CR153	Valpariso	M*	55-08-47	132-05-28	A010162	Ag,Au,Cu,Pb, Zn	Qtz breccia veins in limestone contain Py, Ccp, Gn,Sp; Au values are up to about 12 oz/T. Production: uncertain amount of intermittent production 1900 to 1933.	22c(?), 36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.133.
CR154	Well Fleet	P	55-09-06	132-04-00	A010170	Au	Qtz vein 6 to 7.5 m wide in Gr-bearing schist contains Py; Au value about 0.1 to 0.2 oz/T.	36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.133.
CR155	Golden Fleece	M*	55-09-06	132-03-18	A010041	Ag,Au	Qtz lenses up to 2.4 m thick in marble cut by diabase dikes contain Py, Td, Au. Production: uncertain amount of intermittent production 1900 to 1930's of ore with 0.5 to 3.0 oz/T Au.	22c(?), 36a(?), 19a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.133.
CR156	Matilda, Moonshine	O	55-08-45 55-08-41	132-03-02 132-03-07	A010004 A010012	Au(?)	Qtz vein in mica schist contains Py, Au(?).	36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.134.
CR157	Alpha	P	55-09-00	132-02-30	A010044	Au	Qtz vein up to 11 m thick in contorted marble contains Py, Ccp, low Au values.	36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.136.
CR158	Fortune	M*	55-08-42	132-03-00	A010039	Au	Qtz veins in zone 3 or more m wide contain Ccp, Py, Td, Au; small production for test Production: small production for test shipments in early 1900's and 1922.	36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.136.
CR159	Jumbo	P	55-08-32	132-03-00	A010015	Ag,Au	Qtz vein 0.6 to 1.0 m thick in Gr-bearing phyllite contains Td, Au.	36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.134.
CR160	Beauty	P	55-08-30	132-02-54	A010020	Ag,Au,Cu	Qtz vein 30 to 45 cm thick in marble contains Py, Td, Ccp; values of up to 1.0 oz/T Au and _ oz/T Ag ($220/T in 1902) reported.	36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.135.
CR161	Welcome, Amazon	P	55-08-30 55-08-38	132-02-40 132-03-14	A010169 A010060	Ag,Au	Welcome is mineralized shear zone along contact of limestone and Gr-bearing schist that contains Py, Au; Amazon is Qtz breccia vein 1.5 to 3 m thick parallel bedding in Cal-bearing schist that contains a reported 1.0 oz/T Au.	36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.133-134.
CR162	House, Standby, Triangle No. 2	P	55-08-42 55-08-46 55-08-26	132-03-18 132-03-18 132-02-38	A010054 A010149 A010140	Au	House is Qtz vein 30 to 60 cm thick in marble that contains Py, Td, Ccp, Au(?); Standby is Qtz stringers in marble that contain Py, Au; Triangle No.2 is Qtz vein in marble that is reported to contain 1.94 oz/T Au.	36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.134.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
CR163	Salmon	P	55-08-06	132-03-12	A010154	Au	Qtz vein up to 1.5 m thick in marble and/or greenschist contains Py, Ccp, Gn; Au value reported to be 0.4 oz/T.	36a(?)	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.135.
CR164	Union Bay	P	55-44-00 to 55-49-00	132-00-00 to 132-12-00	None	Cr,Fe,PGE	Cretaceous age zoned ultramafic body in gabbro and metasedimentary rocks contains magmatic segregations of Ti-rich Mag and Chr; body is 4.8 by 8.1 km and is a concentrically zoned pipe and lopolith that grades from a core of dunite and peridotite to a border of Hbl pyroxenite; Mag is pnmary in pyroxenite and is disseminated with Chr in dunite; Chr also as discontinuous stringers in dunite; PGE with Chr and Mag in dunite; assays of hand-picked Chr average 0.093 ppm Pt, 0.200 ppm Pd, o.062 ppm Rh, 0.215 ppm Ir. Reserves: estimated inferred reserve is about one billion T with 18 to 20% Fe and significant V. Also, USBM inferred estimate is similar, but is not yet available.	9	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.142; Coldwell, 1990.
CR165	Gold Standard	M*	55-39-12	132-00-42	A010113	Au	Two sets of Qtz veins in phyllitic flysch and andesitic or basaltic metatuff; older set is parallel foliation and has produced the most ore; younger veins strike parallel to foliation, but dip in opposite direction; main Qtz vein is 0.15 to 2 m thick, 305 m long, and contains Py, Gn, Au, tetradymite. Production: uncertain amount 1898 to 1941. Reserves: USBM may have inferred estimate, but it is not yet available.	36a	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.143; Coldwell, 1990.
CR166	Puzzler	P	55-38-40	132-00-40	A010132	Au	Conjugate set of Au-bearing(?) Qtz veins in Gr-bearing schist.	36a	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.143.
CR167	Midnight Sun	P	55-39-10	132-01-25	A010010	Au	Sheared Qtz vein in greenschist contains Py, Au.	36a	Berg, 1984, p.143.
CR168	Helm Bay, Helm Bay King (Sleeping Beauty)	M*	55-40-30	132-02-50	A010048	Au	Qtz gash veins and lenses in Chl-Qtz schist (greenschist) contain Ccp, Gn, Au(?); Au value reported to be 0.7 oz/T. Production: in 1930's or 1940's, probably minor. Reserves: USBM has inferred estimate, but it is not yet available.	36a	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.144; Coldwell, 1990.
CR169	Hoffman	P	55-39-00	132-01-00	None	Au	Irregular Qtz(?) vein about 1.5 m thick in greenstone contains Py, Au.	36a	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.144.
CR170	Keystone	M	55-37-05	132-02-30	A010045	Au	Qtz(?) stockwork 6 to 12 m thick in greenschist contains Py; average Au value is about 0.4 oz/T. Reserves: USBM has inferred estimate, but it is not yet available.	36a	D.J. Gryback, 1989, unpub. data; Berg, 1984, p.144; Coldwell, 1990.

Table 2-CR. Summary mine, prospect, and mineral-occurrence information for Craig quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No., if any	Commodities/ resources	Brief description	Deposit-Type No.	Reference(s)
			Latitude	Longitude					
CR171	Melville	M	55-37-15	132-01-50	A010050	Au	Qtz vein in fault in slate and greenstone contains Apy; some Au-bearing(?) ore mined early 1900's.	36a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.144.
CR172	Alexander	P	55-37-25	132-01-15	A010061	Au	Qtz vein 0.5 to 1.0 m thick in greenstone and slate contains Au(?).	36a	D.J. Grybeck, 1989, unpub. data.

Table 2-DE. Summary mine, prospect, and mineral-occurrence information for Dixon Entrance quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are : M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
DE001	Forrester Point	O	54-50-20	133-32-00	A010257	Mo	Py, Mol in Qtz monzonite.	21b	Berg, 1984, p.145.
DE002	Wood Cove	O	54-49-20	133-31-10	A010268	Cu,Mo	Altered Qtz monzonite to granodiorite contains network of Mol veinlets and some disseminated Mol, Ccp.	21b	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.145.
DE003	Mount Vesta	P	54-56-00	132-57-30	A010263	Ag,Cu,Pb,Zn	Veinlets in limestone near granite contact contain Td, Ccp, Gn, Sp.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.145.
DE004	Lucky Strike	P	54-53-30	132-57-10	A010260	Cu	Qtz, Ccp along shear zone in schist.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.145.
DE005	Wolk Harbor, N of	P	54-42-24	132-45-48	None	Au?	Qtz veins; grab samples contained up to 0.5 ppm Au.	?	D.J. Grybeck, 1989, unpub. data.
DE006	McLeod Bay	P	54-41-20	132-42-40	A010254	Au,Cu,Pb	Qtz veins contain minor amounts of Gn, Sp, Ccp; Au values up tp 0.6 oz/T.	36a(?), 22c(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.146.
DE007	McLeod Bay, N side	P	54-42-06	132-42-00	None	Cu?	Fe-stained schistose metarhyolite, argillite, metachert, and minor metacarbonate contain Fe-stained lenses 30 to 60 cm thick that contain up to 5.0% Py.	28a(?)	D.J. Grybeck, 1989, unpub. data.
DE008	Lakeside	O	54-59-40	132-45-00	A010259	Cu	Shear zones along contact between altered pyroxenite and schist, both cut by Qtz diorite, contain Ccp.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.146.
DE009	Barrier Islands, loc. 1	O	54-49-19	132-28-49	None	Au,Cu,Pb,Zn	Ordovician-Silurian fragmental volcanic rocks and siliceous black slate contain 5 cm thick or less stratiform sulfide layers containing Py, Apy, Sp; selected grab samples contained up to 30 ppm Ag, >0.5% Brt, 1,500 ppm Pb, 3,000 ppm Zn.	28a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.153.
DE010	Barrier Islands, loc. 2	O	54-49-12	132-26-54	None	Au,Cu,Pb,Zn	Ordovician-Silurian fragmental volcanic rocks and siliceous black slate contain 5 cm thick or less stratiform sulfide layers containing Py, Apy, Sp; selected grab samples contained up to 30 ppm Ag, >0.5% Brt, 1,500 ppm Pb, 3,000 ppm Zn.	28a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.153.
DE011	Barrier Islands, loc. 3	O	54-48-33	132-27-15	None	Au,Cu,Pb,Zn	Ordovician-Silurian fragmental volcanic rocks and siliceous black slate contain 5 cm thick or less stratiform sulfide layers containing Py, Apy, Sp; selected grab samples contained up to 30 ppm Ag, >0.5% Brt, 1,500 ppm Pb, 3,000 ppm Zn.	28a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.153.
DE012	Barrier Islands, loc. 4	O	54-48-08	132-27-03	None	Au,Cu,Pb,Zn	Ordovician-Silurian fragmental volcanic rocks and siliceous black slate contain 5 cm thick or less stratiform sulfide layers containing Py, Apy, Sp; selected grab samples contained up to 30 ppm Ag, >0.5% Brt, 1,500 ppm Pb, 3,000 ppm Zn.	28a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.153.
DE013	Barrier Islands,	O	54-48-39	132-23-23	None	Au,Cu,Pb,Zn	Ordovician-Silurian fragmental volcanic	28a	D.J. Grybeck, 1989,

Table 2-DE. Summary mine, prospect, and mineral-occurrence information for Dixon Entrance quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are : M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
	loc. 5						rocks and siliceous black slate contain 5 cm thick or less stratiform sulfide layers containing Py, Apy, Sp; selected grab samples contained up to 30 ppm Ag, >0.5% Brt, 1,500 ppm Pb, 3,000 ppm Zn.		unpub. data; Berg, 1984, p.153.
DE014	Barrier Islands, loc. 6	O	54-48-20	132-20-08	None	Au,Cu,Pb,Zn	Ordovician-Silurian fragmental volcanic rocks and siliceous black slate contain 5 cm thick or less stratiform sulfide layers containing Py, Apy, Sp; selected grab samples contained up to 30 ppm Ag, >0.5% Brt, 1,500 ppm Pb, 3,000 ppm Zn.	28a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.153.
DE015	Ranger	P	54-50-00	132-18-50	A010264	Cu,Fe	Altered volcanic rocks cut by granitic rocks and Qtz veins contain disseminated(?) Mag, Ccp.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.147.
DE016	Goodhope	P	54-52-10	132-17-10	A010258	Cu	Qtz veins in altered volcanic rocks intruded by granitic dikes contain irregular masses of Mag, Ccp, Py.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.147.
DE017	Brownson Bay	P	54-46-12	132-13-36	None	Ag,Cu,Pb,Zn	Small, high-grade stratiform(?) massive sulfide deposits; values up to 20.0% Zn, 11.0% Pb, 1.0% Cu, 4.0 oz/T Ag reported.	28a	D.J. Grybeck, 1989, unpub. data.
DE018	Feichert	P	54-44-30	132-08-40	A010256, A010253	Ag,Cu,Pb,Zn	Qtz-rich graywacke and silic volcanic rocks contain stratiform sulfide layers with Ccp, Sp, Apy; selected grab samples contained up to 30 ppm Ag, 1,500 ppm Ba, 500 ppm Cu, 1,000 ppm Pb, >1.0% Zn.	28a	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.150.
DE019	Alice	P	54-43-10	132-06-40	A010255	Cu	Limestone interbedded with andesitic greenstone contains irregular masses and veinlets of Ccp.	?	Berg, 1984, p.151.
DE020	Nicholas Bay, loc. 1	P	54-43-06	132-07-17	None	Ag,Cu,Zn	Qtz-rich graywacke and silic volcanic rocks contain stratiform sulfide layers with Ccp, Sp, Apy; selected grab samples contained up to 30 ppm Ag, 1,500 ppm Ba, 500 ppm Cu, 1,000 ppm Pb, >1.0% Zn.	28a	D.J. Grybeck, 1989, unpub. data.
DE021	Nicholas Bay, loc. 2	P	54-42-29	132-06-53	None	Ag,Cu,Zn	Qtz-rich graywacke and silic volcanic rocks contain stratiform sulfide layers with Ccp, Sp, Apy; selected grab samples contained up to 30 ppm Ag, 1,500 ppm Ba, 500 ppm Cu, 1,000 ppm Pb, >1.0% Zn.	28a	D.J. Grybeck, 1989, unpub. data.
DE022	Spik	P	54-47-35	132-04-49	A010266	Cu	Greenstone contains large, high-grade masses of Bn, Ccp, Po.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.152.
DE023	Polson, Ickis	P	54-47-35	132-02-37	A010265	Au,Cu	Qtz-Cal-Brt veins in felsic igneous rocks contain Py, Ccp, Hem, Bn, secondary minerals, Au.	22c	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.151.
DE024	McLean Arm, N of	P	54-49-49	132-00-52	None	Fe	Hbl-rich phase of diorite and Qtz diorite pluton contains Mag concentrations.	?	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.150.

Table 2-DE. Summary mine, prospect, and mineral-occurrence information for Dixon Entrance quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are : M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
DE025	Veta	P	54-47-17	132-01-11	None	Cu	Zone 1 m wide in fine-grained diorite or greenstone contains Qtz, Py, Ccp, Bn, secondary minerals.	22c(?)	D.J. Grybeck, 1989, unpub. data.
DE026	Mallard Bay	P	54-46-35	132-01-00	A010261	Fe	Pyroxenite contains Mag concentrations.	9(?)	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.151.
DE027	Stonerock Bay	P	54-46-10	132-00-00	A010267	REE,U	Qtz-Hem veins in altered andesite(?) dikes that cut syenite contain radioactive and REE-bearing minerals; carbonatite masses in the syenite also contain U-, REE-bearing minerals.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.151.
DE028	Geiger	P	54-56-56	132-10-14	A010281	REE,U	Altered felsic dike that cuts metavolcanic rocks contains veinlets with Fl, and unidentified U minerals.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data.
DE029	Moira Sound, South Arm, loc. 1	P	54-56-00	132-12-40	A010262	Au	Au-bearing Cal vein in fault in siliceous metavolcanic rocks contains Py.	?	D.J. Grybeck, 1989, unpub. data.
DE030	Moira Sound, South Arm, loc. 2	P	54-56-19	132-10-39	None	REE,U	Aplite masses in Devonian black slate near NW border of Bokan Mtn. peralkaline granite reported to contain U or to be radioactive.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.147.
DE031	I and L, 1 & 2	P	54-55-29	132-10-42	A010273, A010274	REE,U	Fe-stained altered zones in pegmatites near center of Bokan Mtn. peralkaline granite contain radioactive minerals.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.148-149.
DE032	Wennie	P	54-55-10	132-10-40	A010277	REE,U	REE, U minerals occur along fractures up to 30 cm thick and in veinlets adjacent to the fractures in Bokan Mtn. peralkaline granite.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.148-149.
DE033	Old Crow	P	54-55-30	132-10-00	A010278	REE,U	Veinlets along fault zone in Bokan Mtn. peralkaline granite contain Qtz, Hem, Fl, radioactive minerals.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.148-149.
DE034	Little Joe	P	54-55-20	132-08-40	A010280	REE,U	Pegmatite dikes cut Bokan Mtn. peralkaline granite and contain small amount of unidentified radioactive mineral.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.148-149.
DE035	I and L, 3 & 4	P	54-55-04	132-08-10	A010272	REE,U	Veinlets along fault zone in Bokan Mtn. peralkaline granite contain Qtz, Hem, Fl, radioactive minerals.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.148-149.
DE036	I and L, 2	P	54-54-50	132-08-40	A010275	REE,U	Locally hydrothermally altered pegmatite dikes near the margin of the Bokan Mtn. peralkaline granite contain a variety of U-, Th-, Nb-, REE-bearing minerals.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.148-149.
DE037	Atom Marietta	P	54-54-50	132-07-40	A010279	REE,U	Fractured dacite dikes, intersecting fault, and aplite phase of Bokan Mtn. peralkaline granite localize narrow veinlets, irregular masses, and disseminations of uraninite, uranothorite, and other U-bearing minerals.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.148-149.
DE038	Pieper's Purple	P	54-54-30	132-09-20	A010271	REE,U	Fl veinlets with radioactive minerals occur	FP/UREE,	D.J. Grybeck, 1989,

Tabla 2-DE. Summary mine, prospect, and mineral-occurrence information for Dixon Entrance quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are : M = mine, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							(1) cutting an altered mafic dike on a fault at or near the contact of the Bokan Mtn. peralkaline granite and slate; and (2) along albite or pegmatite dikes within the granite.	FP/THRE	unpub. data; Berg, 1984, p.148-149.
DE039	Ross-Adams	M*	54-54-40	132-08-20	A010276, A010684	REE,U	Crudely fusiform body about 55 m by 12 m within boss of Bokan Mtn. peralkaline granite contains dissemin-ations and replacements of uraninite and uranothorite along fracture sets associated with hydrothermal alteration. Production: 1958 to 1975 about 120,000 T averaging about 1.0% U3O8. Reserves: USBM has inferred estimate, but it is not yet available.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.148-149; Coldwell, 1990.
DE040	Carol Ann	P	54-54-20	132-06-10	A010269	REE,U	915 m long dacite dike in albitized Qtz mon-zonite and Qtz diorite border zone to Bokan Mtn. granite contains radioactive allanite.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.148-149.
DE041	Cheri	P	54-53-20	132-06-10	A010269	REE,U	Quartzite pendant in albitized aureole of Bokan Mtn. peralkaline granite contains disseminated allanite.	FP/UREE, FP/THRE	D.J. Grybeck, 1989, unpub. data; Berg, 1984, p.148-149.

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No., if any	Commodities/ resources	Brief description	Deposit-Type No.	Reference(s)
			Latitude	Longitude					
JU001	Casement Glacier Nunatak	O	58-58-15	135-59-24	A012111	Zn?	Qtz-Ank veins up to 30 cm thick in 3 to 5 m thick altered zone in hornfels; one sample contained 300 ppm Zn.	22c(?)	Wells and others, 1986, p.16; Berg, 1984, p.154.
JU002	Mount Elder	O	58-58-26	135-51-12	None	Cu,Zn	Disseminated psilomelane, Py, secondary Cu minerals in siliceous gangue in volcanic rocks.	?	Wells and others, 1986, p.15.
JU003	Casement Glacier, E of	O	58-56-12	135-57-00	A012079	Cu,Mo	Py in altered zones1.6 to 10 m thick in granitic rock near contact with hornfels; composite and grab samples contained up to 500 ppm Cu, 5 ppm Mo.	?	Wells and others, 1986, p.17; Berg, 1984, p.154.
JU004	Berg Mountain	O	58-57-3-	135-41-56	A012108	?	Tr yttrium in Py-bearing siliceous rock.	?	Wells and others, 1986, p.25; Berg, 1984, p.154.
JU005	Berg Creek	O	58-57-33	135-37-58	None	Cr(?)	Stream-sediment samples from several km square area contained 700 to 2,000 ppm Cr.	?	Wells and others, 1986, p.26; Berg, 1984, p.154.
JU006	Sullivan River, head of	O	58-58-00	135-33-10	A012105	As,Co,Cu,Zn	Po, Ccp, Py(?)-bearing greenschist; one sample contained Tr Co.	?	Wells and others, 1986, p.27; Berg, 1984, p.154.
JU007	Dream-Opus, loc. 1	O	58-57-12	135-26-11	None	Ag,Au	Py-bearing Qtz veins and pods in phyllite.	36a	Wells and others, 1986, p.27; USBM press release, 1987
JU008	Dream-Opus, loc. 2	P	58-56-49	135-25-39	None	Ag,As,Au,Co, Cu,Zn	Stratiform massive and disseminated sulfide in low-grade metamorphic rocks; first sampled by USGS in 1986; "discovered" by USBM in 1987; assays up to 3.5 oz/T Au, 7.3 oz/T Ag, 2.1% Cu reported.	24b(?)	Clough and Hayden, 1988; USBM press release, 1987.
JU009	Mount Young, #2	O	58-53-15	135-34-27	A012104	Ag,Au,Cu,Mo, W	Irregular, discontinous Fe-stained Py-bearing zones in metasedimentary and metavolcanic rocks; grab samples contained up to 1,500 ppm Zn, T-also some Ag, Cr, Cu, Mo, Pb, V; one 5 m long chip sample contained 0.1 ppm Au, 20 ppm Ag, also Cu, Pb, Zn.	23(?)	Wells and others, 1986, p.31; Berg, 1984, p.155.
JU010	Mount Young, #1	O	58-54-30	135-37-12	A012097	Ag,Au,Cu,Mo, Pb,Zn	Ccp and secondary Zn mineral (?) reported from short Qtz veins,15 cm thick and altered zones a few m thick in metamorphic and intrusive rocks; sample reported to have contained anomalous amount of Ag.	22c(?)	Wells and others, 1986, p.32; Berg, 1984, p.155.
JU011	Adams Inlet	O	58-52-00	135-58-44	A012112	Ag,Co,Cu,Mo, Sn	Py, Ccp, Po along fractures in amygdaloidal basalt flows near altered basalt dikes; Py, Ilm, Mag disseminated in the dikes; one grab sample from 1.3 m thick altered zone contained 1 ppm Ag, 300 ppm Co, 500 ppm Cu, 30 ppm Mo; chip samples contained 150 to 300 ppm Cu, 11 to 30 ppm Mo; one sample contained 10 ppm Sn.	23	Wells and others, 1986, p.18; Berg, 1984, p.156.
JU012	White Glacier	O	58-49-32	135-55-37	A012113	Ag,Cu Sr,Zn,	Small stratiform pods and disseminated Py	28c	Wells and others,

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
						barite(?)	in Permian andesite and associated sedimentary rocks; Fe-stained zone 2.4 m thick in limestone near contact with volcanic rocks and a mafic dike consists of Ccp, Sp, Ag, Au, barite, witherite, Sr minerals in Py-bearing chert; chip samples across this zone contained up to 4.5% Zn, 0.19% Cu, 7 ppm Ag, 5,000 ppm Ba, 5,000 ppm Sr.		1986, p.19; Berg, 1984, p.156.
JU013	White Glacier, area 3	O	58-49-02	135-55-12	A012115	Ag,Cu,Sr,Zn, barite(?)	See above description.	28c	Wells and others, 1986, p 19; Berg, 1984, p.156.
JU014	Mount Young, #3	O	58-51-36	135-35-12	A012078	Cu,Zn	Py, Ccp in cellular siliceous matrix associated with volcanic rocks.	?	Wells and others, 1986, p.34; Berg, 1984, p.155.
JU015	Endicott Gap	O	58-50-35	135-40-27	A012109	Cu,Zn	Veinlets of Bn,Ep, and secondary Cu minerals associated with volcanic rocks.	?	Wells and others, 1986, p.35; Berg, 1984, p.155.
JU016	Sandy Cove	M*	58-43-28	135-58-31	A-12081	Ag,Au,Cu,U, W,REE	Py, Ccp, Bn, Sch, Au, Ag, secondary Fe and Cu mineral-bearing Qtz veins 2.5 to 30 cm thick and altered zones up to 3 m thick in monzonite that intrudes and hornfelses limestone; Ccp also in altered monzonite and one contact metamorphic zone; test shipments of selected material contained 0.37 oz/T au, 0.15 oz/T Ag; other samples contained up to 0.96 oz/T Au,2.4 oz/T Ag.	22c(?)	Wells and others, 1986, p.21; Berg, 1984, p.161.
JU017	Miller Peak	P	58-43-39	135-54-27	A012106	Ag,Cu	Widely-spaced Py,Ccp, Mal-bearing Qtz-Cal veins conformable with bedding in limestone or marble extend for a few 100's of m along strike; channel samples contained 0.42 to 1.5% Cu, and up to 0.7 ppm Ag.	22c	Wells and others, 1986, p.20; Berg, 1984, p.160.
JU018	Triangulation Station Val	O	58-43-30	135-15-00	None	Zn(?)	Py, Mag in Fe-stained greenstone.	?	Wells and others, 1986, p.38.
JU019	William Henry Bay	P	58-45-36	135-15-00	A012096	Cu,Pb,Zn,REE	Py, Ccp, Gn, Sp(?), thorianite, euxenite in veinlets in small Tertiary(?) Qtz monzonite pluton; one sample reported to contain 0.20% eU.	FP/UREE	Wells and others, 1986, p.40; Berg, 1984, p.161.
JU020	Alaska-Endicott	M*	58-41-47	135-15-07	A012080	Ag,Au,Cu	Ccp, Py in faulted Qtz breccia vein about 3 m wide in greenstone and lava flows; 200 T ore mined in early 1920's contained 48.38 oz Au, 20 oz Ag; Cu ore reported shipped in 1923, but no data on Cu content available.	22c	Wells and others, 1986, p.43; Berg, 1984, p.162.
JU021	York Creek	P	58-38-51	135-55-27	A012095	Au,Co,Cu,Ni	Py-rich Qtz veins up to 15 cm thick and altered zones containing pods of Py in hornfels; nearby Fe-stained zone in siliceous limestone contains 5 to 10% Po; various samples contain Tr Au, up to 2,000 ppm	22c	Wells and others, 1986, p.24; Berg, 1984, p.161.

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							Cu; locally anomalous Co, Mo, Ni also reported.		
JU022	Peak 3051, Excursion Inlet	O	58-27-37	135-33-31	None	Cu	Diorite near peak contains about 2% Po.	?	Wells and others, 1986, p.47; Berg, 1984, p.162.
JU023	Exray, Pit #6	P	58-25-12	135-32-22	A012110	Ag,Cu	Ccp in Cal veins in calcareous argillite and in zones in limestone breccia; samples contained from 80 to 4,300 ppm Cu across widths of 30 cm to 2 m; one grab sample contained Tr Ag.	22c	Wells and others, 1986, p.50; Berg, 1984, p.163.
JU024	Alaska Silver King	O	58-27-00	135-26-12	None	Ag	Metasedimentary rocks contain Py, Sd, ferroan Dol; also carbonate breccia with Py, Po.	?	Clough and Hayden, 1988
JU025	Home Shore	O	58-15-57	135-18-12	None	Cu,Pb,Zn	Narrow Qtz veins contain Gn, Sp, Ccp.	22c	Clough and Hayden, 1988
JU026	Buttercup, Howard Bay	M*	58-17-39	135-03-27	A012107	Ag,Cu,Pb,Zn	Qtz-Cal veins contain Ccp, Sp, Py, Gn; reported shipment of 7 T ore in 1920's assayed 44 oz/T Ag, 3.55% Cu, Tr Zn.	22c(?)	Wells and others, 1986, p.54; Berg, 1984, p.163; Clough and Hayden, 1986
JU027	Lincoln Island	P	58-31-00	135-01-00	None	Cu	Py, Po in blebs and stringers up to several cm thick and several cm long.	23(?)	Clough and Hayden, 1986, p.10-11.
JU028	Barron	P	58-17-41	134-50-00	A012098	Ag,Au,Cu(?), Pb	3 m thick Mag- and Po-bearing skarn.	18c	Wells and others, 1986, p.60.
JU029	Portage	P	58-17-00	134-50-42	A012114	Au,Cu,Pb	Ccp, Py, minor Gn in lenticular Qtz masses in slate; early 1900 assays show low Au values.	36a(?)	Wells and others, 1986, p 61; Berg, 1984, p.178.
JU030	Mansfield	P	58-15-41	134-51-10	A012077	Au,Cu,Pb,Zn	Qtz veins 1 to 2 m wide contain Ccp, Po, minor Sp, Gn.	22c	Wells and others, 1986, p 66; Berg, 1984, p.178.
JU031	Bear Creek	P	58-15-27	134-48-00	None	Asbestos	Tremolite (not chrysotile) asbestos in amphibole schist; brittle fibers up to 20 cm long.	N.A.	Wells and others, 1986, p 67; Berg, 1984, p.178.
JU032	Admiralty-Alaska, Willoughby	M*	58-14-30	134-51-41	A010691, A012091	Au,Cu,Pb,Zn	Qtz veins in schist, phyllite and other metamorphic rocks contain Au, Py, Po, Gn, Sp, Ccp; 10,000 to 15,000 oz Au produced in early 1900's.	22c	Wells and others, 1986, p.69; Berg, 1984, p.179.
JU033	Admiralty-Alaska, Mertie	M	58-14-33	134-52-06	A012087, A012091	Co,Cu,Ni	Gabbronorite pipe intrudes Qtz-mica schist; Po, Pnt, Ccp concentrated in Ol-Hbl gabbro in keel of pipe; other gabbro and norite contain less sulfide. Reserves: USGS indicated(?) estimate: 560,000 T with 0.35% Cu, 0.34% Ni, 0.15% Co. Also: USBM estimated inferred figure exists, but is not yet available.	7a	Wells and others, 1986, p.70; Berg, 1984, p.179; Baggs and others, 190.

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
JU034	Alaska Dano, Warhorse	M*	58-13-02	134-52-12	None	Ag,Au,Cu,Pb, Zn	Numerous Qtz fissure veins in mica and Chl schist contain Py, Po, Gn, Sp, Ccp, Au, secondary Fe, Cu minerals; reported assays indicate high Ag values.; two ore shipments in early 1900's contained about 5.8 and 3.9 oz/T Au; total production probably <100 oz Au.	22c	Wells and others, 1986, p.72; Berg, 1984, p.179.
JU035	Nowell-Otterson, Big Thing	P	58-12-30	134-52-04	A012089	Ag,Au,Cu,Pb, Zn	Veins in Qtz-mica and Chl schist and graphitic schist contain Po, Py, Gn, Hem, Ccp, Au.	22c(?)	Wells and others, 1986, p.73.,
JU036	Robert Barron Peak, S of	O	58-11-58	134-50-00	A012093	Cu,Pb	Disseminated Py, Po, Gn in Sd-cemented Qtz breccia.	?	Wells and others, 1986, p.74; Berg, 1984, p.182.
JU037	Williams Vein, Alaska Empire	M*	58-11-00	134-47-07	A012085	Ag,Au,Cu,Pb, Zn	Qtz fissure veins up to 15 m thick in Qtz-mica schist and phyllite contain Ag, Au, Py, Gn, Sp, Ccp; in 1926 assays indicated Au and Ag values of $12/T; production through 1940 totalled >$200,000.	22c	Wells and others, 1986, p 77; Berg, 1984, p.180.
JU038	Alaska Rand	P	58-10-12	134-44-23	A012088	Ag,Au	Mineralized Qtz lenses in phyllite, schist, and greenstone contain Py, Apy; may actually be the same location as JU037.	?	Wells and others, 1986, p.80.
JU039	Hawk Inlet, W of	O	58-07-41	134-46-51	A012092	Cu	Py, minor Ccp in schist.	?	Wells and others, 1986, p 82; Berg, 1984, p.182.
JU040	Mammoth	P	58-06-41	134-38-37	A012084	Ag,Au,Pb,Zn	Few 100's of m wide belt of Qtz-Ms-Chl schist and minor calcsilicate schist contains disseminated Py; 3 E-trending zones 8 to 20 m wide in the belt have 2.5 to 15 cm thick Qtz-carbonate-mariposite veins containing Py, Sp, Gn, Au; high Au, Ag assays reported	28c	Wells and others, 1986, p.88; Berg, 1984, p.180.
JU041	Mariposa Ridge, N of	O	58-06-30	134-40-47	None	As,Zn	Shear zone in carbonate contains 5 to 10% mariposite and Qtz stringers with Py.	?	Wells and others, 1986, p.90.
JU042	Mariposa Ridge	O	58-05-59	134-40-52	A012086	Ag,Au,Ba,Pb, Zn	Shear zone in dolomite with sulfide-bearing Qtz stringers, one vein sample contained 0.3% Zn, 0.7%Pb, 0.25 ppm Ag; one Qtz-rich metavolcanic sample contained 0.5% Ba, Tr As, Tr Ag, Tr Au.	?	Wells and others, 1986, p.92.
JU043	Mariposa Ridge, E end of	O	58-06-30	134-37-00	None	As,Pb,Zn, barite	Dark brown cellular Lm gossan.	?	Wells and others, 1986, p.91.
JU044	Greens Creek	M*	58-04-42	134-37-31	A010663, A012083	Ag,Au,Bi,Cu, Pb,Sb,Zn	Stratiform massive sulfide lenses in Upper Triassic metavolcanic rocks; sulfides include Py, Po, Sp, Gn, Ccp; massive sulfide lenses are 15 cm to 25 m thick. Reserves: indicated estimate in 1987: 3.5 million T with 3.9% Pb, 9.7% Zn, about 23.8 oz/T Ag, 0.18 oz/T Au. Production started in 1989, amount produced	28c	Wells and others, 1986, p.95; Berg, 1984, p.181.

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							to date not known.		
JU045	Lines	O	58-01-52	134-48-07	None	Cr,Ni,Zn	Disseminated sulfide and oxide minerals in serpentinized ultramafic sill.	7a(?)	Wells and others, 1986, p.98; Berg, 1984, p.181.
JU046	Salmon River junction	O	58-04-17	134-27-27	A012082	REE	X-ray spectographic analysis of heavy minerals from pegmatite dikes shows Ci, La, Nd, Nb, Pr, Th(?), Y, Zr.	?	Wells and others, 1986, p.97; Berg, 1984, p.181.
JU047	Ivanhoe	M*	58-52-51	135-05-58	A012074	Au	Qtz vein 30 cm to 3 m thick (average 1.5 m) in altered Triassic(?) basalt flows; 340 oz Au recovered from 3,000 T ore in early 1900's. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.100; Berg, 1984, p.157; Baggs and others, 1990.
JU048	Ophir	M	58-53-00	135-05-47	A012075	Au	Qtz fissure vein 0.6 to 2 m thick in diorite contains Py; many vugs with large Qtz crystals; Au values reported to be low. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.102; Berg, 1984, p.157Baggs and others, 1990.
JU049	Horrible	M*	58-52-12	135-05-37	A012076	Au	Qtz fissure vein in diorite contains Py; about 73 oz Au recovered from 500 T of ore in early 1900's. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.103; Berg, 1984, p.157; Baggs and others, 1990.
JU050	Bear	M*	58-52-27	135-05-28	A012116	As,Au,Cu	1.5 m wide Qtz vein in diorite contains Py, Ccp, Apy; about 5,500 T ore mined in late 1800's. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.105; Berg, 1984, p.157; Baggs and others, 1990.
JU051	Kensington	M*	58-52-00	135-05-00	A012101	Ag,Au,Pb	Qtz veins in stockworks and shear zones in diorite contain Py, Gn; about 12,000 T ore mined in early 1900's. Reserves: 20 million Tat 0.14 oz/T reported.	36a	Wells and others, 1986, p.106; Berg, 1984, p.157; Bundtzen and others, 1988, p.12-13; Kleeschulte, 1989, p.7.
JU052	Eureka	M	58-52-12	135-05-10	A012102	Ag,Au,Pb	Close to, and similar to, Kensington(JU051) Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.106; Berg, 1984, p.158; Baggs and others, 1990.
JU053	Johnson, Gold King	P	58-52-02	135-04-50	A012100	Au	Stockwork of Py-bearing Qtz stringers in shattered country rock at contact of diorite and hornfelsed greenstone country rock; sampling about 1900 indicated an ore body about 460 m long, 15 to 21 m wide, with minimum average grade of about 0.189 oz/T. USBM estimated inferred figures exist for both Johnson and Gold King, but are not yet available; USBM also has an inferred figure for the Seward, which is nearby.	36a	Wells and others, 1986, p.107; Berg, 1984, p.158; Baggs and others, 1990.

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
JU054	Northern Belle	M*	58-51-52	135-04-37	A012094	Au	Au- and sulfide-bearing Qtz fissure vein between diorite and Chl schist; nearly 23,000 T ore produced in late 1800's. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.108; Berg, 1984, p.158; Baggs and others, 1990.
JU055	Comet	M*	58-51-30	135-04-00	A012103	Au,Cu,Pb	Py-, Ccp-, Gn-bearing Qtz fissure veins 0.6 to 2.5 m thick in diorite near, but at right angle to, contact with slate and graywacke; about 22,250 oz Au recovered from about 50,000 T ore in late 1800's. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.111; Berg, 1984, p.158; Baggs and others, 1990.
JU056	Greek Boy	P	58-20-10	134-59-32	A012117	Au	Py in zone of Qtz veins in Qtz diorite along sheared contact with altered basalt; disseminated sulfide in slate nearby.	?	Wells and others, 1986, p.122; Berg, 1984, p.159.
JU057	Indiana	P	58-50-49	135-02-47	A012063	Au(?),Cu(?)	Py, minor Ccp in Qtz stringers in very sheared diorite.	?	Wells and others, 1986, p.116; Berg, 1984, p.159.
JU058	Jualin	M*	58-50-30	135-02-42	A012016, A010694	Au,Cu,Pb,Zn	Qtz fissure veins in shear zones in altered diorite contain Au, Py, Ccp, Gn, minor Sp, secondary Cu minerals; 4 or 5 veins developed, one had about 1.5 oz/T Au, others indicate about 48,375 oz Au produced in early 1900's; currently being reopened. Reserves: estimated "probable and possible" reserve of 1.19 million T with 0.236 oz/T Au.	36a	Wells and others, 1986, p.115; Berg, 1984, p.159; International Curator Resources Ltd. 1988 Annual Report.
JU059	Fremming	P	58-49-40	135-01-26	A012022	Au,Cu,Pb,Zn	2 m wide zone of sulfide-bearing schist and Qtz stringers contains Py, Ccp, Gn, Sp, Au; developed in early 1900's. Reserves: USBM inferred figure exists, but is not yet available.	36a(?)	Wells and others, 1986, p.118; Berg, 1984, p.160; Baggs and others, 1990.
JU060	Tacoma	P	58-42-37	134-54-00	A012033	Au(?)	Qtz veins in black slate contain Py.	?	Wells and others, 1986, p.126; Berg, 1984, p.163.
JU061	Gold Standard	P	58-40-07	134-53-42	A012023	Au(?)	Qtz stringer zone 0.6 to 2 m thick in slate next to greenstone footwall contains Apy, Gn; samples across a 1.4 m width contained about 0.3 oz/T Au. Reserves: USBM inferred figure exists, but is not yet available for Gold Standard and California combined.	36a(?)	Wells and others, 1986, p.128; Berg, 1984, p.164; Baggs and others, 1990.
JU062	California	P	58-39-39	134-53-00	A012072	As,Au,Pb	1 m thick zone of Qtz, carbonate, Apy, Gn, Au(?) in schist and slate along contact with greenstone. Reserves: USBM inferred figure exists, but is not yet available for Gold Standard and California combined.	36a(?)	Wells and others, 1986, p.128; Berg, 1984, p.164; Baggs and others, 1990.
JU063	Aurora Borealis	M*	58-35-51	134-52-02	A012073	As,Au,Pb	Qtz vein up to 1 m wide in black slate near	36a	Wells and others,

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							contact with greenstone and associated clastic rocks contains Au, Apy, Py, minor Gn; about 266 oz Au produced in late 1800's. Reserves: USBM inferred figure exists, but is not yet available. USBM also has reserve figure for nearby Yankee Boy.		1986, p.131; Berg, 1984, p.164; Baggs and others, 1990.
JU064	Bessie	M*	58-35-30	134-52-00	A012030	As,Au,Pb,Zn	Vertical Qtz vein 15 cm to 1.6 m thick in greenstone contains minor Apy, Py, Sp, Gn, Au; test shipment of a few T of ore; no other production. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.132; Berg, 1984, p.164; Baggs and others, 1990.
JU065	Alaska-Washington	M	58-35-00	134-51-27	A012065	Au,Zn	Qtz fissure vein in grenstone contains Py, minor Sp. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.133; Berg, 1984, p.164; Baggs and others, 1990.
JU066	Joyce-Jensen, Maud S., Blue Jay	M	58-36-30	134-49-00	A012067	Au	Joyce-Jensen is Qtz stringer lode about 3 m thick in slate; reported to have 0.34 oz/ T Au; Maud S. is 1.3 to 1.4 m thick Qtz stringer lode in slate with about 0.33 oz/T Au; Blue Jay is Qtz stringer lode in slate with 0.33 oz/T Au. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.129; Berg, 1984, p.165; Baggs and others, 1990.
JU067	Black Chief	M	58-36-30	134-47-00	A012032	Au,Pb	Qtz stringers in crushed black slate in zone 1.1 to 6 m wide contain minor Py, Gn, Au(?). Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.130; Berg, 1984, p.165; Baggs and others, 1990.
JU068	E Pluribus Unum, Cottrell-Spaulding(?)	M	58-36-00	134-47-51	A012070	As,Au,Pb,Zn	2.4 m thick Qtz stringer lode in 10.5 m disseminated sulfide zone in graywacke and slate contains Apy,Gn, Sp, Au; main workings were on a 45 cm wide vein that contained 9.7 to 14.5 oz/T Au for a length of 5.5 m; Cottrell-Spaulding may be the same as the E Pluribus Unum. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.135; Berg, 1984, p.165; Baggs and others, 1990.
JU069	Dividend, Julia, Noonday	P	58-35-10	134-47-58	A012071	As,Au,Pb	Qtz-Cal stringer lode in black slate near greenstone footwall contains Py, Apy, Gn, Au across a 3.6 m width. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.136; Berg, 1984, p.166; Baggs and others, 1990.
JU070	Rex, Puzzler	M*	58-35-00	134-48-00	A012031	As,Au,Pb	Rex is Apy-bearing Qtz-Cal vein reported to have produced about 145 oz Au in 1903; Puzzler is Qtz stringer lode 4.3 m wide in slate.	36a	Wells and others, 1986, p.136; Berg, 1984, p.167.
JU071	Cascade	P	58-35-00	134-47-32	A012068	Au,Pb,Zn	2 m wide Qtz stringer lode in slate contains Apy, Gn, Sp; slate contains dissem-	36a	Wells and others, 1986, p.137; Berg,

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							inated Py; footwall is Aug porphyritic basalt; 1.5 m width of stringer lode reported to contain 0.58 oz/T Au.		1984, p.166.
JU072	Eagle River, Amalga	M*	58-34-30	134-46-27	A012017	Au,Cu,Pb,Zn	Qtz veins in shattered slate interlayered with mafic and felsic igneous rocks contain Py, Po, Apy, Gn, Ccp,Cu, Au; ore bodies were 5.2 to 3 m wide and 7.5 to 30 m long and were offset up to a few hundred m by faults; production in early 1900's was about 23,000 oz Au. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.139; Berg, 1984, p.167; Baggs and others, 1990.
JU073	Mother Lode	P	58-34-20	134-51-00	None	Au(?)	Altered greenstone next to Qtz masses contains Apy, Py. Reserves: USBM inferred figure exists, but is not yet available.	?	Wells and others, 1986, p.140; Berg, 1984, p.165; Baggs and others, 1990.
JU074	Olsen	P	58-33-30	134-46-12	A012066	As,Au(?)	Qtz veins in slate next to volcanic rocks contain rock fragments with Apy. Reserves: USBM inferred figure exists, but is not yet available.	?	Wells and others, 1986, p.142; Berg, 1984, p.167; Baggs and others, 1990.
JU075	Mitchell and McPherson	P	58-33-00	134-43-33	A012069	Au,Pb	Qtz-, Py-, Gn-bearing breccia zone 2 m thick cuts layering in dioritic gneiss; reported to have 0.25 to 0.58 oz/T Au. Reserves: USBM inferred figure exists, but is not yet available.	?	Wells and others, 1986, p.143; Berg, 1984, p.167; Baggs and others, 1990.
JU076	Moerlein	P	58-31-47	134-41-52	None	Au	Retreat of Herbert Glacier has exposed 2 sets of Qtz veins containing Py, Apy, Gn in shears in Bt-Qtz gneiss; northernmost vein is 1.5 m wide and 134 m long; potassic alteration in footwall of veins. Reserves: USBM inferred figure exists, but is not yet available.	36a	Redman and others, 1988, p.12; Baggs and others, 1990.
JU077	Summit, St. Louis	P	58-31-49	134-40-31	A012034	As,Au	St. Louis is Apy, Py, Gn-bearing shear zone about 2.1 m thick in Qtz diorite gneiss; reported to average 0.25 oz/T Au; Summit is Qtz vein 15 to 290 cm thick and 9 m long with Apy, Au that cuts layering in Qtz diorite gneiss.	36a	Wells and others, 1986, p.144; Berg, 1984, p.168.
JU078	Windfall Creek	M*	58-29-30	134-42-52	A012024	Au	Qtz veins in schist contain Apy, Gn, Py, Sp, minor Ccp, Au; placer Au mined intermittently 1882 to 1906; no record of lode or placer production.	?	Wells and others, 1986, p.145; Berg, 1984, p.168.
JU079	Smith & Heid, prospect near	P	58-29-00	134-40-02	A012012	Ag,As,Au,Pb, Sb	See Smith & Heid(JU080)	36a(?), 22c(?)	Wells and others, 1986, p.146; Berg, 1984, p.168.
JU080	Smith & Heid	P	58-28-52	134-39-55	A012011	Ag,As,Au,Pb, Sb	Qtz vein and Chl schist contain Apy; country rock is mainly black, schistose graywacke which locally contains disseminated Py, Apy. Reserves: USBM inferred figure exists, but	36a(?), 22c(?)	Wells and others, 1986, p.146; Berg, 1984, p.168; Baggs and others, 1990.

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							is not yet available.		
JU081	Patton	P	58-28-30	134-39-00	A012019	As,Au,Cu,Pb, Zn	Qtz -sericite schist contains Qtz stringers and locally disseminated or massive Gn, Sp, Py, minor Apy, Ccp; stringer lodes and one or two Qtz veins up to 60 cm thick contain a little Au.	?	Wells and others, 1986, p.147; Berg, 1984, p.168.
JU082	Montana Creek	M*	58-28-00	134-40-29	A012014	Au	Placer Au recovered from creek 1880 to 1892; Au probably derived from local Qtz veins in schist and slate. See JU080 also.	39a	Wells and others, 1986, p.150.
JU083	McGinnis Creek	M*	58-27-15	134-37-05	A012020	Au	Placer Au mined in early 1900's from talus cone in valley; Au rough and mostly fine; probably derived from local Qtz veins in slate.	39a+/-	Wells and others, 1986, p.148; Berg, 1984, p.169.
JU084	Peterson Lake	M*	58-26-30	134-43-10	A012015	As,Au,Pb,Zn	Large tabular masses of Qtz with some stringers extending out into country rock contain Apy, Au; several 100 T ore reported mined in early 1900's with average grade of 0.3 oz/T Au. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.149; Berg, 1984, p.169; Baggs and others, 1990.
JU085	Auk, Treasury Hill	P	58-25-00	134-40-00	A012013	As,Au,Pb	15 m wide zone of Apy-bearing Qtz veins cut slate and mafic igneous rocks that locally contain Apy, Py, Po; vein material contains up to 0.145 oz/T Au. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.153; Berg, 1984, p.169; Baggs and others, 1990.
JU086	Mendenhall	P	58-25-28	134-35-30	A012025	As,Au,Pb	Qtz veinlets in interlayered slate and Chl schist contain sparse Po, Apy, Gn; slate next to stringers locally contains abundant disseminated Apy; nearby mafic dike 30 m wide contains irregular Qtz-Cal veinlets with a little Po, Au.	36a	Wells and others, 1986, p.155; Berg, 1984, p.169.
JU087	Nugget Creek	O	58-25-50	134-28-10	A012010	Au	Small Au nuggets in thin gravel beds.	39a	Wells and others, 1986, p.158; Berg, 1984, p.170.
JU088	Dull and Stephens	P	58-25-30	134-35-30	A012018	As,Au,Cu,Pb	Irregular masses of Au-bearing Qtz in altered volcanic breccia; little Apy, Py in country rock next to Qtz masses. Reserves: USBM inferred figure exists, but is not yet available.	?	Wells and others, 1986, p.156; Berg, 1984, p.170; Baggs and others, 1990.
JU089	Winn	P	58-22-50	134-37-49	A012064	Au(?)	Qtz-Ab-carbonate veinlets cut an altered dike which, near the veinlets, contains disseminated Py, Apy.	?	Wells and others, 1986, p.157; Berg, 1984, p.170.
JU090	Lemon Creek, Upper	M*	58-23-58	134-24-42	None	Au,Cu,Pb,Zn	A little placer Au mined in early 1900's from gravel on glacial clay in bedrock-dammed basin; Nearby two narrow Qtz veins in a gneissic diorite dike contain Po, Gn, Sp, Ccp.	39a, 22c(?)	Wells and others, 1986, p.163; Berg, 1984, p.170.

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
JU091	Clark	P	58-22-35	134-25-37	A012007	Au,Cu	Qtz veins up to 1 to 1.3 m thick in slate mafic igneous rocks contain Po and a little Ccp; highest Au values about 0.05 oz/T Au.	36a	Wells and others, 1986, p.164; Berg, 1984, p.170.
JU092	Lemon Creek, Lower	M*	58-22-27	134-28-10	A012009	Au	Placer mining in gravel overlying glacial clay in early 1900's.	39a	Wells and others, 1986, p.162.
JU093	Doran	P	58-20-37	134-28-10	A012004	Au(?)	Shattered, sheared,and altered Ab diorite dike is cut by Py-bearing Qtz-Ab-carbonate veinlets.	36a(?)	Wells and others, 1986, p.166; Berg, 1984, p.171.
JU094	Wagner	M*	58-20-00	134-27-32	A012045	As,Au,Cu,Pb, Zn	At least one vein 2.4 m thick between slate and greenstone contains Qtz, Ab, carbonate, mica, Rt, Apy, Py, Ccp, Sp, Gn, Td; possible minor production; no data on Au content. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.167; Berg, 1984, p.171; Baggs and others, 1990.
JU095	Boston	M	58-18-28	134-24-37	A012037	Au	Sulfide-bearing Qtz veinlets and disseminated sulfides in Ab diorite dike; low Au values. Reserves: USBM inferred figure exists, but is not yet available.	36a(?)	Wells and others, 1986, p.171; Berg, 1984, p.171; Baggs and others, 1990.
JU096	Hallam	P	58-18-52	134-23-25	A012044	Au	Qtz veins in black slate between greenstone footwall and schist hanging wall contain Au; disseminated Py in slate and greenstone.	?	Wells and others, 1986, p.170; Berg, 1984, p.171.
JU097	Gold Creek placer	M*	58-19-00	134-21-42	A012042	Ag,Au	Residual placers on lode deposits and stream placers in bedrock basins; total Au production, 1880 to 1940, about 63,280 oz.	39a	Wells and others, 1986, p.174; Berg, 1984, p.174.
JU098	Ebner	M*	58-18-32	134-22--03	A012043	Ag,Au,Cu,Pb, Zn, barite	Part of Alaska-Juneau lode system described under JU101.	36a	Wells and others, 1986, p.173; Berg, 1984, p.174.
JU099	Last Chance Basin placer	M*	58-18-23	134-23-00	A012035	Ag,Au	Part of Gold Creek placer system described under JU097.	39a	Wells and others, 1986, p.172; Berg, 1984, p.174.
JU100	Silver Bow Basin placer	M*	58-18-32	134-20-32	A012041	Ag,Au	Part of Gold Creek placer system described under JU097.	39a	Wells and others, 1986, p.177; Berg, 1984, p.174.
JU101	Alaska-Juneau	M*	58-17-42	134-20-25	A012057, A010693	Ag,As,Au,Cu, Pb,Zn	Network of Qtz veins in Perseverance Slate and metagabbro near footwall contact with Gastineau Volcanics greenstone; slate and metagabbro locally contain disseminated Po, Py; Qtz veins contain Au, Py, Po, Apy, Gn, Sp,Ccp, Ag; vein system is about 100 m wide and 2.2 km long and is divided into north and south parts by the Silverbow fault; total production, including mill clean-up after mine closure, was about 3.5 million oz Au, 1.9 million oz Ag, 40.2 million lb Pb from 88.5 million T ore (of which 47.2	36a	Wells and others, 1986, p.178; Berg, 1984, p.174; McAllister, 1989, p.1,8.

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							million T were milled); mine is currently being evaluated for possible reopening. Reserves: all discovered reported to be 100 million T with 0.047 oz/T Au.		
JU102	Silver Falls	P	58-18-22	134-15-45	A012021	Ag,Au,Pb,Sb, Zn	Qtz veins in breccia zones in schist and gneiss contain sparse Py, stibnite, Apy, Sp, Gn; selected samples contained 0.12 to 1.03 oz/T Au; one sample with stibnite contained 4.25 oz/T Ag. Reserves: USBM inferred figure exists, but is not yet available.	36a(?), 22c(?)	Wells and others, 1986, p.223; Berg, 1984, p.175; Baggs and others, 1990.
JU103	Alaska-Juneau rock dump	P(?)	58-17-12	134-22-55	A012006	Au,Pb,W,Zn	Sluice-box concentrate contained Sp, Gn, Au, Sch. Reserves: USBM inferred figure exists, but is not yet available.	N.A.	Wells and others, 1986, p.183; Berg, 1984, p.174; Baggs and others, 1990.
JU104	Groundhog	M*	58-17-12	134-19-30	A012039	Ag,As,Au,Cu, Pb,Zn	Part of Alaska-Juneau lode system described under JU101.	36a	Wells and others, 1986, p.181; Berg, 1984, p.174.
JU105	Perseverance	M*	58-17-37	134-21-10	A012058	Ag,As,Au,Cu, Pb,Zn	Part of Alaska-Juneau lode system described under JU101.	36a	Wells and others, 1986, p.181; Berg, 1984, p.174.
JU106	Lurvey Basin placer	P	58-18-00	134-20-00	A012052	Au	Au-bearing gravel in small lake and in talus above lake.	39a	Wells and others, 1986, p.180; Berg, 1984, p.175.
JU107	Bull Consolidated	M*	58-18-17	134-18-12	A012051	Au	Au-bearing lode; some ore reported produced for testing in 1905.	?	Wells and others, 1986, p.179; Berg, 1984, p.175.
JU108	Lurvey Amplitheater placer	O	58-17-30	134-19-35	A012053	Au	Gravel in cirque reported to contain Au.	39a	Wells and others, 1986, p.182; Berg, 1984, p.175.
JU109	Ibex, Silver Queen, Glacier, Copper Streak	M*	58-17-00	134-17-12	A012056	Ag,As,Au,Cu, Pb,Sb,Zn	Qtz vein system SE of and on strike with Alaska-Juneau (JU101); 120 m wide zone contains several en echelon, lenticular veins in black slate and greenstone; veins are up to 3.5 m thick and contain Py, Ag-bearing Gn, Sp, Ccp, Po, Apy, Td, Ag, stibnite, pyrargyrite; slate and greenstone contain disseminated Py; about 22,500 oz Au produced in early 1900's from ore that averaged $40/T (in 1900). Reserves: USBM inferred figure exists, but is not yet available. USBM also has reserve figures for nearby Rubicon and Ascension.	36a(?), 22c(?)	Wells and others, 1986, p.185; Berg, 1984, p.175; Baggs and others, 1990.
JU110	Anderson	P	58-16-42	134-17-52	A012054	Ag(?),Au,Pb, Zn	Qtz veins 0.6 to 1.2 m thick and Qtz stringers in Py-bearing black slate contain Py, Sp, Gn; Au, Ag probably present.	36a	Wells and others, 1986, p.186; Berg, 1984, p.176.
JU111	Golden Treasure	P	58-16-37	134-17-28	A012005	Au(?)	Small Qtz stringers in phyllite contain Apy, Py; no Au or Ag in samples collected	36a(?)	Wells and others, 1986, p.189; Berg,

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1. Map No.	2 Name	3 Category	4 Location Latitude	Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							by USGS in 1983.		1984, p.176.
JU112	Gould & Curry	M*	58-16-58	134-16-10	A012055	Au,Cd,Cu,Zn	Three Qtz veins about 40 cm thick in Py-bearing slate and schistose metaigneous rock contain Sp, Po, Ccp(?), Py, Au; 1895 production reported to be 1,250 oz Au. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.188; Berg, 1984, p.176; Baggs and others, 1990.
JU113	Reagan	P	58-16-30	134-17-00	A012040	Ag,Au,Cu,Pb, Zn	Qtz vein in Py-bearing black slate contains Gn, Sp, Ccp,Py, Td; electrum in seams and fractures. Reserves: USBM inferred figure exists, but is not yet available.	36a	Wells and others, 1986, p.190; Berg, 1984, p.176; Baggs and others, 1990.
JU114	Alaska Gold Belt, Nelson-Lott	P	58-16-00	134-16-00	A012002	Au,Pb,Zn	Qtz-Cal veins and stringers in slate, schist, and altered gabbro contain Sp, Py, Po, Gn; larger veins reported to have up to 34 ppm Au.	36a	Wells and others, 1986, p.194.
JU115	Middle Peak	O	58-15-33	134-15-00	A012003	Cu,Pb	Qtz veins in metavolcanic rocks contain Py, Ccp, secondary Cu minerals; metavolcanics locally contain a little Gn, Ccp.	36a(?), 22c(?)	Wells and others, 1986, p.195; Berg, 1984, p.177.
JU116	Alaska-Taku	P	58-14-32	134-13-27	A012027	As,Au,Cu,Zn (all ?)	Qtz stringer lodes in slate.	?	Wells and others, 1986, p.218; Berg, 1984, p.177.
JU117	Penn-Alaska	P	58-12-47	134-10-12	A012028	Au(?)	Qtz veins(?) reported to contain Au(?).	36a	Wells and others, 1986, p.225; Berg, 1984, p.177.
JU118	Eagle Creek, middle	O	58-18-12	134-28-00	A012036	(?)	Disseminated and lenticular sulfides in metavolcanic rocks.	?	Wells and others, 1986, p.199.
JU119	Eagle Creek, lower	P	58-18-22	134-27-52	A012029	Ag,Au,Pb,Zn	Narrow layer of altered and silicified metavolcanic rocks contains disseminated Ccp, Py, Sp, Gn.	28c(?)	Wells and others, 1986, p.198.
JU120	Lucy	P	58-17-33	134-26-10	A012038	Au	30 to 60 cm wide Qtz veins and stringers in slate and in greenstone dike; one 1983 USGS sample contained <1ppm Au.	36a	Wells and others, 1986, p.200.
JU121	Douglas Mining Co.	P	58-16-30	134-25-42	A012046	Au,Cu,Zn	Qtz-Cal stringers in altered and sheared diorite dike about 20 m wide in black slate; stringers and diorite(?) contain sparsely disseminated Ccp, Py, Sp; diorite sample reported to contain 0.17 oz/T Au.	36a	Wells and others, 1986, p.204; Berg, 1984, p.172.
JU122	Skookum Chief	P	58-16-35	134-25-07	A011999	Au	Qtz stringers and narrow veins in greenstone surrounded by slate contain Py, Au.	36a	Wells and others, 1986, p.203.
JU123	Jersey City	P	58-15-52	134-23-39	A012048	Au	Greenschist interlayerd with thin slate units both contain locally abundant disseminated(?) sulfides.	?	Wells and others, 1986, p.208; Berg, 1984, p.172.
JU124	Treadwell	M*	58-16-15	134-23-00	A012049	Ag,Au,Cu,Pb	Part of Treadwell group described under JU125.	36a	Wells and others, 1986, p.211.

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
JU125	Treadwell Group (includes Treadwell, 700-Foot, Mexican, Ready Bullion)	M*	58-16-07	134-22-47	A010692	Ag,As,Au,Cu, Mo,Pb,Sb,Sr, W,V	Qtz and Qtz-Cal veins in shattered "albite diorite" (altered Qtz-poor granitic rock) in slate below greenstone hanging wall contain Au, Py, Mag, Mol, Ccp, Gn, Sp, Td, As, realgar, orpiment, Sch; system is >1,070 m long and was mined to depth of >600 m belong adjacent Gastineau Channel; total production 1882 to 1922 was $67.5 million from milling 28.8 million T of ore (breakdown of production by grade and into Au, Ag, Cu, Pb not available). Reserves: USBM inferred figure exists, but is not yet available. USBM also has reserve figure for Treadwell mine group tailings.	36a	Wells and others, 1986, p.210; Berg, 1984, p.173; Baggs and others, 1990.
JU126	700-Foot	M*	58-16-00	134-22-32	A012062	Ag,Au,Cu,Pb	Part of Treadwell group described under JU125.	36a	Wells and others, 1986, p.211.
JU127	Mexican	M*	58-15-52	134-22-23	A012060	Ag,Au,Cu,Pb	Part of Treadwell group described under JU125.	36a	Wells and others, 1986, p.212.
JU128	Ready Bullion	M*	58-15-45	134-22-00	A012059	Ag,Au,Cu,Pb	Part of Treadwell group described under JU125.	36a	Wells and others, 1986, p.213.
JU129	Yakima	M	58-15-14	134-22-37	A012050	Au(?),Pb,Zn	Py-bearing zone in interlayered slate, greenstone, and sericite schist is >100 m wide and > 1.61 km long and contains Qtz, Cal, disseminated Py, and Gn, Sp found on dump. Reserves: USBM inferred figure exists, but is not yet available.	28c	Wells and others, 1986, p.215; Berg, 1984, p.173; Baggs and others, 1990.
JU130	Ready Bullion Creek	O	58-15-15	134-22-00	None	Ag,Au	NW-trending Qtz-feldspar veins in mafic dike and in slate contain 1 to 5% Py; one 1983 USGS sample contained 1,000 ppm V.	?	Wells and others, 1986, p.216.
JU131	Gastineau Channel, including tailings from Alaska-Gastineau mill	P	58-15-30	134-21-07	A012000	Au	Placer operation reworked tailings from Alaska-Gastineau mill (Perseverance Mine-JU105); tailings are Py-rich and contain about 1 ppm Au, Tr Pb, Tr Zn, Tr As. Reserves: USBM inferred figure exists, but is not yet available.	N.A.	Wells and others, 1984, p.180; Baggs and others, 1990.
JU132	Red Diamond, Mammoth	P	58-13-25	134-20-31	A012001	Au(?)	Red Diamond is Qtz-mica schist zone about 11 m thick containing Qtz stringers and disseminated Py; Mammoth is possible continuation of Red Diamond and consists of layers of Qtz-mica schist and slate with Qtz stringers and Py; see also Alaska Treasure (JU133) and Jersey City (JU123). Reserves: USBM inferred figure exists, but is not yet available.	28c	Wells and others, 1986, p.220; Berg, 1984, p.178; Baggs and others, 1990.
JU133	Alaska Treasure	M*	58-13-27	134-19-41	A012026	Ag,As,Au,Bi, Co,Cu,Pb,Zn	1.6 km long, 2.2 km wide altered zone in phyllite, greenstone,and slate includes a sericitized and silicified zone in phyllite and meta-felsic volcanic rocks that is about 25 m wide and 610 m long; within	28c, 36a(?)	Wells and others, 1986, p.221; Berg, 1984, p.177; Baggs and others, 1990.

Table 2-JU. Summary mine, prospect, and mineral-occurrence information for Juneau quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							this zone are narrow Qtz-sericite-Py veins and disseminated Py; other sulfides present are Ccp, Gn, Sp, Po, Td(?); USGS 1983 grab samples averaged 1.0% Zn and contained 0.65 to 1.5 ppm Au; mill test of one T of picked ore contained about 0.34 oz/T Au. Reserves: USBM inferred figure exists, but is not yet available.		
JU134	Nevada Creek	O	58-13-30	134-19-00	None	Au(?)	Py-bearing phyllite.	?	Wells and others, 1986, p.222.

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
KC001	Bailey Bay Hot Springs	N.A.	55-59-00	131-39-48	N.A.	Geothermal	Ten principal springs and many seeps issue from granitic bedrock; intermediate temperature reservoir system; surface temperature 92 degrees C.; combined discharge rate 300 l/min.	N.A.	Motyka and Moorman, 1987.
KC002	Bell Island Hot Springs	N.A.	55-56-00	131-33-24	N.A.	Geothermal	Principal springs 400 m inland and 5 m above high tide line in gneissic granitic rock; intermediate temperature reservoir system; surface temperature 74 degrees C.; combined discharge rate 100 l/min.	N.A.	Motyka and Moorman, 1987.
KC003	Burroughs Bay	P	55-59-43	131-17-53	A012303	Mo	Granite and Qtz porphyry dikes contain disseminated Mol, Mol-Qtz veins, Mol fracture coatings; also disseminated and vein Py.	21b	Berg, 1984, p.187; Berg and others, 1978, p.6.
KC004	Gold Standard	M*	55-38-58	131-59-48	A012304	Au,Bi,Pb	Au-bearing Qtz veins in greenschist(?) contain Py, tetradymite, Gn; main vein 0.15 to 2.0 m thick and 300 m long. Production: probably a few 1,000 oz Au, 1898 to 1941.	36a	Berg, 1984, p.187; Berg and others, 1978, p.6.
KC005	Old Glory	M	55-37-42	132-59-27	A012309	Au	Qtz vein in greenschist and argillite contains Au, sulfides; sulfides also disseminated in country rocks. Reserves: USBM has an inferred estimate, but it is not yet available.	36a	Berg, 1984, p.187; Berg and others, 1978, p.6; Coldwell, 1990.
KC006	Novatney	O	55-37-18	131-59-51	A012306	Au	Au-bearing(?) narrow Qtz veins in schist.	36a	Berg, 1984, p.187; Berg and others, 1978, p.6.
KC007	Gold Mountain	M*	55-37-00	131-59-21	A012305	Au,Cu,Pb	Qtz veins and stringers in Py-bearing(?) greenschist contain Py, Ccp, Gn, Au Production: some Au production reported. Reserves: USBM has an inferred estimate, but it is not yet available.	36a	Berg, 1984, p.187; Berg and others, 1978, p.6; Coldwell, 1990.
KC008	Last Chance; Keystone	P M	55-36-30	131-59-30	A012310	Ag,Au,Cu	Last Chance is Qtz vein of irregular width in a shear zone in Py-bearing(?) Chl schist; that contains Ccp, Bn; average Au content low; Keystone is Qtz stockwork 6 to 12 m thick in greenschist; veins and greenschist contain abundant Py and have low Ag, Au values	36a	Berg, 1984, p.188; Berg and others, 1978, p.6.
KC009	Kingston; Rainy Day	P P	55-36-45 55-36-46	131-58-06 131-58-09	A012308 A012307	Au,Pb,Zn	Kingston is Qtz veins in 2 to 10 m wide zone in Py-bearing(?) Chl schist; 0.12 to 29.0 oz/T Au reported in early 1900's; Rainy Day is 1 m thick Qtz vein in a porphyritic granodiorite dike that contains Py, Sp, Gn, Au. Reserves: USBM has an inferred estimate, but it is not yet available.	36a	Berg, 1984, p.188; Berg and others, 1978, p.6; Coldwell, 1990.
KC010	Mary T.	P	55-36-03	131-58-31	A012311	Au,Cu	Chl or sericite schist contains Qtz, Py, Ccp, secondary Cu minerals, Au; all disseminated(?).	28c(?)	Berg, 1984, p.188; Berg and others, 1978,

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
									p.6.
KC011	U.S.	P	55-36-01	131-58-10	A012312	Au	Qtz vein in Chl schist contains Py, Au.	36a	Berg, 1984, p.188; Berg and others, 1978, p.7.
KC012	Blue Bucket	P	55-35-44	131-58-12	A012314	Au	Qtz vein in Chl and sericite schist contains Py, some Au.	36a	Berg, 1984, p.189; Berg and others, 1978, p.7.
KC013	Little Maumee	P	55-35-57	131-57-03	A012313	Au,Cu	Small Qtz vein in porphyritic diorite reported to contain Py, Ccp, Au.	36a	Berg, 1984, p.189; Berg and others, 1978, p.7.
KC014	Caamano Point	P	55-30-53	131-58-47	A012315	Sb	Veinlets and irregular masses of stibnite in brecciated and partly dolomitized and silicified limestone.	27d	Berg, 1984, p.189; Berg and others, 1978, p.7.
KC015	Swan Lake	O	55-36-36	131-13-27	A012317	Mo	Sparse very fine-grained Mol disseminated in Fe-stained 15 m thick felsic sill(?) in paragneiss; one sample contained 150 ppm Mo.	?	Berg, 1984, p.190; Berg and others, 1978, p.7.
KC016	Lucky Four	O	55-31-23	131-45-24	A012316	Ag,Co,Cu,Mo	Fe- and Cu-stained altered schist contains disseminated Py, Ccp, other sulfide minerals(?); samples contained up to 10 ppm Ag, 500 ppm Co, 2.0% Cu, 30 ppm Mo.	?	Berg, 1984, p.189; Berg and others, 1978, p.7.
KC017	Ella Point	P	55-29-48	130-59-15	A012318	Zn	Py, Sp occur in sericite schist.	?	Berg, 1984, p.190; Berg and others, 1978, p.7.
KC018	Hoadley	P	55-21-35	131-40-24	A012326	As,Au,Bi	Two sets of Qtz veins 10 to 60 cm thick in gabbro(?) intrusive into schist; older set contains Py, Po; younger Apy, Au, tetradymite. Reserves: USBM has an inferred estimate, but it is not yet available.	22c(?)	Berg, 1984, p.192; Berg and others, 1978, p.8; Coldwell, 1990.
KC019	Wildcat	M*	55-21-24	131-40-12	A012327	Au,Cu	Au-bearing Qtz veins in diorite or gabbro intrusive into black slate; main vein 30 to 40 cm thick contains Py, Ccp; Py disseminated in wallrock. Production: 5 T test shipment in early 1900's contained about 1.0 to 1.5 oz/T Au. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?)	Berg, 1984, p.192; Berg and others, 1978, p.8; Coldwell, 1990.
KC020	Laskawonda	P	55-20-48	131-38-33	A012328	Ag,Au,Cu	Small Qtz veinlets in phyllite and schist contain Py, Ccp; Au, Ag reported in early 1900's. Reserves: USBM has an inferred estimate, but it is not yet available.	?	Berg, 1984, p.192; Berg and others, 1978, p.9; Coldwell, 1990.

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
KC021	Birdseye	P	55-18-40	131-33-50	A012332	Au,Pb,Zn	Qtz vein 1.0 to 1.5 m thick in porphyry dike in slate and schist contains Py, Gn, Sp, Au; dike rock also contains the same.	22c(?)	Berg, 1984, p.194; Berg and others, 1978, p.9.
KC022	Mahoney	M*	55-25-41	131-30-27	A012333	Ag,Au,Cu,Pb, Zn	Discontinuous tabular to lenticular body of massive sulfide about 30 cm thick in fine-grained dark gray mica-bearing phyllite consists of Sp, Gn; generally stratiform. Production: 100 T concentrates with 2.0 oz Au, 347 oz Ag, 214 lbs Cu, 42,086 lbs Pb, oz Ag, 214 lbs Cu, 42,086 lbs Pb, 74,829 lbs Zn shipped 1947-1948. Reserves: estimated 2,500 T with 6.0 to 7.0% Pb, 28.0% Zn. Also, USBM has an inferred estimate, but it is not yet available.	28c(?), RM/MS(?)	Berg, 1984, p.194; Berg and others, 1978, p.9; Coldwell, 1990.
KC023	Londevan	M	55-23-55	131-29-02	A012334	Ag,Au,Cu,Pb, Zn	Several Qtz veins up to 1 m thick in schist contain up to 5% Py, Sp, Gn, Ccp, Ag, Au. Production: small T of ore mined early 1900's, but none actually shipped. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?)	Berg, 1984, p.194; Berg and others, 1978, p.9; Coldwell, 1990.
KC024	Peterson	P	55-22-37	131-28-10	A012335	Ag,Au,Cu,Pb, Zn	Qtz-Cal vein in schist contains Py, Gn, Sp, Po, Ccp; Au, Ag also reported. Reserves: USBM has an inferred estimate, but it is not yet available.	22c(?)	Berg, 1984, p.195; Berg and others, 1978, p.9; Coldwell, 1990.
KC025	Moth Bay	P	55-17-48	131-20-33	A012336	Ag,Au,Cu,Pb, Zn	Conformable lenses and discontinuous layers of massive sulfide up to 1 m thick in Ms-Qtz-Cal schist consist of Py, Po, Sp, Gn, Ccp, Bn, Cv; also disseminated Py in schist; Ag, Au known only from analyses; discovered Reserves: about 100,000 T with 7.5% Zn, 1.0% Cu, 10,000 T with 3.0% Cu, 100,000 T with < 7.5% Zn, < 1.0% Cu. Also, USBM has an inferred estimate, but it is not yet available.	28c(?), RM/MS(?)	Berg, 1984, p.195; Berg and others, 1978, p.10; Coldwell, 1990.
KC026	Lake	P	55-24-28	131-11-40	A012337	Pb,Zn	Qtz veins in Ms(?) and Chl schist contain Py, Gn, Sp.	22c(?)	Berg, 1984, p.196; Berg and others, 1978, p.10.
KC027	Baltic Star	P	55-22-54	131-11-18	A012340	Au,Pb,Zn	Qtz vein 0.5 m thick in schist contains Py, Sp, Gn, Au; disseminated sulfides in schist also. Reserves: USBM has an inferred estimate, but it is not yet available.	22c(?), 36a(?)	Berg, 1984, p.196; Berg and others, 1978, p.10; Coldwell, 1990.
KC028	Baltic, Queen	P	55-22-43	131-11-27	A012341	Au,Zn	Qtz vein 0.3 to 2.0 m thick in schist contains Py, Sp, low Au values.	22c(?), 36a(?)	Berg, 1984, p.196; Berg and others, 1978, p.10.
KC029	Golden Rod	P	55-22-40	131-10-45	A012342	Au	Qtz vein 5 m thick in gneissic granodiorite	22c(?),	Berg, 1984,

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							and aplite has low Au content.	36a(?)	p.196; Berg and others, 1978, p. 10.
KC030	Salve	P	55-22-29	131-11-42	A012343	Au	Qtz stringers in layer of sulfide-bearing sericite schist contain Py and have low Au values.	28c(?)	Berg, 1984, p.197; Berg and others, 1978, p.10.
KC031	Sea Breeze	P	55-22-30	131-11-05	A012344	Au,Pb,Zn	Qtz veins 0.3 to 2.0 m wide in or near porphyry dike in greenstone contain Py, Gn, Sp, Au.	22c(?), 36a(?)	Berg, 1984, p.197; Berg and others, 1978, p.10.
KC032	Sealevel	M*	55-22-13	131-11-30	A012345	Ag,Au,Pb,Zn	Qtz fissure veins in schistose intermediate or felsic metatuff(?) and in dikes of altered feldspar porphyry contain Py, Gn, Sp, Au. Production: unknown amount of Au produced in early 1900's. Reserves: USBM has an inferred estimate, but it is not yet available.	22c	Berg, 1984, p.197; Berg and others, 1978, p.10; Coldwell, 1990.
KC033	Goo Goo	M*	55-22-23	131-10-55	A012346	Au,Pb,Zn	Qtz veins up to 6 m wide in greenschist contain Py, Sp, Gn, Au. Production: unknown amount of Au produced in early 1900's. Reserves: USBM has an inferred estimate, but it is not yet available.	22c	Berg, 1984, p.197; Berg and others, 1978, p.11; Coldwell, 1990.
KC034	Majestic	P	55-22-15	131-11-15	A012347	Au,Pb,Zn	Qtz vein 6 m wide in altered schist contains Py, Sp, Gn, Au; selected samples contained 1.5 oz/T Au.	22c	Berg, 1984, p.197; Berg and others, 1978, p.11.
KC035	Golden Banner, Baby George	P	55-22-11 55-22-07	131-10-55 131-11-15	A012348 A012349	Au,Pb,Zn	Qtz vein 0.3 to 2.0 m wide in schist cut by porphyry dike contains Py, Gn, Sp, Au; nearby on Gokachin Creek, a 10 m wide Fe-stained zone of Ms-rich Qtz-Cal schist contains disseminated Py and lenses and discontinous layers a few cm thick of massive Py, Po, Sp, Gn(?); Baby George is 3 m wide Qtz(?) vein in argillite and greenstone.	22c, 28c	Berg, 1984, p.198; Berg and others, 1978, p.11.
KC036	Wild West	P	55-22-00	131-11-12	A012350	Au	Several Qtz stringers about 30 cm wide in argillite and greenschist.	22c(?)	Berg, 1984, p.198; Berg and others, 1978, p.11.
KC037	High Horse	P	55-22-06	131-10-45	A012351	Au,Zn	Qtz vein 0.15 to 1.0 m thick in schist contains Py, Sp; low Au values.	22c(?)	Berg, 1984, p.198; Berg and others, 1978, p. 11.
KC038	Alava	O	55-14-12	131-07-42	A012352	Fe	Ti-bearing Mag occurs in Cretaceous(?) zoned ultramafic intrusion.	9	Berg, 1984, p.198; Berg and others, 1978, p. 11.
KC039	Typhoon	P	55-24-24	131-48-15	A012324	Au(?)	Qtz vein 20 cm thick in slate contains Py; Au may be present. Reserves: USBM has an inferred estimate, but it is not yet available.	22c(?), 36a(?)	Berg, 1984, p.191; Berg and others, 1978, p.11; Coldwell, 1990.

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Catagories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
KC040	Easter	P	55-24-12	131-48-25	A012323	Au	Qtz veins in slate and greenschist contain Py, Apy, Au; reported values in early 1900's of 0.14 to 19.3 oz/T Au. Reserves: USBM has an inferred estimate, but it is not yet available.	22c(?), 36a(?)	Berg, 1984, p.191; Berg and others, 1978, p.11; Coldwell, 1990.
KC041	Tongass	P	55-24-15	131-48-05	A012325	Au(?)	Qtz vein 20 cm wide in slate contains Py, Au(?).	22c(?), 36a(?)	Berg, 1984, p.191; Berg and others, 1978, p.11.
KC042	Six Point	P	55-22-48	131-51-10	A012322	Au(?),Cu	Thin Qtz vein along contact of altered diabase dike and slaty limestone contains Py, Ccp.	22c(?), 36a(?)	Berg, 1984, p.191; Berg and others, 1978, p.11.
KC043	White Knight	P	55-20-20	131-51-30	A012319	Au(?),Cu	Small masses of Ccp associated with Py, Po in greenstone.	?	Berg, 1984, p.190; Berg and others, 1978, p.7.
KC044	Gold Stream	M*	55-18-12	131-38-15	A012329	Au,Cu,Pb,Zn	Sulfide-bearing Qtz veins, greenschist, Qtz-sericite schist; main ore body 1.0 to 2.5 m wide mass of Qtz, schist, Py, Ccp, Gn, Sp, Apy, Au. Production: several 1,000 T ore produced in early 1900's with about 0.88 oz/T Au. Reserves: USBM has an inferred estimate, but it is not yet available.	?	Berg, 1984, p.193; Berg and others, 1978, p.9; Coldwell, 1990.
KC045	Heckman	P	55-17-38	131-37-12	A012330	Au	2.5 m wide zone of Py-bearing Qtz-Cal veins in Chl schist; low Au values. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?)	Berg, 1984, p.193; Berg and others, 1978, p.9; Coldwell, 1990.
KC046	Moonshine	P	55-17-23	131-37-12	A-012331	Au	Two parallel Qtz veins 6m and 2 m thick in greenstone contain low Au values. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?)	Berg, 1984, p.193; Berg and others, 1978, p.9; Coldwell, 1990.
KC047	Triangulation Station Pug, near	P	55-15-48	131-50-00	A012320	Ag,Cu	Fe- and Cu-stained brecciated metarhyolite (?) in 3 m wide zone contains Qtz, Hem, Ccp, Py; one sample contained 1.5 ppm Ag, 2.0% Cu.	28c(?)	Berg, 1984, p.191; Berg and others, 1978, p.8.
KC048	Nelson Cove	P	55-11-53	131-49-27	A012321	Ag,Au,Ba,Cu, Pb,Zn	1(?) m wide Fe-stained fault breccia in dikelike mafic(?) igneous rock contains Qtz, carbonate, Brt, sulfides; selected samples contained up to 70 ppm Ag, 0.15 ppm Au, >0.5% Ba, 700 ppm Cu, 1.5% Pb, >1.0% Zn.	28c(?)	Berg, 1984, p.191; Berg and others, 1978, p.8.
KC049	Doe	P	55-11-48	131-44-30	A012358	Cu	Qtz vein 1 to 2 m thick in siliceous Chl schist contains Py, Ccp.	?	Berg, 1984, p.200; Berg and others, 1978, p.12.

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 . Map No.	2 Name	3 Category	4 Location Latitude	Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
KC050	Grotto	P	55-11-50	131-44-13	A012357	Cu	Qtz(?) vein in shear or breccia zone in greenschist; in early 1900's 11.0% Cu reported across a 1.5 m width.	28c(?)	Berg, 1984, p.200; Berg and others, 1978, p.12.
KC051	Jewel	P	55-11-42	131-43-33	A012362	Cu	Qtz vein contains Py, Ccp.	?	Berg, 1984, p.201; Berg and others, 1978, p.12.
KC052	Damon	P	55-12-00	131-45-00	None	Cu(?)	Qtz vein in Chl schist contains Py.	?	Berg, 1984, p.200; Berg and others, 1978, p.12.
KC053	Plutyas	P	55-12-00	131-44-00	None	Cu(?)	Qtz vein in Chl schist contains Py.	?	Berg, 1984, p.201; Berg and others, 1978, p. 12.
KC054	Big Joe	P	55-11-32	131-44-13	A012361	Cu	Qtz vein 3 m thick in Chl schist contains Py, Ccp.	?	Berg, 1984, p.201; Berg and others, 1978, p.12.
KC055	Hobo, War Eagle	P M	55-11-31 55-11-23	131-44-39 131-44-27	A012359 A012360	Au,Cu	Hobo is Qtz(?) vein 3 m thick that contains Py, Ccp; War Eagle is Qtz veins in shear or breccia zones in greenschist that contain Py, Ccp, Au. Reserves: USBM has an inferred estimate, but it is not yet available.	?	Berg, 1984, p.201; Berg and others, 1978, p.12; Coldwell, 1990.
KC056	Buck, Bay View	P M*	55-11-30 55-11-21	131-43-47 131-43-48	A012363 A012364	Ag(?),Au,Cu, Zn	Buck is Qtz vein in altered quartzite and schist reported in early 1900's to carry Au, Cu; Bay View is Qtz- and Cal-cemented breccia in basalt dike in trondjhemite faulted into rhyolitic metatuff; breccia contains small masses and disseminations of Py, Ccp, Sp, Bn; grab samples of massive sulfide contained up to 10 ppm Ag, 0.10 ppm Au, 200 ppm As, >2.0% Cu, 150 ppm Sn. Production: small test shipment reported in early 1900's. Reserves: USBM has an inferred estimate, but it is not yet available.	?	Berg, 1984, p.201-202; Berg and others, 1978, p.12; Coldwell, 1990.
KC057	Concord	P	55-10-42	131-44-51	A012366	Ag,Au,Cu,Zn	Qtz-Brt-carbonate veins in breccia zones in greenstone and trondjhemite contain Ccp, Ap, Ag, Au; up to 3.5 oz/T Au reported in early 1900's.	?	Berg, 1984, p.202; Berg and others, 1978, p.12.
KC058	Dall	P	55-10-00	131-43-38	A012371	Ag,Au,Brt,Cu	Fault breccia zones in Fe- and Cu-stained metamorphosed bedded and intrusive rocks contain disseminated Py, Ccp and Qtz-Brt-carbonate veins that contain Py, Ccp; early 1900's assays averaged 11.0% Cu, 0.28 oz/T Au.	28c(?)	Berg, 1984, p.204; Berg and others, 1978, p.13.
KC059	Friday	O	55-09-16	131-47-00	A012367	Cu	Qtz-carbonate-Brt(?) veins in breccia zones in Fe-stained bedded and intrusive	28c(?)	Berg, 1984, p.203; Berg and

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No., if any	Commodities/ resources	Brief description	Deposit-Type No.	Reference(s)
			Latitude	Longitude					
							rocks contain Py, Ccp.		others, 1978, p. 13.
KC060	Washington	P	55-09-22	131-45-13	A012370	Cu	Qtz-jasper breccia at contact of diabase and trondjhemite(?) contains Py, Ccp.	?	Berg, 1984, p.203; Berg and others, 1978, p.13.
KC061	Black Jack #7	P	55-09-18	133-44-31	A012369	RA	Thin fissure(?) veins of pitchblende(?) in altered basalt or gabbro that may be in fault contact with metamorphic rocks.	?	Berg, 1984, p.203; Berg and others, 1978, p.13.
KC062	Carita	P	55-08-46	131-46-23	A012368	Cu	Vein or breccia zone contains Qtz, Ccp, Cal.	?	Berg, 1984, p.203; Berg and others, 1978, p.13.
KC063	Annette Bay	O	55-14-46	131-31-24	A012372	Cu,Sb	Cu, Sb mineral reported in uncertain type of occurrence.	?	Berg, 1984, p.204; Berg and others, 1978, p.13.
KC064	Sylburn Harbor-N	O	55-12-06	131-35-12	A012375	Ag,Au,Pb	Discontinuous Qtz-Cal fissure veins up to 6 m thick and a few 100 m long in subhorizontal shear zone in trondjhemite contains Gn; grab samples contained 1.38 oz/T Au, 0.42 oz/T Ag.	?	Berg, 1984, p.204; Berg and others, 1978, p.14.
KC065	Round Mountain, NE of	O	55-12-57	131-32-30	A012374	Cu	Mal reported in conglomerate.	?	Berg, 1984, p.204; Berg and others, 1978, p.13.
KC066	Nadzaheen Cove	O	55-13-10	131-29-12	A012373	Ag,Au,Pb	Qtz lenses and veins up to 3 m wide and a few 100 m long in phyllite and fine-grained schist contain disseminated Py, Gn, Au; disseminated sulfides in country rocks also; early(?) 1900's assays of veins(?) showed 0.71 oz/T Au, 0.91 oz/T Ag.	36a(?)	Berg, 1984, p.204; Berg and others, 1978, p.13.
KC067	Driest Point	O	55-10-36	131-36-13	A012376	Pb,Brt	Veinlets with Qtz, Cal, Brt, Gn in "crushed" metarhyolite.	?	Berg, 1984, p.205; Berg and others, 1978, p.14.
KC066	Sylburn Harbor-S, loc. 1	O	55-10-15	131-35-39	A012377	Cu,Pb,Brt	3(?) m wide shear zone in metarhyolite contains Cal and Qtz veins with Brt, Hem, Gn, Ccp, Py.	?	Berg, 1984, p.205; Berg and others, 1978, p. 14.
KC069	Sylburn Harbor-S, loc. 2	O	55-10-39	131-34-30	A012378	Pb,Brt	3(?) m wide shear zone in brecciated metarhyolite contains veins and irregular masses of Brt, Cal, Hem, Gn.	?	Berg, 1984, p.205; Berg and others, 1978, p.14.
KC070	Sylburn Harbor-S, loc. 3	O	55-10-30	131-33-24	A012379	Cu	Qtz veinlets in brecciated trondjhemite contain Ccp, Py, Hem, secondary Cu minerals.	?	Berg, 1984, p.205; Berg and others, 1978, p.14.

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
KC071	Hassler Harbor	O	55-12-17	131-24-57	A012381	Cu	Foliated trondjhemite contains sparsely disseminated Ccp.	?	Berg, 1984, p.205; Berg and others, 1978, p.14.
KC072	Ham Island	O	55-10-52	131-22-02	A012382	Au	Traces of Au detected in beach placer material and in Qtz float near Qtz-bearing slate and graywacke outcrop.	?	Berg, 1984, p.205; Berg and others, 1978, p.14.
KC073	Metlakatla	O	55-07-34	131-34-00	A012390	Cu	Schist and hornfels contains sparsely disseminated Py, Ccp.	?	Berg, 1984, p.207; Berg and others, 1978, p.14.
KC074	Yellow Hill	O	55-06-19	131-34-09	A012391	Cr,Pt,Asbestos	Partly serpentinized dunite contains scattered thin seams of chyrostile asbestos and sparse veinlets and disseminated Cr; random sample of massive dunite contained 0.029 ppm Pt.	9	Berg, 1984, p.207; Berg and others, 1978, p.15.
KC075	Tamgas Harbor	O	55-04-51	131-32-30	A012392	Cu	Schist contains sparsely disseminated Py, Ccp, Mal.	?	Berg, 1984, p.207; Berg and others, 1978, p.15.
KC076	Purple Lake	O	55-06-35	131-26-27	A012389	Cu	Trondjhemite contains disseminated Ccp.	?	Berg, 1984, p.207; Berg and others, 1978, p.14.
KC077	Crab Bay, W of	O	55-06-20	131-24-16	A012387	Ag,Au,Cu,Pb, Brt	Qtz and sulfide stringers in limestone and (?) metarhyolite contain Td, Gn, Ccp, Cv, Cc; Brt stringers and stringers and disseminated grains of Gn, Py, Ccp occur in brecciated dolomitic limestone.	22c(?)	Berg, 1984, p.206; Berg and others, 1978, p.14.
KC078	Blunt Mountain, S of	P	55-07-42	13-22-24	A012385	Ag,Au,Cu,Pb, Zn	Qtz veins up to 1 m thick in locally brecciated metarhyolite contain Py, Ccp, Gn; Au, Ag also reported; Ccp, Py also disseminated in metarhyolite; assays of several veins in 1930's showed up to 0.05 oz/T Au, 20.60 oz/T Ag, 4.63% Cu, 9.75% Pb, 13.14% Zn.	28c(?)	Berg, 1984, p.206; Berg and others, 1978, p.14.
KC079	Blunt Mountain	O	55-08-24	131-23-37	A012385	Pb	Fe-stained Qtz veins and pods up to 3 m thick in schistose trondjhemite contain Gn, Hem(?), Py.	?	Berg, 1984, p.206; Berg and others, 1978, p.14.
KC080	Blunt Mountain, NE of, loc. 1	O	55-08=43	131-21-54	A012384	Ag,Au,Cu,Pb, Zn	Qtz veins up to 1 m wide in metarhyolite; reported in 1930's to assay up to 0.91 oz/T Ag, 0.43 oz/T Au, 0.85% Cu, 2.0% Pb, 16.75% Zn.	28c(?)	Berg, 1984, p.206; Berg and others, 1978, p.14.
KC081	Blunt Mountain, NE of, loc. 2	O	55-09-12	131-21-43	A012383	Cu,Pb,Zn	Qtz lenses and veins up to 10 m wide and 30 m long in phyllite and metarhyolite locally contain Gn, Sp, marcasite(?); metarhyolite contains disseminated Sp, Ccp, Py, Gn.	28c(?)	Berg, 1984, p.206; Berg and others, 1978, p.14.

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
KC082	Triangulation Station Canoe	O	55-02-10	131-38-51	A012393	Cu	Thin stringers and streaks of Py, Ccp in schist and gneiss.	?	Berg, 1984, p.207; Berg and others, 1978, p.15.
KC083	Felice Strait	O	55-03-31	131-51-00	A012394	Au(?),Cu	Sheared aplite and leucocratic Qtz monzonite contain Ccp, Mol, Py, Hem.	?	Berg, 1984, p.207; Berg and others, 1978, p.15.
KC084	Leduc River, NW of	O	5-58-40	130-51-00	A012293	Cu,Mo	Small Qtz veins in Fe-stained paragneiss contain Mol, Ccp.	?	Berg, 1984, p.185; Berg and others, 1978, p.5.
KC085	Leduc River, E of	O	55-55-40	130-48-53	A012294	Cu	Large Fe-stained zone in paragneiss contains Ccp, Po; low Cu, Pb, Zn, Mo, Ag values reported.	?	Berg, 1984, p.186; Berg and others, 1978, p.5.
KC086	Chickamin River, W of	O	55-55-15	130-42-42	A012295	Cu	Fe-stained zone in paragneiss contains Ccp, Po.	?	Berg, 1984, p.186; Berg and others, 1978, p. 5.
KC087	Chickamin River, E of	O	55-53-53	130-42-17	A012296	Cu,Mo	Fe-stained zone in pelitic schist contains Ccp, Py; one sample contained 150 ppm Mo.	?	Berg, 1984, p.186; Berg and others, 1978, p.5.
KC088	Gnat	P	55-49-49	130-54-35	A012298	Cu,Mo,Pb	Qtz fissure vein 2.5 m thick in gneissic Qtz diorite contains Ccp, Mol, Gn, Py; values up to 1,500 ppm Pb, 1,400 ppm Cu, 910 ppm Mo.	22c	Berg, 1984, p.186; Berg and others, 1978, p.5.
KC089	Davis River, SW of	O	55-50-00	130-25-00	A012292	Cu	Fe-stained zone in paragneiss contains Ccp, Po.	?	Berg, 1984, p.185; Berg and others, 1978, p.5.
KC090	Walker Cove, N side	O	55-42-48	130-52-09	A012301	Cu	Paragneiss contains Py, Ccp; chip sample across 13 m width assayed 1,000 ppm Cu.	?	Berg, 1984, p.187; Berg and others, 1978, p.6.
KC091	Marble Copper	P	55-43-22	130-52-11	A012301	Ag,Au,Cu	Marble-skarn zone in paragneiss near contact with foliated granodiorite contains Ccp, Mal; a 55 cm long channel sample assayed 4,000 ppm Cu, 30 ppm Ag, 3.5 ppm Au.	18b	Berg, 1984, p.187; Berg and others, 1978, p.6.
KC092	Walker Cove, S side	O	55-43-42	130-51-25	A012300	Cu,Mo	55 cm wide Qtz vein at contact of paragneiss and Qtz diorite contains Ccp, Mol.	?	Berg, 1984, p.186; Berg and others, 1978, p.5.
KC093	Alamo	P	55-45-08	130-45-40	A012299	Ag,Au,Cu,Zn	Zone 25 m wide in paragneiss contains disseminations and veinlike masses of Ccp, Py, Po, Sp; USBM sampling showed up to	RM/MS	Berg, 1984, p.186; Berg and others, 1978,

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							0.2 ppm Au, 50 ppm Ag, several 1,000 ppm Zn, 500 ppm Cd; deposit may average 0.2 to 0.7% Cu.		p.5.
KC094	Commonwealth	P	55-45-46	130-12-24	A012291	Au,Cu,Mo,Zn	Both Qtz veins in and quartzite, schist, and marble within Qtz monzonite contain Mol, Sp, Ccp.	22c	Berg, 1984, p.185; Berg and others, 1978, p. 5.
KC095	Quartz Hill	P	55-24-10 55-24-11	130-28-00 130-28-57	A010665 A012355	Mo,U(?)	Oligocene granite porphyry stock contains stockwork of Mol-Qtz veins, Mol-coated fractures, and disseminated grains of Mol; dis-Reserves: current estimate is more than 1.5 billion T averaging about 0.136% MoS2; traces of U present in accesory mineral in the porphyry. Also, USBM has an inferred estimate, but it is not yet available.	21b	Berg, 1984, p.199; Berg and others, 1978, p.11; Coldwell, 1990.
KC096	Reliance	P	55-16-35	130-56-53	A012354	Ag,Au,Cu,Zn	Massive stratiform layers and disseminated grains of Py, Po, Ccp, Sp in Fe-stained mica schist; Ag, Au reported.	RM/MS	Berg, 1984, p.199; Berg and others, 1978, p.11.
KC097	Pyrite	P	55-15-38	130-58-09	A012353	Mo	Qtz vein in metamorphic rocks contains Mol.	?	Berg, 1984, p.199; Berg and others, 1978, p.11.
KC098	Gullette	P	55-08-45	130-31-45	None	Au	Placer Au reported in stream gravels.	39a	Berg and others, 1978, p.11.
KC099	QC	P	55-08-30	130-32-00	None	Au	Placer Au reported in stream gravels.	39a	Berg and others, 1978, p.11.
KC100	Red River	P	55-04-10	130-31-00	A012356	Cu,Mo	Small stratiform masses and bands a few cm to 30 m thick of sulfide in metasedimentary gneisses consist of Py, Ccp, Po, Mag, Bn, Mol; disseminated grains also; gneisses are cut by pegmatite and gneissic granodiorite.	RM/MS	Berg, 1984, p.200; Berg and others, 1978, p.11.
KC101	Howard, Sixmile	P	55-59-52 55-59-45	130-03-59 130-03-58	A012279 A012284	Ag,Au,Cu,Pb, Zn,Brt	Howard is Qtz stringer lode in granodiorite; veins contain Py, Gn, Sp, Brt; Sixmile is narrow Qtz stringers and veins in Texas Creek granodiorite that contain Au, Py, Gn, Ccp, Sp.	22c	Berg, 1984, p.183-184; Berg and others, 1978, p.4.
KC102	Last Shot	P	55-59-47	130-03-33	A012280	Ag,Au,Cu,Pb, W,Zn	Qtz vein from 5 cm to 4 m thick in Texas Creek granodiorite contains a lens of solid sulfide up to 50 cm thick and at least 10 m long that consists of Gn, Py, Sp, Po, Ccp, Td, freibergite, Sch; 65 cm channel sample across lens contained 0.08 oz/T Au, 11.3 oz/T Ag, 6.2% Pb, 4.85% Cu.	22c	Berg, 1984, p.183; Berg and others, 1978, p.4.
KC103	Fish Creek, Bishop, Starboard, etc.	M,P	56-00-00	130-03-00	A012285 A012281	Ag,Au,Cu,Pb, W,Zn	Qtz veins up to 1 m wide mainly in Texas Creek granodiorite near contact with bedded country rocks contain Gn, Sp, Py, Td, Ccp, Sch; lenticular bodies of Po, Py, Ccp, Apy	22c	Berg, 1984, p.184; Berg and others, 1978, p.4.

Table 2-KC. Summary mine, prospect, and mineral-occurrence information for Ketchikan quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							present locally; assays of richest material range from 103 to 706 oz/T Ag, 17 to 39% Pb, Tr to 7% Cu, 1.0 oz/T Au.		
KC104	Mountain View	M*	55-59-00	130-03-00	A012286	Ag,Au,Cu,Pb, W,Zn,Brt	Qtz(-Brt) veins in Texas Creek granodiorite and adjacent country rocks contain Py, Po, Sch, Ccp, Gn, Sp, Td, freibergite, Ag, Au, anglesite, Apy, Az, chalmersite, Cv, Mal, marcasite, Mol, proustite, specularite; main vein averaged 1.23% WO3, 0.1 oz/T Au, 6.4 oz/T Ag across 57 cm width. Production: only production was for mill tests. Reserves: USBM has an inferred estimate, but it is not yet available.	22c	Berg, 1984, p.184; Berg and others, 1978, p.4.; Coldwell, 1990.
KC105	Lucky Boy Extension	P	55-59-04	130-02-51	A012290	Cu,Pb,W,Zn	Qtz stringers 15 to 30 cm thick in fault zone 60 to 90 cm thick in slaty quartzite contain Py, Gn, Sp, Po, Ccp.	22c	Berg, 1984, p.185; Berg and others, 1978, p.4.

Table 2-MF. Summary mine, prospect, and mineral-occurrence information for Mount Fairweather quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
MF001	Desolation Glacier	O	58-46-43	137-34-22	A013140	Au,Cu,Fe,Ni, Ti,Pt	Disseminated Ni-bearing Po, Py, Ccp in mafic dike 2-m wide exposed for 61 m; one sample contained 0.59% Ni, 0.62% Cu, 0.01 oz/T Au, and estimated 2 to 5% Ti.	?	Kimball and others, 1978, p. C124; Berg, 1984, p. 221.
MF002	Echo Creek placer	O	58-40-03	137-41-45	A013127	Au,Cu,Fe,Pt, Ti	Au, Pt and other heavy minerals in thin and patchy placer deposits on modern and old raised beaches; heavy minerals are Grt, Mag, Ilm, Au, Pt derived from layered mafic and ultramafic plutons in Fairweather Range; mining from 1867 to 1940 produced about 4,000 fine oz Au. Reserves: USBM estimate of inferred reserves for blocks 4a,b,c are about 615,600 cu. yd. with 1.6% Ilm, 24,600 cu. yd. with 2.3% Ilm, and 19,500 cu. yd. with 2.7% Ilm, respectively.	39c	Kimball and others, 1978, p. C28, C87, block 4; Berg, 1984, p. 220.
MF003	Crillon Inlet	O	58-39-30	137-29-05	A013123	Cu,Ni	Fe-stained float in scree; one sample contained 1,600 ppm Cu, 0.15 ppm Au, 1 ppm Ag, 2,000 ppm Ni, 300 ppm Co.	?	Kimball and others, 1978, p. C93.
MF004	Cascade Glacier	O	58-39-33	137-26-00	A013139	Cu	Large area of Fe-stained amphibolite/schist that contains up to 240 ppm Cu; one sample across sulfide-bearing seam 3 m long and up to 12 cm wide contained 800 ppm Cu, 0.15 ppm Au, 7 ppm Ag.	23	Kimball and others, 1978, p. C125; Berg, 1984, p. 219.
MF005	North Crillon Glacier, S side, loc. 1	O	58-40-00	137-17-20	A013126	Cu,Ni,Pt,Ti	Fe-stained zone in gabbro stock; one sample contained >1% Ti.	1?	Kimball and others, 1978, p. C109; Berg, 1984, p. 219.
MF006	North Crillon Glacier, S side, loc. 2	O	58-35-30	137-18-43	A013130	Cu,Ni,Pt	Fe- and Cu-stained layer about 1.5 m thick in mafic pluton extends for several hundred m along south wall of valley and contains up to 60% Ilm, 2 to 3% Po, Ccp; chip samples of accessible shear zone with Po, Ccp, Ilm contained up to 980 ppm Cu, 3,000 ppm Ni, 0.70 ppm Pt.	7a	Kimball and others, 1978, p. C106; Berg, 1984, p. 218.
MF007	South Crillon Glacier, N side, loc. 1	O	58-38-15	137-18-12	A013129	Cr,Cu,Fe,Ni, Ti	Fe-stained shear zones up to 6 m thick in Ilm-bearing layered gabbro near basal contact with amphibolite/schist; one 2 m thick zone contained pod of Po, Ccp, Pnt; a sample contained 3,000 ppm Cu, 2,500 ppm Ni, 700 ppm Co; rest of zone contains disseminated sulfides and up to 0.10 ppm Au.	7a	Kimball and others, 1978, p. C101; Berg, 1984, p. 218.
MF008	South Crillon Glacier, N side, loc. 2	O	58-38-07	137-19-00	A013125	Cr,Cu,Fe,Ni, Ti	See above.	7a	Kimball and others, 1978, p. C110; Berg, 1984, p. 218.
MF009	Mount Lookout	O	58-36-02	137-16-00	A013131	Fe,Ti	Contact zone of gabbro(?) stock contains probably 10 to 25% Ilm.	7a	Kimball and others, 1978, p. C110; Berg, 1984, p. 223.
MF010	Fall Creek	O	58-37-30	137-30-00	A013124	Au	Yellow- and red-stained hydrothermally altered zones in sedimentary and volcanic	25b	Kimball and others, 1978, p.

Table 2-MF. Summary mine, prospect, and mineral-occurrence information for Mount Fairweather quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No., if any	Commodities/ resources	Brief description	Deposit-Type No.	Reference(s)
			Latitude	Longitude					
							rocks; channel sample across jasper-rich zone in Py- and Pow-bearing greenstone assayed 0.02 oz/T Ag; one sample of altered zone near upper Coal Creek contained 0.24 oz/T Au, 0.02 oz/T Ag.		C94; Berg, 1984, p. 219.
MF011	Topsy Creek placer	O	58-33-30	137-29-58	A013128	Au,Fe,Pt,Ti	Au, Pt and other heavy minerals in thin and patchy placer deposits on modern and old raised beaches; heavy minerals are Grt, Mag, Ilm, Au, Pt derived from layered mafic and ultramafic plutons in Fairweather Range; mining from 1867 to 1940 produced about 4,000 fine oz Au. Reserves: USBM estimate of inferred reserves for blocks 6 and 7 are about 19,600 cu. yd. with 0.7% Ilm and 663900 cu. yd. with 4.0% Ilm, respectively.	39c	Kimball and others, 1978, p. C28, C87, block s 6 and 7; Berg, 1984, p. 220.
MF012	Brady Glacier Nunatak	P	58-38-15	137-18-12	A013129	Co,Cu,Ni,Pt	Magmatic segregations of Py, Pnt, Ccp in layered mafic-ultramafic pluton; deposit partly explored by private drilling; overall average grade of rocks exposed at surface is probably <0.5% Ni, <0.5% Cu; samples of sulfide masses at surface contained 2 to 3% Ni, 1 to 2.1% Cu, 0.25% Co; analyses of PGE average 1.29 ppm in massive sulfide, 0.18 ppm in gabbros with disseminated sulfide, 0.23 ppm in ultramafic rocks with disseminated sulfide. Reserves: USGS/USBM estimate of indicated reserves is 90 million T with 0.53% Ni, 0.33% Cu; also unknown amount of PGE; inferred reserves is also 90 million T with 0.53% Ni, 0.33% Cu; also unknown amount of PGE.	7a	Kimball and others, 1978, p. C95; Berg, 1984, p. 215.
MF013	Finger Glacier, S of	O	58-30-00	137-04-00	A013134	Cu,Pb,Ti	Samples of Ilm-rich layered mafic stock contained up to 2.5% Ilm, 0.1 to 1.0% Cu, and 1 to 10% Pb.	7a	Kimball and others, 1978, p. C111; Berg, 1984, p. 214.
MF014	Mt. Marchainville, unnamed glacier N of	O	58-29-07	137-02-57	A013135	Cu,Ni	Lenses of Ni-bearing Po in diorite; largest are 3 m wide and 150 m long;sample of float from lens contained 0.83% Ni, 0.18% Cu.	?	Kimball and others, 1978, p. C111; Berg, 1984, p. 214.
MF015	Kaknau Creek Cirque-N	O	58-29-20	137-05-02	A013133	Cu,Pb,Sn,Ti	Samples of Ilm-rich layered mafic stock contained 0.1 to 1.0% Cu, Tr Pb, Tr Sn, 1 to 10% Ti.	7a	Kimball and others, 1978, p. C112?; Berg, 1984, p. 214.
MF016	Kaknau Creek Cirque-S	O	58-28-00	137-05-00	A013132	Cu,Ti	Cu-stained gneiss; samples of Fe-stained layers up to 15 m thick contained 5 to 11% Ilm.	23?	Kimball and others, 1978, p. C112; Berg, 1984, p. 214.
MF017	Icy Point geothermal	O	58-23-30	137-03-39	None	Geothermal	Local fishermen reported small hot springs with improved pools; USGS found only unimproved shallow pools to 1.5 m across; locality not reported previously.	N.A.	None

Table 2-MF. Summary mine, prospect, and mineral-occurrence information for Mount Fairweather quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No., if any	Commodities/ resources	Brief description	Deposit-Type No.	Reference(s)
			Latitude	Longitude					
MF018	DeLangle Mountai	P	58-24-30	137-55-47	A013138	Fe,Ni,Ti	Mag-rich zones in layered gabbro stock probably contain about 10% Fe; one layer 60 cm thick and 70 m long reported to contain about 64% Fe, 20% Ti, 0.28% Ni.	7a	Kimball and others, 1978, p. C119; Berg, 1984, p. 213.
MF019	Boussoule Bay placer	O	58-24-00	137-55-00	None	Au,Fe,Pt,Ti	Au, Pt and other heavy minerals in thin and patchy placer deposits on modern and old raised beaches; heavy minerals are Grt, Mag, Ilm, Au, Pt derived from layered mafic and ultramafic plutons in Fairweather Range; mining from 1867 to 1940 produced about 4,000 fine oz Au. Reserves: USBM estimate of inferred reserves for blocks 12a and b areabout 67,100 cu. yd. with 4.8% Ilm and 133,100 cu. yd. with 2.7% Ilm.	39c	Kimball and others, 1978, p. C28, C87, block 12; Berg, 1984, p. 220.
MF020	Astrolabe Peninsula	O	58-21-10	137-53-02	A013137	Fe,Ni,Ti	Ilm and Mag in layered gabbro stock; float samples contained 8 to 22% Mag, 2% Ilm.	1	Kimball and others, 1978, p. C122; Berg, 1984, p. 211.
MF021	Marvitz	P	58-07-15	136-25-00	A013194	Au,Pb	Lenticular Qtz veins up to 1.5 m thick and andesite dikes in close-spaced joints in Qtz-Ser schist and slate; veins have Au, Py, Apy, Gn; 3 tunnels in early 1900's; no record of production.	36a	Berg, 1984, p. 209
MF022	Bontara	P	58-00-42	136-20-30	A013195	Au(?)	Au prospect in Ab Qtz diorite.	36a(?)	Berg, 1984, p. 209
MF023	3,087 Nunatak	O	58-59-00	137-01-00	None	Cu	Massive sulfide lenses up to 65 cm wide and 2 m long in metavolcanic rock; reported to be similar to MF027.	28a(?)	Kimball and others, 1978, p. C147; Berg, 1984, p. 230.
MF024	Tarr Inlet, W of, loc. 1	O	58-58-30	137-00-23	A013145	Cu	Qtz-Cal veinlets in pegmatitic diorite contain Ccp, Py, and secondary Cu minerals; one sample contained 2,000 ppm Cu.	?	Kimball and others, 1978, p. C171; Berg, 1984, p. 230.
MF025	3,850 Nunatak	O	58-57-12	136-59-07	A013146	Ag,Cu,Zn	Pods of massive sulfide up to 7 cm across in skarn at contact of granitic and bedded calcareous rocks contain Py, Po, Ccp; chip samples of pods contained up to 770 ppm Cu, 190 ppm Zn, 1.5 ppm Ag.	18b(?)	Kimball and others, 1978, p. C171; Berg, 1984, p. 230.
MF026	Tarr Inlet, W of, loc. 2	O	58-57-28	136-55-42	A013147	Ag,Cu,Zn	Siliceous lenses in locally altered leucocratic granitic rocks contain veinlet and disseminated Py, Ccp; one sample contained 1,000 ppm Cu, 300 ppm Zn, Tr Ag.	?	Kimball and others, 1978, p. C190; Berg, 1984, p. 230.
MF027	Orange Point	P	58-55-15	136-59-52	A013141	Ag,Au,Cu,Mo, Pb,Zn	Stratiform massive sulfide deposit in Permian(?) and/or Triassic(?) metaandesite flows flow and tuffs; elongate zones of massive and disseminated sulfide up to 25 m wide and 170 m long; minerals present include Py, Po, Sp, Ccp.	28a	Kimball and others, 1978, p. C129; Berg, 1984, p. 228.

Table 2-MF. Summary mine, prospect, and mineral-occurrence information for Mount Fairweather quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No.,	Commodities/	Brief description	Deposit-	Reference(s)
			Latitude	Longitude	if any	resources		Type No.	
							Reserves: USBM/USGS inferred estimate is about 270,000 T with 2.7% Cu, 5.7% Zn, 0.03 oz/T Au, 1.0 oz/T Ag; also about 530,000 T with o.4% Cu, 0.3% Zn, 0.006 oz/T Au, 0.35 oz/T Ag; more recent USBM inferred estimate is >1 million T containing up to 19% Zn, 5.2% Cu, 0.5% barite, 1,600 ppm Pb, 100 ppm Mo, 3.5 ppm Au, 70 ppm Ag.		
MF028	Johns Hopkins Inlet, N entrance	O	58-55-15	136-55-27	A013148	Ag,Cu,Pb,Zn	Sulfides in lenticular carbonate-Qtz vein up to 1 m thick in gneiss; chip sample contained 770 ppm Cu, 259 ppm Pb, 4300 ppm Zn, 0.03 ppm Au, 15 ppm Ag.	?	Kimball and others, 1978, p. C191; Berg, 1984, p. 226.
MF029	Johns Hopkins Inlet, S entrance	O	58-54-00	136-59-00	A013142	Ag,Co,Cu	Sulfides in hornfels float; one sample contained 4,600 ppm Cu, 7 ppm Ag, 300 ppm Co.	?	Kimball and others, 1978, p. C172; Berg, 1984, p. 227.
MF030	Johns Hopkins Inlet, S side	O	58-53-45	137-00-28	A013144	Cu,Sn,W	Hornfels(?) float contains Po,Ccp; one sample contained 4,100 ppm Cu, 250 ppm Zn, 0.15 ppm Au, 7 ppm Ag, 700 ppm Sn, 790 ppm W.	15a(?), 15b(?)	Kimball and others, 1978, p. C172; Berg, 1984, p. 227.
MF031	Kashoto Glacier	O	58-52-30	137-02-10	A013143	Cu	Py disseminated in Bt hornfels near contact with granodiorite; Fe-stained altered zone is a few 100 m thick; two composite grab samples contained 300 to 700 ppm Cu, Tr Au.	?	Kimball and others, 1978, p. C173; Berg, 1984, p. 227.
MF032	A.F. Parker	M*	58-52-48	137-53-26	A013149	Ag,Au	Qtz veinlets 1 to 2.5 cm thick in 15 cm gouge zone in granodiorite contain Gn, Py, Au; one sample of crushed Qtz contained 5.13 oz/T Au, 1.55 oz/T Ag; 7 to 8 T ore mined in early 1940's.	36a	Kimball and others, 1978, p. C232, C234-C236; Berg, 1984, p. 226.
MF033	Leroy	M*	58-52-30	137-52-30	A013150	Ag,Au,Cu,Pb, Zn	Qtz-Cal-Fld fissure veins in metamorphic rock screen in granitic rock contains Apy, Py, Gn, Sp, Ccp, Au, Ag; samples contained aup to 10.34 oz/T Au,7.4 oz/T Ag, 1,000 ppm Cd, 70 ppm Cu, 1,500 ppm Pb, 15,000 ppm Zn; 2,857 oz fine Au produced mid-1900's.	36a	Kimball and others, 1978, p. C199-C206; Berg, 1984, p. 225.
MF034	Rainbow	M*	58-52-34	136-50-00	A013153	Ag,Au,Pb,Zn	Steeply dipping Qtz-Cal fissure vein or fault breccia in altered alaskite and granodiorite; ore similar to that at Leroy (MF033); altered rock along fault also contains a little Au; samples contained up to 10.2 oz/T au, 2.04 oz/T Ag, 1,500 ppm As, 500 ppm Pb, 2,000 ppm Zn; mined in 1940's; no production figures available.	36a	Kimball and others, 1978, p. C206, C213-C215; Berg, 1984, p. 226.
MF035	Sentinel	M	58-52-27	136-49-57	A013154	Au,Pb	Steeply dipping 30 cm thick altered zone in granodiorite contains Qtz(?), Gn, other sulfides,Au; unknown, but small, amount of Au recovered from decomposed material in 1930's.	36a	Kimball and others, 1978, p. C221-C222; Berg, 1984, p. 226.
MF036	Monarch #1 and #	M*	58-52-04	136-50-52	A013152	Au,Pb	Qtz fissure veinlets and lenses in altered granodiorite contain Apy, Py, Gn,Au; unknown amount of ore, mostly weathered material	36a	Kimball and others, 1978, p. C217-C220;

Table 2-MF. Summary mine, prospect, and mineral-occurrence information for Mount Fairweather quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							from surface, produced in early 1900's.		Berg, 1984, p. 225.
MF037	Ptarmigan Creek	O	58-51-36	136-52-00	A013151	Zn	Lenticular Qtz fissure vein in granodiorite(?) contains Sp,Apy,Py.	22c(?)	Kimball and others, 1978, p. C242-C245; Berg, 1984, p. 225.
MF038	Incas	M	58-51-49	136-50-00	A013155	Au	Lenticular Qtz fissure veins in altered granodiorite contain Apy, Au; altered granodiorite contains sulfides, Tr Au; probably small production, mainly from weathered veins, in early 1900's.	36a	Kimball and others, 1978, p. C215-C217; Berg, 1984, p. 225.
MF039	Sunrise	P	58-51-40	136-47-28	A013159	Ag,Au,Cu	Small pods of Ccp, Po in altered zones in marble and hornfels cut by lamprophyre dikes; small Qtz vein contains Py and small amounts of Au, Ag; unconfirmed report of Sch.	22c(?)	Kimball and others, 1978, p. C233-C234; Berg, 1984, p. 224.
MF040	Rambler	P	58-50-59	136-53-58	A013156	Ag,Au,barite, Pb,Zn	Up to 1 m thick Qtz-Cal veins in granodiorite, metamorphic rocks, and mafic dikes contain barite, Apy, Py, Gn, Au; assays of 6.45 oz/T Au, 1.72 oz/T Ag reported; surface exploration in 1930's.	22c(?)	Kimball and others, 1978, p. C230-C233; Berg, 1984, p. 223.
MF041	Highland Chief	P	58-50-30	136-50-42	A013157	Ag,Au	Up to 60 cm thick Qtz veins in marble, schist, and granodiorite contain Au, Apy, Gn; one sample assayed 3.49 oz/T Au, 1.25 oz/T Ag; prospect is snow covered all or much of year.	36a	Kimball and others, 1978, p. C222-C230; Berg, 1984, p. 224.
MF042	Galena	M*	58-51-15	136-49-33	A013158	Ag,Au,Pb,Zn	Vuggy Qtz vein 10 to 45 cm thick in granodiorite contains Py, Sp, Gn; assays show 0.16 oz/T Au,0.30 oz/t Ag; 0.79% Zn; about 30 T ore reported mined in 1939.	36a	Kimball and others, 1978, p. C233; Berg, 1984, p. 224.
MF043	Hopalong	M*	58-51-00	136-47-12	A013160	Au	Vertical Qtz-Cal veins up to 30 cm wide in diorite contain sparse Py, Apy, probably Au; minor Au production reported from weathered parts of vein in 1930's.	36a	Kimball and others, 1978, p. C236-C237; Berg, 1984, p. 224.
MF044	Reid Glacier, E of head of, loc. 1	O	58-48-47	136-45-34	A013162	Au,Cu	Fe-stained zones and 30 to 60 cm thick Qtz veins in marble and other metamorphic rocks contain small amounts of sulfides; select grab sample from altered zone contained Tr Au,300 ppm Cu; Qtz vein sample contained Tr Au, 1,000 ppm Cu.	22c(?)	Kimball and others, 1978, p. C247; Berg, 1984, p. 223.
MF045	Reid Glacier, E of head of, loc. 2	O	58-47-00	136-45-37	A013163	Ag,Au,Cu	Up to 1 m thick layers of Py, Apy, Ccp in Fe-stained Ep-Grt skarn; samples of sulfide and Fe-stained rock contained up to 0.15 ppm Au, 1.5 ppm Ag, 1,100 ppm Cu.	18b	Kimball and others, 1978, p. C248; Berg, 1984, p. 222.
MF046	SW Gilbert Island	P	58-46-30	136-33-52	A013168	Ag,Au,Cu,Mo, Pb,Zn	Qtz veinlet stockwork in bleached and altered Qtz diorite contains small amounts of Ccp, Mol, also Td, Gn, Sp, Py, Au; selected sample contained 7,000 ppm Cu, 2,000 ppm Mo,	17(?)	Kimball and others, 1978, p. C249; Berg, 1984, p. 221.

Table 2-MF. Summary mine, prospect, and mineral-occurrence information for Mount Fairweather quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location Latitude	Longitude	MRDS No., if any	Commodities/ resources	Brief description	Deposit-Type No.	Reference(s)
							0.292 oz/T Ag.		
MF047	Blue Mouse Cove	O	58-48-00	136-30-00	A013169	Ag,Au,Zn	Qtz vein about 30 cm wide in 1.3 m thick shear zone in granitic rocks contains Td, Py, Au; chip sample across richest 75 cm contained 680 ppm Zn, 220 ppm Pb, 7 ppm Ag, 300 ppm As.	22c	Kimball and others, 1978, p. C248-C249; Berg, 1984, p. 221.
MF048	Geikie Inlet, head of	O	58-35-10	136-29-57	None	Au,Cr(?)	Chromite in blebs in lamprophyre dikes in diorite near a dunite body; chip sample from dike contained 0.10 ppm Au.	?	Kimball and others, 1978, p. C266; Berg, 1984, p. 216.
MF049	Threesome Mountain	P	58-32-00	136-33-49	A013182	Ag,Cu,Mo,W	Porphyry Mol deposit in Tertiary granodiorite; fracture coatings and fillings up to 6 cm thick contain Qtz, Mol, Sch; samples contained up to >2,000 ppm Mo, 7 ppm Ag, 330 ppm Cu, 4,900 ppm W.	21b	Kimball and others, 1978, p. C253-C256; Berg, 1984, p. 215.
MF050a	Wood Lake, S end of, placer	M	58-32-30	136-29-07	None	Au	Placer Au mined from glacially derived gravels; location uncertain, see MF050b.	39a	Kimball and others, 1978, p. C264-C265; Berg, 1984, p. 215.
MF050b	Wood Lake, S end of, placer	M	58-29-00	136-29-00	None	Au	Alternate location for MF050a.	39a	Kimball and others, 1978, p. C264-C265; Berg, 1984, p. 215.
MF051	Valley of Tears placer	M	58-30-58	136-21-59	A013185	Au	Placer Au in reworked glacial deposits; USBM samples had Au content of about $0.005 to $0.015 per cubic yard at 1978 price.	39a	Kimball and others, 1978, p. C363-C364; Berg, 1984, p. 214.
MF052	Dundas Bay, N Arm	P	58-27-30	136-33-28	A013183	Au,Mo,W	Skarn and vein deposit with Mol, Sch, Pow; geochemical anomalies.	14a	Kimball and others, 1978, p. C257-C263;
MF053	Abyss Lake	O	58-26-28	136-36-29	A013184	Ag,Cu,Fe	Mag-Grt lenses up to 10 m long and 3 m thick between marble and granite contain minor Ccp, Py; one sample contained 1.5 ppm Ag.	18b(?), 18d(?)	Kimball and others, 1978, p. C267; Berg, 1984, p. 213.
MF054	Alaska Chief	P	58-26-34	136-06-02	A013191	Ag,Au,Co,Cu, Zn	Massive sulfides Ccp, Po, Py, Sp(?), in tactite, marble, and hornfels near contact with granite; 1966 chip samples contained up to 15,000 ppm Cu, 700 ppm Zn, 300 ppm Co, 0.232 oz/T Au, 4.377 oz/T Ag; discovered indicated resource of 27,000 T with 1.0% Cu, 0.1 oz/T Au, 2.0 oz/T Ag.	18b	Kimball and others, 1978, p. C353-C354; Berg, 1984, p. 213.
MF055	Dundas Bay, middle (Doc Silver(?))	O	58-23-00	136-28-16	A013188	Ag,Au	Au-bearing Qtz veins in dioritic rock; channel sample of 58 cm thick vein with 12 cm thick gouge zone contained 250 ppm Pb, 5 ppm Ag, 0.275 oz/T Au (fire assay).	36a(?)	Kimball and others, 1978, p. C269; Berg, 1984, p. 211.
MF056	Brady Glacier	M	58-20-42	136-36-00	A013186	Ag,Au	Very fine Au in outwash mined in early 1900's.	39a	Kimball and

Table 2-MF. Summary mine, prospect, and mineral-occurrence information for Mount Fairweather quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
	outwash placer								others, 1978, p. C126; Berg, 1984, p. 211.
MF057	Dundas Bay, W Ar	O	58-21-27	136-30-00	A013187	Ag,Co,Cu	Ccp and other sulfides in hornblendite dikes in gneissic dioritic rock; grab samples of two small sulfide lenses contained 18.0% Cu, 3 ppm Ag, 700 ppm Co.	?	Kimball and others, 1978, p. C270; Berg, 1984, p. 211.
MF058	Dundas Bay, E side, loc. 1	O	58-22-29	136-17-07	A013189	Au(?), Cu, Mo(?)	Pods of Py, minor Ccp, secondary Cu and Fe minerals, and Qtz veins in Qtz-rich metamorphic rocks in contact with metabasalt; samples contained up to 2,000 ppm Cu, Tr Ag, Tr Mo, Tr Pb.	?	Kimball and others, 1978, p. C354-C357; Berg, 1984, p. 212.
MF059	Dundas Bay, E side, loc. 2	O	58-21-15	136-17-27	A013190	Cu,Mo	Cu-bearing Qtz veins 2.5 to 5 cm thick spaced 30 cm apart in cataclastic Bt-Qtz diorite; selected sample contained 1,000 ppm Cu, 300 ppm Mo.	?	Kimball and others, 1978, p. C270; Berg, 1984, p. 212.
MF060	Lemesurier Island, SW point	P	58-15-30	136-05-53	A013192	Cu,Mo	Grt-Pyx hornfels at marble-Qtz diorite contact contains Mol, minor Ccp in small gash veins and disseminated; Mol sparse but rich small pockets; no record of production.	18b	Cobb, 1978, p. 28-29; Berg, 1978, p. 210.
MF061	Lemesurier Island, Iceberg Point	O	58-15-43	136-04-30	A013193	Cu,Mo	Small veins in limestone contain Qtz, Grt, Ep, Mol, Ccp, Bn, also palygorskite in limestone; two deposits of latter mined in early-middle 1900's.	22c(?)	Cobb, 1978, p. 28-29; Berg, 1978, p. 210.
MF062	Shag Cove	O	58-38-30	136-20-17	A013178	Ag,Cu	Po, Py, Ccp, Az, Cu(?) in pods in sheared and altered zone in Qtz-rich rocks; sample of largest (1 m long, 15 cm thick) pod contained 3,000 ppm Cu, 700 ppm Zn, 200 ppm Co, Tr Ag.	22c(?)	Kimball and others, 1978, p. C366; Berg, 1984, p. 217.
MF063	Francis Island	O	58-37-30	136-10-37	A013179	Ag,Au,Cu,Zn	Silicified fault zone up to 3 m wide along contact of Qtz diorite with tactite derived from marble contains irregularly distributed Ccp, Bn, Mal, Sp(?), Td(?), Cc(?), Pyr(?), Py; samples from fault zone contained up to 7,000 ppm Cu, 1,000 ppm Zn, 200 ppm Sb, 150 ppm Bi, 1.46 oz/T Ag;	18b	Kimball and others, 1978, p. C387; Berg, 1984, p. 217.
MF064	Willoughby Island, N end	O	58-36-00	136-07-32	A013181	Ag,Au,Pb	Massive sulfides, including Py, Ccp, loellingite, as replacements in limestone; this locality was not found when sought in 1966, 1975-1977.	19a(?)	Kimball and others, 1978, p. C367; Berg, 1984, p. 216.
MF065	Willoughby Island, W end	O	58-35-30	136-08-27	A013180	Ag,Au,Cu,Pb, Sb	30 cm wide vein at intersection of two lamprophyric dikes contains Ccp, Py, Td, jamesonite; sample contained 25.0% Pb, 25.0% Sb, 1.74 oz/T Au, 42 oz/T Ag; some ore reported mined; this locality was not found when sought in 1966, 1975-1977.	22c	Kimball and others, 1978, p. C368; Berg, 1984, p. 216.
MF066	Willoughby Island marble	P	58-34-57	136-05-42	None	Marble	Marble exposed for 150 m along shore and up to elevation of 20 m;cut by dikes; locally jointed.	N.A.	Kimball and others, 1978, p. C368.
MF067	Russell Island	O	58-56-30	136-48-32	A013161	Ag,Au,Pb	Narrow Au-bearing Qtz veins in Fe-stained	22c	Cobb, 1978, p. 56;

Table 2-MF. Summary mine, prospect, and mineral-occurrence information for Mount Fairweather quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							zone up to 1.2 m thick in granodiorite; select grab sample contained 0.844 oz/t Au.		Kimball and others, 1978, p. C238.
MF068	Silver Dick	P	58-57-30	136-40-00	None	Ag	Ankeritic Qtz vein about 15 cm thick at contact of dioritic dike and marble contains Td, wire Ag.	36a(?)	Kimball and others, 1978, p. C187-C188; Berg, 1984, p. 231.
MF069	Rendu Inlet, ridge to W	O	58-56-30	136-41-07	A013164	Cu,Mo	Qtz and Qtz-rich pegmatite stringers in granitic rock contain scattered Mol, Ccp, Py, Po.	17(?)	Kimball and others, 1978, p. C190; Berg, 1984, p. 228.
MF070	Rendu Inlet, W side, loc. 1	P	58-56-00	136-38-27	A013165	Ag,Cu	Several Fe-stained zones up to 6 m long and 30 cm thick in bleached marble contain scattered Py and perhaps other sulfide minerals; one sample contained 1,500 ppm Cu, 1,000 ppm Ni, 700 ppm Co.	22c	Cobb, 1978,p. 53; Berg, 1984, p. 229
MF071	Rendu Inlet, W of mouth of	O	58-54-50	136-38-57	A013166	Fe	Pods of Mag-rich skarn in Qtz diorite near contact with marble.	18d	Kimball and others, 1978, p. C190; Berg, 1984, p. 229.
MF072	Rendu Inlet, W side, loc. 2	O	58-54-50	136-37-42	A013167	Mo	Scattered sulfides, mostly Py, in bleached marble; one sample contained 1,500 ppm Cu, 1,000 ppm Ni, 700 ppm Co.	?	Kimball and others, 1978, p. C191; Berg, 1984, p. 229.
MF073	Queen Inlet	O	58-54-02	136-30-32	A013170	Co,Cu,Sn	Small tactite and skarn bodies up to 6 m thick along contacts between alaskite, porphyritic volcanic rocks and marble; skarn and mafic dikes contain veins and pods of Py, Ccp, secondary Cu minerals; samples contained up to 300 ppm Cu, 300ppm Co, 30 ppm Sn.	18b(?), 18d	Kimball and others, 1978, p. C345-C347; Berg, 1984, p. 229.
MF074	Mount Merriam	O	58-54-02	136-26-00	None	Cu,Fe	Zones of tactite in carbonate rocks; samples of Mag-rich pods contained up to 20.0% Fe, 0.28% Cu.	18d	Kimball and others, 1978, p. C345-C347; Berg, 1984, p. 229.
MF075	Tidal Inlet, S of	O	58-47-30	136-20-28	A013174	Cu	Py, Ccp, Po(?) in Qtz veins near contact with diorite; sample contained 1,000 ppm Cu, 200 ppm Ni, 300 ppm Co.	22c(?)	Kimball and others, 1978, p. C350; Berg, 1984, p. 221.
MF076	Bruce Hills, loc. 1	P	58-59-10	136-20-37	A013173	Ag,Cu,Mo,Pb, Zn	Py, Po, Ccp, Mol, Mal, minor Mol, Sp, Gn in thin Qtz veins, disseminated, and as fracture fillings in granodiorite and hornfels near a steeply dipping fault zone; samples contained up to 3 ppm Ag.	21a(?)	Kimball and others, 1978, p. C295-C307; Berg, 1984, p. 233.
MF077	Bruce Hills, loc. 2	P	58-59-10	136-21-00	A013172	Ag,Cu,Mo,Pb, Zn	See above description.	21a(?)	Kimball and others, 1978, p. C295-C307; Berg, 1984,

Table 2-MF. Summary mine, prospect, and mineral-occurrence information for Mount Fairweather quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
									p. 233.
MF078	Wachusett Inlet	O	58-57-24	136-21-00	A013171	Ag,Cu,Mo	Qtz vein 2.5 cm to 30 cm thick in granitic rock containes Py, Mol, Ccp; USBM sample over 20 cm interval contained up to 74,000 ppm Cu 1,500 ppm Mo, 30 ppm Ag, 700 ppm Zn. Reserves: USBM/USGS inferred reserve estimate is 800 T over a 1.2-m mining width with 0.44% cu, 0.005% Mo, 0.034 oz/T Ag.	21a(?)	Kimball and others, 1978, p. C307-C310; Berg, 1984, p. 231.
MF079	Muir Inlet Nuna-tak	P	58-59-17	136-06-00	A010685	Cu,Mo	Qtz vein stockwork, mainly in hornfels around a Qtz monzonite porphyry stock intruded into metasedimentary rocks, but also in the stock and in a silicified skarn zone near the contact of the stock; all contain Mol, Py, Po, Ccp, Td, Bn, enargite; early or mid-1900's assays showed 0.04 oz/T Au, 7.07 oz/T Ag. Reserves: USBM/USGS indicated reserve estimate of 8.2 million T with 0.06% Mo, 0.02% Cu; also 137 million T with 0.04% Mo, 0.02% Cu; Inferred estimate of 9.1 million T with 0.06% Mo, 0.02% Cu.	21a(?)	Kimball and others, 1978, p. C274-C295; Berg, 1984, p. 232.
MF080	Red Mountain	O	58-57-47	136-03-00	A013176	Ag,Cd,Pb,Zn	Small Py-rich pods and disseminated sulfides in limestone near granodiorite cupola; largest pod is 3 m long and 30 cm in diameter; one sample contained 7,000 ppm Zn, 500 ppm Pb, 700 ppm Cd, Tr Ag.	19a	Kimball and others, 1978, p. C316; Berg, 1984, p. 232.
MF081	Adams Inlet	P	58-51-17	136-02-20	A013177	Mo	Mol on fracture surfaces in metamorphic rocks near granitic contact.	?	Kimball and others, 1978, p. C350; Berg, 1984, p. 223.

Table 2-PA. Summary mine, prospect, and mineral-occurrence information for Port Alexander quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No., if any	Commodities/ resources	Brief description	Deposit-Type No.	Reference(s)
			Latitude	Longitude					
PA001	Silver Bay	P	56-59-45	135-08-20	A013366	Au,Cu	Au-bearing Qtz vein in graywacke contains Py, Ccp.	36a	Berg, 1984, p.247.
PA002	Eureka	P	56-58-52	135-09-03	A013367	Au,Cu	Qtz stringers in slate contain Py, Ccp.	36a	Berg, 1984, p.247.
PA003	Bauer (Halley and Rodgers)	P	56-58-13	135=06-20	A013368	Au	Qtz veinlets in graywacke contain Py, Po, Au-bearing Py; reported to contain 0.22 oz/T Au.	36a	Berg, 1984, p.248.
PA004	Cache	M*	56-58-42	135-05-43	A013369	Ag,Au	Qtz vein up to 3 m thick reported to have contained 0.36 oz/T Au, some Ag. Production: unknown amount of ore mined in late 1800's.	36a	Berg, 1984, p.248.
PA005	Lucky Chance	M*	56-57-01	135-03-00	A013370	Ag,Au	Qtz stringers and vein up to 2.5 m thick along(?) contact of slate and graywacke contain Py, Apy, Au; one sample of ore assayed 1.45 oz/T Au. Production: some ore mined in early 1900's.	36a	Berg, 1984, p.248.
PA006	Hill, loc. 1	O	56-57-35	135-00-10	A013371	Cr	Magmatic segregations of Chr in small lenses, thin layers, and disseminated grains in small serpentinite bodies derived from dunite and pyroxenite.	8a	Berg, 1984, p.249; Cobb, 1972.
PA007	Hill, loc. 2	O	56-56-21	134-58-16	None	Cr	Same as PA006.	8a	Berg, 1984, p.249; Cobb, 1972.
PA008	Hill, loc. 3	O	56-56-33	134-57-19	None	Cr	Same as PA006.	8a	Berg, 1984, p.249; Cobb, 1972.
PA009	Hill, loc. 4	O	56-55-37	134-57-15	None	Cr	Same as PA006.	8a	Berg, 1984, p.249; Cobb, 1972.
PA010	Hill, loc. 5	O	56-55-21	134-54-45	None	Cr	Same as PA006.	8a	Berg, 1984, p.249; Cobb, 1972.
PA011	Hill, loc. 6	O	56-54-37	134-56-54	None	Cr	Same as PA006.	8a	Berg, 1984, p.249; Cobb, 1972.
PA012	Hill, loc. 7	O	56-54-46	134-56-00	None	Cr	Same as PA006.	8a	Berg, 1984, p.249; Cobb, 1972.
PA013	Hill, loc. 8	O	56-54-00	134-55-45	None	Cr	Same as PA006.	8a	Berg, 1984, p.249; Cobb, 1972.
PA014	Goddard Hot Springs, loc. 1	N.A.	56-50-46	135-21-30	None	Geothermal	Intermediate-temperature reservoir system; discharge temp. 67 degrees C.; rate 49 l/min from main spring; four springs about 250 m from shoreline emerge from colluvial granitic boulders with combined discharge of 98 l/min.	N.A.	Bliss, 1983; Motyka and Moorman, 1987.
PA015	Goddard Hot Springs, loc. 2	N.A.	56-50-10	135-22-11	None	Geothermal	See PA014.	N.A.	Bliss, 1983; Motyka and Moorman, 1987.
PA016	Red Bluff Bay	P	56-51-53	134-42-30	A013372	Cr	Magmatic segegations of Chr in thin tabular masses in serpentinized dunite body in	8a	Berg, 1984, p.249.

Table 2-PA. Summary mine, prospect, and mineral-occurrence information for Port Alexander quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							phyllite and greenschist; resource in eight known deposits are about 30,000 T with 18 to 40% Cr_2O_3; Cr-Fe ratio ranges from 18.65 to 50.56.		
PA017	Snipe Bay	P	56-25-27	134-57-20	A013373	Ag,Cu,Ni	Magmatic segregations of massive and disseminated Mag, Pnt, Ccp, Py, Po in gabbronorite and hornblendite pluton cutting hornfelsed graywacke; 0.13 oz/T Ag reported in early assay. Reserves: about 430,000 T with 0.3% Ni, 0.3% Cu.	7a(?)	Berg, 1984, p.249.
PA018	Redfish Bay pe matite	P	56-21-20	134-53-10	None	Qtz,feldspar, mica	Several pegmatite bodies in an area about 200 m in diameter contain Qtz, albite-oligoclase, microcline, muscovite.	N.A.	Sainsbury, 1957.
PA019	Saginaw Bay, loc. 1	O	56-54-19	134-12-31	A013374	Brt	Barite occurs in fissure veins up to 1.5 m thick in limestone, conglomerate, and volcanic rocks.	?	Berg, 1984, p.249; Gryback and others, 1984, p.5.
PA020	Saginaw Bay, loc. 2	O	56-52-12	134-12-31	A013375	Brt	Same as PA019.	?	Berg, 1984, p.249; Gryback and others, 1984, p.5.
PA021	Saginaw Bay, loc. 3	O	56-53-29	134-10-34	A013376	Brt	Same as PA019.	?	Berg, 1984, p.249; Gryback and others, 1984, p.5.
PA022	Cornwallis Pen sula, loc. 1	P	56-56-07	134-14-22	A013377	Ag,Cu,Pb,Zn, Brt	Masses of barite up to 1.5 m diameter; Brt vein up to 45 cm thick and 60 m long; many short Brt-Wth veinlets in Upper Triassic felsic volcanic rocks; very fine disseminated Sp in Cal-cemented limestone breccia of Carboniferous age; area has been prospected as Mississippi Valley type (32a), felsic plutonic-related U and REE (FP/UREE), bedded barite(31b), and Sierran massive sulfide (28c).	?	Berg, 1984, p.250; Gryback and others, 1984, p.6.
PA023	Cornwallis Pen sula, loc. 2	P	56-55-42	134-12-00	A013378	Ag,Cu,Pb,Zn, Brt	Same as PA022.	?	Berg, 1984, p.250; Gryback and others, 1984, p.6.
PA024	Cornwallis Pen sula, loc. 3	P	56-55-05	134-10-39	A013379	Ag,Cu,Pb,Zn, Brt	Same as PA022.	?	Berg, 1984, p.250; Gryback and others, 1984, p.6.
PA025	Fossil Bluffs	P	56-54-53	134-09-56	A013380	Zn	Cal-cemented Carboniferous limestone contains Sp.	32a(?)	Gryback and others, 1984, p.7.
PA026	Keku Islet	O	56-55-44	134-08-04	A013381	Ag,Zn	Sp fills transverse fractures in altered Tertiary(?) basalt dike in sandstone and conglomerate; adjacent country rocks are shattered and contain brecciated Py, marcasite healed by Sp; one Sp-rich sample contained 37.4% Zn, 0.24 oz/T Ag, tr Au.		Berg, 1984, p.250; Gryback and others, 1984, p.8, 9.

Table 2-PA. Summary mine, prospect, and mineral-occurrence information for Port Alexander quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No.,	Commodities/	Brief description	Deposit-	Reference(s)
			Latitude	Longitude	if any	resources		Type No.	
PA027	Keku Islands	O	56-54-48	134-07-27	A013382	Pb,Sr,Brt	Veins and veinlets in limestone and marble and rarely in basalt dikes contain Brt, Wth; one veinlet contains Py, Gn.		Berg, 1984, p.250; Grybeck and others, 1984, p.10.

Table 2-PE. Summary mine, prospect, and mineral-occurrence information for Petersburg quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No.,	Commodities/	Brief description	Deposit-	Reference(s)
			Latitude	Longitude	if any	resources		Type No.	
PE001	Point St. Albans	O	56-06-34	133-57-24	A010325	Ag,Pb,Zn	Qtz-Cal veins and lenses up to 2 m thick contain Sp, Gn, Py, Apy, berthiente (FeSb2S4); veins cut edge of porphyritic Hbl diorite pluton that intrudes Silurian turbidites; selected samples contained up to 0.5 ppm Au, 300 ppm Ag, 360 ppm Cu, and about 2% Pb, 14% Zn.	22c	Grybeck and others, 1984a, p. 54; also Berg, 1984, p.241.
PE002	Port Camden	O	56-48-19	133-56-32	A010324	U	Sandstone of Tertiary Kootznahoo Formation contains Sd, Py, Mag, Ap, carbonized wood; latter are radioactive when tested in place at 2 to 50X background; one sample contained about 1,600 ppm eU; samples from a 10 cm thick sandstone bed contained 11 and 12 ppm U.	30c	Grybeck and others, 1984a, p.11-12; also Berg, 1984, p.234.
PE003	Hamilton Creek	O	56-06-00	133-40-00	A010317	U	White Cal veins in Permian Dol contain fragments of laminated phosphate rock that are radioactive with 20X background for one 50 cm thick bed; one sample contained about 60 ppm eU.	?	Grybeck and others, 1984a, p.14; also Berg, 1984, p.236.
PE004	Kushneahin Lake	O	56-32-00	133-29-15	None	Cu(?),Mo(?)	Vividly altered Tertiary rhyolite, rhyolite tuff, and rhyolitic glass contain disseminated Py; grab samples contained <5 ppm Cu, <5 ppm Mo.	?	Grybeck and others, 1984a, p.28.
PE005	Calder marble	M*	56-10-22	133-27-52	None	Marble	Dimension stone quarried 1906-1910 from Hecata Limestone; deposit currently being evaluated as a pure CaCO3 resource.	N.A.	Burchard, 1913, p. 56-58, 1920, p.59-62; C.R. Wanamaker, oral comm., 1988.
PE006	Castle and Co.	P	56-08-20	133-27-00	A010343	Au	Au-bearing Qtz vein reported.	36a(?)	Grybeck and others, 1984a, p.56; also Berg, 1984, p.242.
PE007	Shakan	P	56-08-16	133-27-06	A010342	Au,Mo	Fault breccia zone in pegmatitic Hbl diorite contains Po, Mol, Ccp, some Sp, Py in Qtz-Ab gangue; locally Po, Mol, Ccp make up to 30 to 40% of the 0.3 to 3.0 m wide, 160 m long fault zone. Reserves: estimated 10,000 to 20,000 T with about 1.5% MoS2.	?	Grybeck and others, 1984a, p.56; also Berg, 1984, p.242.
PE008	El Capitan Pass, loc. 1	P	56-09-06	133-26-19	None	Cu,Mo,Pb,W	Prospects near contact of marble and diorite pluton; typically, a 1 m wide layer of Mag parallels the contact; samples of hornfels, diorite, and marble contain Mag, Mol, Ccp, Po, Py, Gn; Qtz veins and Qtz-rich near contact contain Sch; a 1.2 m long chip sample of a vein contained 1.4% WO3.	14a, 19a(?)	Grybeck and others, 1984a, p.55; also Berg, 1984, p.242.
PE009	El Capitan Pass, loc. 2	P	56-09-21	133-25-28	None	Cu,Mo,Pb,W	See PE008.	14a, 19a(?)	Grybeck and others, 1984a, p.55; also Berg, 1984, p.242.
PE010	El Capitan Pass, loc. 3	P	56-08-23	133-25-28	None	Cu,Mo,Pb,W	See PE008.	14a, 19a(?)	Grybeck and others, 1984a, p.55;

Table 2-PE. Summary mine, prospect, and mineral-occurrence information for Petersburg quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
									also Berg, 1984, p.242.
PE011	Dry Pass	P	56-09-00	133-24-20	A010340	Cu,Mo,Pb,W	See PE008.	14a, 19a(?)	Grybeck and others, 1984a, p.55; also Berg, 1984, p.242.
PE012	Devilfish Bay	O	56-04-50	133-22-35	A010344	Cu,Mo,U	Mag, Ccp, Mol occur in tactite surrounded by granodiorite and in adjacent marble and hornfelsed graywacke and siltstone; one tactite sample contained 6 ppm U.	18a(?)	Grybeck and others, 1984a, p.59; also Berg, 1984, p.243.
PE013	Salmon Bay, loc. 1	O	56-19-12	133-10-06	A010333	Th,U,REE	Steeply dipping carbonate veins/dikes occur in hornfelsed and altered Silurian graywacke; some veins highly radioactive; veins are up to 1.3 m thick and a few 100's of m long; they contain Fl, Mnz, a variety of rare-earth-element fluorcarbonate minerals, Hem, Mag, Py, marcasite, Zrn, parisite, and bastnaesnite in gangue of Dol-Ank, Qtz, alkali feldspar, Chl, Ep, sericite, Ms, Ap, Toz, Grt, kaolinite; one vein sample contained 0.3% U; rare-earth-carbonate vein samples contained average of 0.79% combined rare-earth oxides and one high-grade grab sample contained 5%; grab samples of veins and felsic dikes commonly contain >1,000 ppm La and several contained 1,000 ppm Mo.	FP/UREE, (?), 10(?), FP/THRE, (?)	Grybeck and others, 1984a, p.62; also Berg, 1984, p.241.
PE014	Salmon Bay, loc. 2	O	56-15-52	133-08-12	None	Th,U,REE	See PE013.	FP/UREE, (?), 10(?), FP/THRE, (?)	Grybeck and others, 1984a, p.62; also Berg, 1984, p.241.
PE015	Paystreak	O	56-15-47	133-06-43	A010332	Th,U,REE	See PE013.	FP/UREE, (?), 10(?), FP/THRE, (?)	Grybeck and others, 1984a, p.62;
PE016	Blashke Islands	O	56-07-29	133-54-41	None!	Cr,Cu,Ni,PGE	An Alaskan-type zoned mafic-ultramafic body about 2.5 km diameter intrudes Silurian graywacke and volcanic rocks; Chr is sparse but ubiquitous in the dunite core; disseminated Po, Ccp occur in the surrounding olivine pyroxenite near the contact with the outermost gabbro zone; samples of sulfide-bearing gabbro contained up to 0.016% Cu, 0.05% Ni, < 1.0 oz/T PGE; other samples contained 0.004 oz/T Au, 0.04 oz/T Pd, tr Pt. Reserves: there is a large tonnage with 1 to 2% sulfides.	9	Grybeck and others, 1984a, p.63; also Berg, 1984, p.243.
PE017	Northern Copper Co.	P	56-53-15	133-22-15	A010323	Ag(?),Cu,Zn	Pods and irregular lenses of Mag, Sp, Po, Ccp occur in greenstone associated with minor marble, more or less stratiform; se-	24a(?) 18b(?)	Grybeck and others, 1984a, p.16; also Berg, 1984,

Table 2-PE. Summary mine, prospect, and mineral-occurrence information for Petersburg quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							lected samples contained major amounts of Cu, Zn, 0.05 ppm Au, up to 5 ppm Ag. Reserves: USBM has an inferred estimate, but it is not yet available.		p.234; Coldwell, 1990.
PE018	Silver Star	P	56-50-50	133-15-50	A010335	Ag,Au	Thin Qtz-Cal veins that cut slate and greenstone intruded by diorite and felsite dikes contain Ccp, Py, Mag; samples contained up to 0.4 oz/T Au, 2.0 oz/T Ag. Reserves: USBM has an inferred estimate, but it is not yet available.	22c(?)	Gryback and others, 1984a, p.19; also Berg, 1984, p.235; Coldwell, 1990.
PE019	Taylor Creek	P	56-47-38	133-21-45	A010322	Ag,Cu,Pb,Zn	Irregular masses and disseminated grains of Gn, Sp, Py, Ccp occur as replacement(?) deposits in brecciated dolomitic limestone in a zone 100 m long, 3 m wide; drill core and outcrop samples contained up to 4.3% Zn, 0.95% Pb, 1.2 oz/T Ag. Reserves: USBM has an inferred estimate, but it is not yet available.	19a, 28c(?)	Grybeck and others, 1984a, p.17; also Berg, 1984, p.235; Coldwell, 1990.
PE020	Halobia	O	56-40-18	133-15-25	A010319	Ag,Pb,Zn	Carbonaceous Upper Triassic phyllite interlayered with siltstone, limestone, Ms-bearing phyllite, and Qtz-rich phyllite contains Py and Qtz-rich phyllite contains massive Py, Gn, Sp lenses up to 0.25 m wide and 1.0 m long in a zone 3 to 4 m wide and 30 to 40 m long; samples contained up to 100 ppm Cu, 100 ppm Ag, 1,000 ppm As.	28c	Grybeck and others, 1984a, p.34; also Berg, 1984, p.244.
PE021	Castle River	O	56-39-48	133-15-16	None	Ag,Pb,Zn	Phyllitic felsic metatuff interlayered with Ms-rich siliceous phyllite locally contains massive sulfide layers to several m thick that contain Py, Sp; samples contained up to 700 ppm Pb, 350 ppm Zn, 10 ppm Ag, 1,500 ppm As, 2,000 ppm Ba. Reserves: USBM has an inferred estimate, but it is not yet available.	28c	Grybeck and others, 1984a, p.33; also Berg, 1984, p.244; Coldwell, 1990.
PE022	Castle Island barite	M*	56-39-10	133-09-40	A010666, A010345	Brt	Stratiform deposit of massive Brt grading to layered Py-Sp-Qtz-Brt rock; Gn, Po, Bn, Ccp, Td also present; Brt ore body was about 100 m long, 65 m wide, 25 m deep; interlayered with chert, graphitic schist, metafelsite(?) schist; main ore body mined out, other bodies probably present offshore. Production: total from 1968 to 1973 estimated at about 750,000 T Brt; no metals recovered, but massive Brt samples contained 0.5 to 2.0% Zn, 0.5% Pb, tr Cu, 1.0 oz/T Ag. Reserves: the offshore body is an inferred reserve of unknown size, but is here estimated to be about 1 million T Brt.	31b, 28c(?)	Grybeck and others, 1984a, p.35; also Berg, 1984, p.236.
PE023	Helen S.	M*	56-34-12	133-04-09	A010326	Au,Pb,Zn	Au-bearing Qtz veins in black slate, greenstone, and felsic metavolcanic rocks and stratiform massive sulfide deposit; latter contained layered Py, Po(?), Apy, Sp, Gn. Production: if any, between 1903 and 1915 was from veins and reported to have con-	36a, 28c	Grybeck and others, 1984a, p.38; also Berg, 1984, p.237.

Table 2-PE. Summary mine, prospect, and mineral-occurrence information for Petersburg quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							tained 0.177 oz/T Au.		
PE024	Harvey Creek	M	56-33-56	133-03-21	None	Au	Several narrow Qtz veins contain disseminated Py, Apy; country rock is felsic metatuff. Production: small tonnage of Au ore(?).	36a	Grybeck and others, 1984a, p.39.
PE025	Maid of Mexico	M	56-33-54	133-01-57	A010334	Ag,Au	Qtz vein 0.6 to 2.0 m thick, averaging 1.5 m thick, 600 m long, contains sparse disseminated Sp, Py, Gn, Ccp, Au; country rocks are Triassic(?) black carbonaceous slate and associated metatuff, limestone, greenstone, and greenschist. Production: some in 1930's, probably >100 oz Au and 100 oz Ag.	36a	Grybeck and others, 1984a, p.40; also Berg, 1984, p.236-237.
PE026	Hattie	M	56-31-58	133-02-57	A010331	Au	Qtz veins in zone 300 m long cut Py-bearing calcareous metarhyolite; both are cut by Ep-Hbl greenstone dikes and by fresh diorite; veins contain Py, Gn, Ccp, Sp and carry Au, Ag; grab samples contained up to 0.05 ppm Au. Production: possible small tonnage in early 1900's.	36a	Grybeck and others, 1984a, p.42; also Berg, 1984, p.237.
PE027	BP Adit	P	56-25-07	132-57-13	A010320	Ag,Au,Cu,Pb, Zn	Massive sulfide layers in siliceous metavolcanic rocks are 10 m thick, extend for 250 m, and contain Py, Ccp, Gn; grab samples of a massive Py layer contained 0.20 to 5.5 ppm Au, up to 2.0% Cu, 1.0% Zn, 1.0% Pb, 20 ppm Ag, >5,000 ppm Ba. Reserves: USBM has inferred estimate, but it is not yet available.	28c	Grybeck and others, 1984a, p.64; also Berg, 1984, p.245; Coldwell, 1990.
PE028	Lost Zarembo	O	56-22-55	132-53-55	A010318	Ag,Au,Cu,Pb, Zn	Three massive sufide layers in metarhyolite; thickest is 1.5 m and 15 m long; parts of the layers contain up to 30% sulfides, mainly Sp, minor Py, Ccp, Gn; selected grab samples contained up to 0.55 ppm Au, 50 ppm Ag, 15 ppm Sn, 3 ppm W. Reserves: USBM has inferred estimate, but it is not yet available.	28c	Grybeck and others, 1984a, p.69; also Berg, 1984, p.245; Coldwell, 1990.
PE029	Hydropit	O	56-22-29	132-54-53	A010321	Ag,Cu,Pb,Zn	Narrow Qtz(?) veins and lenses in an altered shear zone 1.5 m wide in quartz diorite contain Ccp, Bn, Gn, Sp, Apy, Mag; selected grab samples contained major amounts of Cu, Pb, Zn, 0.05 ppm Au, up to 50 ppm Ag, 15 ppm Sn, 3 ppm W.	22c	Grybeck and others, 1984a, p.68; also Berg, 1984, p.245.
PE030	Snow Passage	O	56-15-40	132-54-00	A010339	F	Fl occurs in veins in Tertiary volcanic rocks in an area about 100 m in diameter.	?	Grybeck and others, 1984a, p.67; also Berg, 1984, p.241.
PE031	Round Point	P	56-16-40	132-41-49	None	Cu,Pb,Zn	Lenses, pods, and layers of disseminated sulfides up to 0.3 m thick in felsic metavolcanic rocks; mainly Py, possibly Sp, Ccp; grab samples contained <5 ppm Cu, 50 to 150 ppm Pb, 200 to 11,000 ppm Zn, 150 to	28c(?)	Grybeck and others, 1984a, p.70; also Berg, 1984, p.246.

Table 2-PE. Summary mine, prospect, and mineral-occurrence information for Petersburg quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							5,000 ppm Ba.		
PE032	Kane Peak	O	56-58-40	133-07-00	A010336	Cr,Fe,PGE	An Alaskan-type zoned mafic-ultramafic body about 2.0 km diameter intrudes Cretaceous graywacke and volcanic rocks; Chr is sparse but ubiquitous in the dunite part of the dunite and peridotite core; Po, Pnt, Ccp are disseminated in the surrounding olivine pyroxenite; Ti-bearing Mag is disseminated in surrounding pyroxene hornblendite; no sample information available.	9	Grybeck and others, 1984a, p.20; also Berg, 1984, p.235.
PE033	Exchange	P	56-25-30	132-31-20	A010327	Au	A 1.3 to 1.6 m thick Qtz vein in granitic rock contains Au-bearing(?) Py.	36a	Grybeck and others, 1984a, p.74; also Berg, 1984, p. 240.
PE034	Thomas Bay	P	56-59-25	132-47-10	A010338	Au	Several parallel 15 to 20 cm thick Qtz veins cut gneiss in a zone about 4 m wide contain sparse disseminated Py, Apy, Ccp, Po, Gn; selected sample contained 3.85 ppm Au.	36a	Grybeck and others, 1984a, p.24; also Berg, 1984, p.235.
PE035	Twin Lakes Hot Springs	N.A.	56-42-02	132-16-25	N.A.	Geothermal	Low reservoir temperature system; discharge temp. 21 degrees C; flow rate 270 l/min from two springs combined.	N.A.	Motyka and Moorman, 1987; Bliss, 1983, p.88.
PE036	Chief Shakes Hot Springs	N.A.	56-43-22	132-02-19	N.A.	Geothermal	Intermediate reservoir temperature system; discharge temp. 50 degrees C; flow rate 320 l/min from main spring alone.	N.A.	Motyka and Moorman, 1987; Bliss, 1983, p.16-18.
PE037	Garnet Ledge garnet	M	56-34-27	132-21-35	None	Grt	Dark red, euhedral to subhedral garnet crystals up to 3 cm diameter occur in Qtz-Bt schist in aureole of Qtz diorite stock; mined for mineralogical specimens.	N.A.	Grybeck and others, 1984a, p.43.
PE038	Whistlepig	P	56-31-25	132-01-40	None	Mo(?)	Rhyolite dikes and sills related to Tertiary granite stock in medium-grade schist and gneiss have associated small occurrences of Toz, Fl, Mol; explored intensely in recent years as a possible porphyry Mo system, but no significant deposit found; see also PE039, 040. Reserves: USBM has an inferred estimate for an unnamed Mo deposit, which is probably this one, but it is not yet available. USBM also has an estimate for a deposit called the Copper King, which may be close to the Whistlepig.	?	Grybeck and others, 1984a, p.48; Coldwell, 1990.
PE039	Groundhog Basin	M	56-30-40	132-03-30	A010316	Ag,Cu,Pb,Sn, Zn	Pelitic, semipelitic, and calcareous schist and gneiss contain stratiform layers of massive sulfides and zones of disseminated sulfides, including Py, Po, Sp, Gn, Ccp, Td, cubanite(?), and Mag; four main layers or "beds" recognized, the largest of which is about 1.3 m thick and has been traced for about 1,130 m over a vertical distance of about 460 m; recent work indicates that significant Sn is also present and that all the sulfide mineralization is probably related to the Tertiary granite mentioned in PE036 description. Reserves: several 100,000 T of massive ore with	14c	Grybeck and others, 1984a, p.47; also Berg, 1984, p.238; also Newberry and Brew, 1989; Coldwell, 1990.

Table 2-PE. Summary mine, prospect, and mineral-occurrence information for Petersburg quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							about 8.0% Zn 1.5% Pb, 1.5 oz/T Ag, and several 100,000 T of disseminated ore with about 2.5% Zn, 1% Pb; also, USBM has a revised inferred estimate, but it is not yet available.		
PE040	Glacier Basin	P	56-28-40	132-01-20	A010329	Pb,Sn,Zn	Schist and gneiss with interlayered amphibolite, calc-silicate rock, some marble contain massive and disseminated sulfide layers and bodies like those at PE039, but more disseminated layers than massive; Sp, Gn, Mag common. Reserves: estimated to be many 100,000 T ore with about 1.6% Zn, 0.1% Pb; significant Sn values also present; Qtz-Fl veins present nearby in rhyolite porphyry sill; also USBM has a revised inferred estimate, but it is not yet available.	14c	Grybeck and others, 1984a, p.49; also Berg, 1984, p.239; also Newberry and Brew, 1989; Coldwell, 1990.
PE041	Lake	M	56-28-25	132-05-40	A010330	Ag,Pb,Zn	Qtz-Cal veins, breccia fillings, and stringers occur in prominent fault zone about 3 to 6 m wide that cuts phyllite, slate, quartzite, chlorite schist, and biotite schist near a Qtz diorite pluton; they contain Gn, Sp, Py, Ccp; average grade of seven samples is about 1.0% Pb, 1.0% Zn, 0.12 oz/T Ag. Reserves: USBM has an inferred estimate, but it is not yet available.	22c	Grybeck and others, 1984a, p.45; also Berg, 1984, p.239; Coldwell, 1990.
PE042	Berg Basin	P	56-26-50	132-00-55	A010328	Ag,Au,Pb,Zn	Gn, Sp occur in small pockets in composite basalt dike near contact of dike with schist and gneiss country rock that also includes Tertiary rhyolite sills; Gn, Sp also disseminated in the rhyolite; Gn reported to have 28 oz/T Ag; also a Qtz vein present reported to have 0.68 oz/T Au.	?	Grybeck and others, 1984a, p.50; also Berg, 1984, p.240.

Table 2-PR. Summary mine, prospect, and mineral-occurrence information for Prince Rupert quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986( ).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
PR001	Gardner Bay	P	54-49-18	131-58-36	A012418	RA	Sparsely disseminated black radioactive minerals in pegmatite that cuts diorite.	FP/UREE, FP/THRE	Berg, 1984, p.254.
PR002	Nelson and Tift	M*	54-48-10	131-59-22	A012417	Ag,Au,Cu,Pb,	Lens 23 m long, 9 m deep, and 2.7 m wide in septum of marble and other calcareous rocks in Qtz diorite consists of massive and dis-seminated Py, Ccp, Bn; at N end of septum Au(?)-, Py-bearing Qtz veinlets up to 15 cm thick cut calcareous rocks with minor dis-seminated Mag, Py; total production be-Production: before WWII, 1,3000 T from which Au, Ag, Cu, Pb were recovered; 1935 shipment of sulfides contained 0.73 oz/T Au. 0.05 oz/T Ag.	18b	Berg, 1984, p.254.
PR003	Cow	O	54-57-52	131-35-22	A012395	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridot-ite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.254; Berg and others, 1978, p.15.
PR004	Stebbins	O	54-56-30	131-36-27	A012397	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridot-ite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.254; Berg and others, 1978, p.15.
PR005	Percy	P	54-56-42	131-35-27	A012396	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridot-ite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.254; Berg and others, 1978, p.15.
PR006	Duke Island, center of, loc. 1	P	54-56-55	131-25-45	A012398	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridot-ite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.254; Berg and others, 1978, p.15.
PR007	Duke Island, center of, loc. 2	P	54-55-54	131-24-00	A012399	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridot-ite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.254; Berg and others, 1978, p.15.
PR008	Duke Island, center of, loc.3	P	54-55-45	131-22-54	A012400	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridot-ite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.254; Berg and others, 1978, p.15.
PR009	Duke Island, center of, loc. 4	P	54-56-00	131-22-10	A012401	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridot-ite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.254; Berg and others, 1978, p.15.
PR010	Dud	P	54-56-29	131-20-35	A012402	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridot-ite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.253; Berg and others, 1978, p.15.
PR011	Peter(?)	P	54-55-50	131-20-12	A012403	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridot-ite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.253; Berg and others, 1978, p.15.

Table 2-PR. Summary mine, prospect, and mineral-occurrence information for Prince Rupert quadranle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986( ).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
PR012	Cove	P	54-55-08	131-21-26	A012406	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridotite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.253; Berg and others, 1978, p.15.
PR013	Red	P	54-55-32	131-19-25	A012404	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridotite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.253; Berg and others, 1978, p.15.
PR014	Hall Cove	P	54-54-36	131-21-44	A012407	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridotite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.253; Berg and others, 1978, p.15.
PR015	Camp	P	54-54-06	131-22-12	A012408	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridotite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.253; Berg and others, 1978, p.15.
PR016	Judd Harbor	P	54-53-48	131-18-06	A012409	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridotite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.253; Berg and others, 1978, p.15.
PR017	Richard	P	54-53-10	131-17-50	A012410	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridotite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.253; Berg and others, 1978, p.15.
PR018	Kelp island	P	54-52-13	131-16-26	A012412	Cr,Fe	Ti-bearing Mag as segregations in Hbl clino-pyroxenite and of Chr in dunite and peridotite that is in Cretaceous zoned ultramafic body.	9	Berg, 1984, p.253; Berg and others, 1978, p.15.
PR019	Kelp Island, N of	P	54-53-00	131-14-27	A012411	Cr,Fe,Ni	Disseminated sulfides(?) in mafic igneous rocks.	9	Berg, 1984, p.253; Berg and others, 1978, p.15.
PR020	Last Chance	P	54-45-56	130-41-55	A012414	Mica	Pegmatite <1 m thick in paragneiss; silvery mica occurs in books up to 4 to 5 cm diameter; deposit small and mica of poor quality.	N.A.	Berg and others, 1978, p.16.
PR021	Hyder Mica	P	54-45-46	130-40-22	A012415	Mica	Two massive pegmatite bodies contain mica plates up to 20 cm diameter; bent and broken books common.	N.A.	Berg and others, 1978, p.16.
PR022	Garnet	P	54-43-35	130-41-35	A012416	Grt	Schist contains up to 40% Grt; some crystals up to 2.5 cm diameter.	N.A.	Berg and others, 1978, p.16.

Table 2-SD. Summary mine, prospect, and mineral-occurrence information for Sumdum quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
SD001	Kloss "Patty"	P	57-29-00	133-59-00	None	Ag,Cu,Ni,Pb, Zn	Early 1900's reports of Cu, Ni minerals in shear zones up to 60 m wide in Upper Triassic volcanic(?) rocks; also Ag, Pb, Zn reported in stratiform deposit.	?	Berg, 1984, p.294.
SD002	Mist Creek placer	O	57-59-37	133-51-01	None	Au	0.1 cubic yard gravel sample contained tr Au.	39a	Redman and others, 1985, p.46.
SD003	Snettisham	P	57-59-03	133-47-03	A013320	Cu,Fe,PGE,Ti, V	Disseminated and massive magmatic segregations of Ti-bearing Mag, Po, Ccp, Ilm in pyroxenite. Reserves: 500,000 T with about 18.9% Fe, 2.6% Ti, 0.7% V, 0.0027 oz/T PGE; USBM has a revised inferred estimate, but it is not yet available.	9	Berg, 1984, p.288.
SD004	Friday	M*	57-58-43	133-47-22	A013319	Au	Qtz(?) fissure vein 0.15 to 1.1 m thick in altered slate near diorite intrusive contains Mag, Au-bearing Py; early 1900's Production: early 1900's, combined with Crystal (SD005). Reserves: USBM has an inferred estimate, but it is not yet available.	36a	Berg, 1984, p.288.
SD005	Crystal	M*	57-58-06	133-47-26	A013318	Au	Qtz fissure vein averaging 1.1 m thick in amphibolite contains Py, Au. Production: at least 2,000 oz Au produced in early 1900's. Reserves: USBM has an inferred estimate, but it is not yet available.	36a	Berg, 1984, p.288.
SD006	Sweetheart Creek	O	57-56-41	133-37-50	A013321	Au(?),Pb(?)	Au- and Gn-bearing Qtz in schist.	?	Berg, 1984, p.289.
SD007	Tracy Arm, N of	O	57-57-03	133-30-22	A013336	Cu,Mo	Fe-stained Qtz pod parallel foliation in gneissic granodiorite contains Mol, Ccp; samples contained 100 ppm Mo, 200 ppm Cu.	?	Berg, 1984, p.289.
SD008	Gold Nest	P	57-56-20	133-36-01	A013323	Ag,Au	One m thick brecciated Py-bearing Qtz vein in schist(?) reported to contain Ag; sample contained 7 ppm Au.	?	Berg, 1984, p.289.
SD009	Sweetheart Ridge	P	57-55-26	133-37-20	A013325	Ag,Au,Cu,Pb, Zn	Massive sulfide lenses to 2 m thick in schist and paragneiss and disseminated grains also of Ccp, Py, Sp, Gn parallel foliation; some veins post-date lenses; discovered by USGS in 1973, explored by USBM and private industry in 1980's. Reserves: for zone 45 m long by 30 m deep over 1.7 m width is 7,300 T with 0.23 oz/T Au, 0.31 oz/T Ag, 0.7% Cu; USBM has a revised inferred estimate, but it is not yet available; USBM also has an estimate for a locality identified only as "Sweetheart" which we have not yet been able to relate to our locality listing.	RM/MS	Berg, 1984, p.289.
SD010	Arms	O	57-55-43	133-35-11	A013324	Cu,Pb,Zn	Fe-stained gneiss; float sample contained 230 ppm Cu, 400 ppm Zn, 15 ppm Pb.	?	Berg, 1984, p.289.

Table 2-SD. Summary mine, prospect, and mineral-occurrence information for Sumdum quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
SD011	Tracy Arm	P	57-54-18	133-34-18	A013326	Ag,Au,Cu,Pb, Zn	Conformable layers up to 3 m thick of massive and disseminated Po, Sp, Ccp, Gn in steeply dipping semipelitic and felsic paragneiss; channel samples contained up to 12% Zn, 5.7% Cu, 1 ppm Au 52.4 ppm Ag. Reserves: 187,000 T with 3.4% Zn, 1.42% Cu, 0.43 oz/T Ag, 0.008 oz/T Au; USBM has revised inferred estimate, but it is not yet available.	RM/MS	Berg, 1984, p.290.
SD012	Sawyer Glacier	O	57-57-__	133-04-__	None	Au,Mo	Fe-stained gneiss; a 10 m long channel sample contained 0.10 ppm Au; another sample contained 10 to 30 ppm Mo.	?	Berg, 1984, p.290.
SD013	Carroll Creek placer	O	57-51-24	133-45-27	A013327	Au	Placer Au present in creek gravels.	39a	Redman and others, 1985, p.48.
SD014	Boulder Creek placer	O	57-50-05	2133-44-33	A013328	Au	Fine placer Au present in stream gravels.	39a	Redman and others, 1985, p.48.
SD015	Mount Sumdum, W of	O	57-48-27	133-29-03	A013329	Ag	Qtz vein in Bt schist; 7 cm channel sample contained 30 ppm Ag.	36a	Kimball and others, 1984, p.179.
SD016	Sumdum Glacier, N side	P	57-47-32	133-27-26	A013330	Ag,Au,Cu,Pb, Zn	Deposit is on N side of, under, and on S side of glacier; conformable lenses up to 15 m thick of massive and disseminated Po, Py, Ccp, Sp, some Bn, Cc, Mal, Az, Gn in complexly folded paragneiss; some sulfides in veins(?) and fault breccia that at least in part post-date the lenses. Reserves: 26.7 million T with 0.57% Cu, 0.37% Zn, 0.3 oz/T Ag; USBM revised inferred estimate is similar, but is not yet available.	RM/MS, 28c(?)	Berg, 1984, p.291.
SD017	Sumdum Glacier, S side	P	57-46-40	133-26-30	A013331, A010667	Ag,Au,Cu,Pb, Zn	See above description.	RM/MS, 28c(?)	Berg, 1984, p.291.
SD018	Powers Creek placer	M*	57-45-38	133-30-09	A013332	Au	Stream gravel samples contained up to 0.0031 oz/cubic yard Au; about 2,000 oz Au produced in late 1800's.	39a	Berg, 1984, p.291.
SD019	Point Astley	P	57-42-34	133-37-49	A013333	Ag,Au,Cu,Pb, Zn	Conformable massive lenses and disseminations of Py, Sp, Gn, Ccp, Bn, Cc, Cv, Po, Mal, Ag in phyllite and Ms-Qtz-feldspar schist; some sulfides in stringers that post-date the lenses; samples contained up to 159.1 ppm Ag, 5,800 ppm Cu, 11,000 ppm Pb, 90,000 ppm Zn. Reserves: USBM has inferred estimate, but it is not yet available.	RM/MS, 28c(?)	Berg, 1984, p.291.
SD020	Bushy Islands	O	57-42-31	133-25-59	A013335	Ag,Cu,Zn	Cu-stained Qtz stringers up to 45 cm thick in phyllite locally contain Ccp, Sp, Mal; chip samples of phyllite and Qtz stringers contained 700 ppm Cu, 1,600 ppm Zn, 0.015 oz/T Ag.	22c(?)	Berg, 1984, p.292.

Table 2-SD. Summary mine, prospect, and mineral-occurrence information for Sumdum quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
SD021	Portland	P	57-41-28	133-22-32	A013334	Ag,Au,Cu,Pb, Zn	Stringers and disseminations of Py, Po, Gn, Sp, Ccp parallel foliation in Fe-stained Qtz-mica schist; samples contained up to 0.10 ppm Au, 10 ppm Ag, 930 ppm Cu, 1,800 ppm Pb, 3,400 ppm Zn. Reserves: USBM has an inferred estimate, but it is not yet available.	22c(?)	Berg, 1984, p.292.
SD022	Sumdum Chief	M*	57-38-42	133-28-51	A013337	Ag,Au,Cu,Pb, Zn	Qtz-Cal veins up to 6 m thick in graphitic limestone and phyllite contain Au, Au-bearing Py, Gn, Sp, Ccp, Apy; production in Production: early 1900's, about 24,000 oz Au and probably 24,000 oz Ag; ore averaged 0.4 oz/T Au. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?), 22c(?)	Berg, 1984, p.292.
SD023	Taylor Lake, N of	O	57-37-26	133-23-37	A013356	Ag,Au	60 to 100 cm thick Qtz vein in graphitic schist; grab sample contained 15 ppm Ag, 0.015 ppm Au.	36a	Kimball and others, 1984, p.166.
SD024	Bluebird, Jackpot	P	57-36-30	133-22-53	A013339	Ag,Au,Cu,Pb, Zn	Jackpot is Au- and sulfide-bearing Qtz veins in black slate; Bluebird is 50 cm thick Qtz vein in graphitic schist that contains Py, Sp, Ccp, Gn, Au, Ag. Reserves: USBM has an inferred estimate, but it is not yet available.	36a	Berg, 1984, p.293.
SD025	Sulphide	P	57-36-55	133-16-04	A013357	Ag,Au,Cu,Pb, Zn	Conformable massive sulfide layers 1 to 5 m thick contain Sp, Gn, Ccp, Po, Apy, marcasite in folded paragneiss and quartzite; samples contained up to 03 ppm Ag, 0.15 ppm Au, 2,500 ppm Cu, 13,000 ppm Pb, 19,000 ppm Zn; fire assays indicated up to 0.3 ppm Au, 43.9 ppm Ag. Reserves: USBM has an inferred estimate, but it is not yet available.	RM/MS(?), 28c(?)	Berg, 1984, p.293.
SD026	Mildred	M*	57-35-51	133-21-09	A013340	Ag,Au,Pb	Qtz fissure veins up to 30 cm thick in schist and phyllite contain Au, Py, Sp, Gn, Ccp; sulfides also disseminated in country rocks. Production: early 1900's, about 3,000 oz Au from Mildred, Gertrude(SD027), Redwing(SD029), Jenny Reed(SD030), Fries and Falls, Marty(SD031), Yates(SD032), Yellow Jacket(SD033), Jensen, Keith(SD031), Apache-Navajo(SD035), Gold Shaft(SD037), Spruce Mountain(SD038) at about 0.25 oz/T Au. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD027	Gertrude	M*	57-35-32	133-20-12	A013341	Ag,Au,Cu,Pb Zn	Like the Mildred(SD026) described above. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD028	Spruce Creek placer	M*	57-35-44	133-19=55	A013354	Ag,Au,Cu,Pb Zn	Small amount of Au reported produced in late 1800's and later from basins below the lode	39a	Berg, 1984, p.294.

Table 2-SD. Summary mine, prospect, and mineral-occurrence information for Sumdum quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							deposits. Reserves: USBM has an inferred estimate, but it is not yet available.		
SD029	Redwing	M*	57-35-49	133-18-52	A013344	Ag,Au,Cu,Pb Zn	Like the Mildred(SD026) described above. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD030	Jenny Reed	M*	57-35-56	133-19-01	A013343	Ag,Au,Cu,Pb Zn	Like the Mildred(SD026) described above. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD031	Fries and Falls, Marty, Jackson	M* M* M*	57-36-02 57-35-56 57-__-32	133-18-23 133-18-21 133-17-55	A013346 A013342 A013348	Ag,Au,Cu,Pb Zn	Like the Mildred(SD026) described above. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD032	Yates	M*	57-35-43	133-18-05	A013347	Ag,Au,Cu,Pb Zn	Like the Mildred(SD026) described above. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD033	Yellow Jacket	M*	57-35-27	133-17-50	A013350	Ag,Au,Cu,Pb Zn	Like the Mildred(SD026) described above. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD034	Jensen, Keith	M* M*	57-35-24 57-35-28	133-17-46 133-17-50	A013345 A013349	Ag,Au,Cu,Pb Zn	Like the Mildred(SD026) described above. Reserves: USBM has an inferred estimate, but it is not yet available.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD035	Apache-Navajo	M*	57-35-41	133-16-34	A013352	Ag,Au,Cu,Pb Zn	Like the Mildred(SD026) described above.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD036	Holkham Bay	M*	57-35-37	133-14-11	A013339	Ag,Au,Cu,Pb Zn	Qtz veins up to 2 m thick in schist and schist itself contain Gn, Py, Apy, Ccp, Au. 1970's samples assayed 0.094 oz/T Au. Production: early 1900's, 50 oz Au.	36a(?), 22c(?)	Berg, 1984, p.293.
SD037	Gold Shaft	M*	57-34-54	133-16-00	A013351	Ag,Au,Cu,Pb Zn	Like the Mildred(SD026) described above.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD038	Spruce Mountain	M*	57-34-33	133-16-02	A013353	Ag,Au,Cu,Pb Zn	Like the Mildred(SD026) described above.	36a(?), 22c(?)	Berg, 1984, p.293-294
SD039	Chuck River placer	M*	57-34-02	133-20-48	A013355	Au	Small amount of Au reported produced in late 1800's and more recently.	39a	Berg, 1984, p.294.
SD040	K & D	M*	57-28-45	133-28-42	A013359	Ag,Sb,Zn	Au-bearing(?) Qtz fissure veins uo to about 1.5 m thick in phyllite or schist contain Sb, Sp, Py, Td; samples contained up to 7 ppm Ag. Production: possible minor Au .	27d(?), 22c(?), 36a(?)	Berg, 1984, p.295.
SD041	BBH	O	57-32-04	133-00-02	A013358	U,RA	Altered zones containing pegmatite lenses in granodiorite; samples contained up to 90 ppm eU (16.1 ppm U).	FP/UREE	Berg, 1984, p.294.
SD042	South Dawes Glacier	O	57-24-20	132-46-24	A013361	Cu	Py, Ccp disseminated in paragneiss.	?	Berg, 1984, p.295.
SD043	Joe Dwyer #1	O	57-19-45	132-45-13	A013362	Cu	Aplite dike in Qtz and pegmatite and Ep-	?	Berg, 1984, p.295.

Table 2-SD. Summary mine, prospect, and mineral-occurrence information for Sumdum quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							coated fractures contain Bn.		
SD044	Port Houghton	P	57-18-39	133-06-00	A013360	Cu	Fissure vein 0.6 to 4 m thick in shear zone in schist contains Po, Py, Mag, Ccp, Qtz, Grt, amphibole; one sample across vein contained 1.34% Cu, tr Au, tr Ni.	22c(?)	Berg, 1984, p.295.
SD045	Joe Dwyer #2	O	57-17-13	132-48-46	A013363	Cu	Veinlet contains Qtz, Ep, Bn.	?	Berg, 1984, p.296.
SD046	North Baird Glacier	O	57-15-43	132-42-37	A013364	Cu	Veinlet contains Qtz, Ep, Bn.	?	Berg, 1984, p.296.
SD047	Colp & Lee	P	57-05-21	132-48-40	A013365	Au,Cu,Pb,Zn	Qtz stringers in shear zone 43 m wide in Qtz diorite contain Py,Gn,Sp, Ccp; samples of shear zone reported to contain 0.145 oz/T Au; 1.7 m wide richest part reported to contain 0.774 oz/T Au.	22c(?)	Berg, 1984, p.296.

Table 2-SI. Summary mine, prospect, and mineral-occurrence information for Sitka quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
SI001	Bohemia Basin, NW of	P	57-59-06	136-25-56	A013238	Co,Cu,Ni	See SI002, below.	7a	Berg, 1984, p.255; Ford and others, 1989.
SI002	Bohemia Basin	P	57-58-30	136-25-21	A013237, A010689	Co,Cu,Ni	Magmatic segregation deposit of Po, Pnt, Ccp in trough-like body about 45 m thick near base of basin-shaped norite unit that is part of composite mafic and intermediate composition stock. Reserves: 20.1 million T with 0.33 % Ni, 0.18% Cu,0.04% Co; USBM has a somewhat different estimate, but it is not yet available.	7a	Berg, 1984, p.255; Ford and others, 1989.
SI003	Goldwin	M	57-59-33	136-19-59	A013239	Ag,Au,Cu	Lenticular Qtz veins up to 60 cm thick along faults in diorite pluton contain Py, Po, and bear Au; altered wallrock also contains some Au.	36a	Berg, 1984, p.256.
SI004	Cann Creek	O	57-57-49	137-16-25	A013240	Au	Qtz vein 15 to 30 cm wide in diorite estimated to contain up to 1.0 oz/T Au.	36a	Berg, 1984, p.255.
SI005	Apex-El Nido	M*	57-57-03	137-17-49	A013241, A010690, A013242	Ag,Au,Cu,Pb, Sb,W,Zn	Qtz fissure veins up to1.6 m thick and Qtz stockwork in diorite and in amphibolite inclusion in diorite contain Py, Apy, Ccp, Gn, Sp, Td, Sch, Au; altered wallrock contains same sulfides disseminated. Production: 1912 to 1939 about 17,000 oz Au, 2,400 oz Ag; total production estimated to be >50,000 oz Au. Reserves: USBM estimated inferred figure exists, but is not yet available.	36a	Berg, 1984, p.257.
SI006	Stag Bay, loc. 1	P	57-54-46	136-20-50	A013243	Cu,Fe	Sheared gabbro or diorite locally contains Py, up to 2% Ccp, 60% Mag.	?	Berg, 1984, p.257.
SI007	Stag Bay, loc. 2	O	57-55-03	136-17-57	A013245	Au	Au-bearing Qtz(?) veins in small diorite body and adjacent metamorphic rocks.	36a(?)	Berg, 1984, p.257.
SI008	Etna	P	57-54-35	136-18-06	A013244	Au	Qtz vein about 45 cm thick in diorite stock contains some Au.	36a	Berg, 1984, p.257.
SI009	Cub Mountain	P	57-53-05	136-16-49	A013246	Au	Qtz vein about 30 cm thick in diorite contains visible Au; assays indicate about 1.0 oz/T.	36a	Berg, 1984, p.257.
SI010	Cobol (Pinta Bay)	M*	57-51-20	136-12-40	A013247	Au,Cu,Pb,Zn	Qtz fissure veins up to 60 cm thick in altered Qtz diorite and greenstone contain , Apy, Sp, Gn, Py, Ccp, Po. Production: about 100 oz Au recovered from 130 T ore in 1930's.	36a(?), 22c(?)	Berg, 1984, p.257.
SI011	Mine Mountain	O	57-50-27	136-11-23	A013249	Au,Cu,Pb,Zn	Qtz fissure veins in greenstone(?) contain 0.01 oz/T Au.	36a	Berg, 1984, p.257.
SI012	Southside	P	57-50-21	136-12-41	A0132248	Au	Qtz vein 50 cm thick in greenstone(?) contains free Au.	36a	Berg, 1984, p.258.

Table 2-SI. Summary mine, prospect, and mineral-occurrence information for Sitka quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
SI013	Lake Elfindahl	O	57-50-27	136-15-33	A013250	Cu,Pb,Zn	Au-bearing(?) Qtz fissure vein in fault in greenstone contains Py, Ccp, Sp, Gn.	36a	Berg, 1984, p.258.
SI014	Baker Peak	P	57-49-01	136-14-17	A013258	Ag,Au,Cu	Upper Triassic(?) basalt flows contain masses and disseminations of Ccp, Py; basalt intruded by aplite dikes and adjacent wallrock is altered; both dikes and wallrock locally contain stringers, disseminations, and smallmasses of Ccp, Py; largest concentration of Cu is in a NW-striking vertical zone about115 m long and up to 4 m thick; two USBM channel samples contained average of 2.0% Cu, 7.5% Cu. Reserves: USBM estimated inferred figure exists, but is not yet available.	23(?)	Berg, 1984, p.259.
SI015	Koby & Shepard	P	57-49-46	136-59-38	A013261	Au,Cu,Pb,Zn	Lenticular Qtz bodies up to 2 m thick in a fault zone in greenschist contain Au and about 1.0% Apy, Py, Sp, Gn.	36a	Berg, 1984, p.260.
SI016	Bertha Bay	P	57-48-27	136-21-13	A013251	Cu	Stringers of Ccp, Po in an altered mafic intrusive rock at contact with quartzite(?) and schist.	7a(?)	Berg, 1984, p.258.
SI017	White Sulfur Springs	N.A.	57-48-21	136-20-25	None	Geothermal	Low reservoir temperature system; discharge temp. 44 degrees C; flow rate 85 l/min; estimated mean accessible resource base is 1.01 X 10 power 18 J.	N.A.	Bliss, 1983, p.94, 1989, unpub. data.
SI018	Mirror Harbor	P	57-47-41	136-19-08	A013252	Cu,Ni	Magmatic segregation deposit of disseminated and locally massive Po, Pnt, Ccp in norite that is part of composite mafic stock; some secondary niccolite; largest sulfide body Reserves: largest sulfide body has estimated reserve of about 8,000 T with 1.57% Ni, 0.88% Cu, probably some Co. Also, USBM estimated inferred figure exists, but is not yet available.	7a	Berg, 1984, p.258.
SI019	Davison Bay	P	57-47-18	136-18-42	A013253	Cu,Ni	Magmatic segregation deposit of disseminated Po, Ccp, Pnt in norite that is part of composite mafic stock. Reserves: several million T with about 0.2% Ni, 0.1% Cu. Also, USBM estimated inferred figure may exist, but is not yet available.	7a	Berg, 1984, p.258.
SI020	Davison Bay, E of	P	57-47-09	136-18-27	A013254	Cu,Ni	See SI018, 019.	7a	Berg, 1984, p.258.
SI021	Snow Slide	P	57-47-38	136-15-25	A013257	Cu	2 m thick zone in greenschist contains Py, Ccp, Po(?).	23(?)	Berg, 1984, p.259.
SI022	Little Bay	P	57-46-56	136-17-30	A013255	Ag,Au,Cu,Ni	Ccp, Po in "quartzite"; samples contained Cu, Ag, Au, Ni.	?	Berg, 1984, p.258.
SI023	Princess	P	57-46-28	136-15-41	A013256	Au,Cu	Qtz vein 2 m thick between slate and greenstone contains scattered Po, Ccp; samples assayed 0.48 oz/T Au.	36a	Berg, 1984, p.259.

Table 2-SI. Summary mine, prospect, and mineral-occurrence information for Sitka quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
SI024	New Chichagof	P	57-46-54	136-11-17	A013259	Au	Au-bearing Qtz breccia in fault zone in bedded rocks and diorite; USBM samples of 33 m of breccia across a 1.2 m mining width contained 0.24 oz/T Au.	36a	Berg, 1984, p.259.
SI025	Golden Hand	M*	57-46-29	137-10-54	A013260	Au	Au-bearing Qtz veins and Qtz breccia in fault(?) zone in limestone intruded by Qtz diorite. Production: minor Au production reported for 1979.	36a	Berg, 1984, p.260.
SI026	Congress	P	57-43-53	136-16-52	A013262	Cu	Qtz lenses and veinlets in a 4 m thick zone in schistose greenstone surrounded by graywacke contain sparse Ccp, Po.	36a	Berg, 1984, p.260.
SI027	Peril Strait Hot Springs	N.A.	57-46-16	135-49-12	None	Geothermal	Low reservoir temperature system; discharge temp. 38 degrees C; flow rate unknown; total dissolved solids 786 mg/l.	N.A.	Bliss, 1989, unpub. data.
SI028	Radio Gold	P	57-41-25	136-08-27	A013263	Au	Au-bearing(?) Qtz fissure veins up to 30 cm thick in faults in graywacke that is cut by dikes of unknown type; dikes and probably veins contain Py, Apy.	36a	Berg, 1984, p.261.
SI029	Chichagof (prospect)	P	57-41-13	136-07-24	A013264	Au	Au-bearing(?) Qtz fissure veins up to 1 m thick in faults in graywacke.	36a	Berg, 1984, p.261.
SI030	Hirst-Chichagof	M*	57-41-10	136-06-30	A010687, A013265	Ag,Au,Cu,Pb, Zn	Au-bearing ribbon-Qtz fissure veins in slate and graywacke locally contain massive Apy, Py, Sp, Gn, Ccp. Production: 1922 to 1938 was about 87,980 oz Au, 20,000 oz Ag, some Pb, Cu probably recovered at smelter. Reserves: in mine: 80,000 T with 1.0 oz/T Au, 0.25 oz/T Ag, and 70,000 T with 0.25 oz/T Au, 0.06 oz/T Ag; in tailings: 70,000 T with 0.14 oz/T Au, 0.03 oz/T Ag; in dump: 70,000 T with 0.04 oz/T Au, 0.01 oz/T Ag.	36a	Berg, 1984, p.261.
SI031	Marinovich	P	57-41-17	136-05-51	A013267	Au	Au-bearing(?) Qtz fissure veinlets in joints and faults in graywacke.	36a	Berg, 1984, p.261.
SI032	McKallick	P	57-41-12	136-04-41	A013268	Au	Au-bearing Qtz veins in faults in graywacke.	36a	Berg, 1984, p.262.
SI033	Tillson	P	57-40-37	136-05-38	A013266	Au	Au-bearing(?) Qtz fissure veins in faults in graywacke(?).	36a	Berg, 1984, p.261.
SI034	Hanlon	P	57-39-51	136-10-00	A013269	Au	Au-bearing(?) Qtz fissure veinlet in fault in graywacke contains Py, Apy.	36a	Berg, 1984, p.262.
SI035	Flora, Submarine, Gloria, Minnesota	P	57-39-47	136-06-28	A013275	Au	Au-bearing(?) Qtz -Cal fissure vein up to 30 cm thick in graywacke.	36a	Berg, 1984, p.263.
SI036	Chichagof (mine)	M*	57-39-50	136-05-48	A013274	Ag,Au,Pb	Au-bearing ribbon-Qtz fissure veins in slate and graywacke contain Py, Apy, Gn,	36a	Berg, 1984, p.263.

Table 2-SI. Summary mine, prospect, and mineral-occurrence information for Sitka quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							Sp, Ccp, Au, and locally, Sch, Td; tabuiar plunging ore bodies were up to a few m thick and 300 m long along plunge. Production: 1905 to 1944 about 700,000 oz from 1905 to 1944 was about 700,000 oz Au, Au, 200,000 oz Ag, some reported Cu. Reserves: in mine, indicated, about 80,000 T with 0.025 oz/T Au, 0.08 oz/T Ag; inferred, 463,000 T with 0.30 oz/T Au, 0.09 oz/T Ag; in tailings, 456,000 T with 0.11 oz/T Au, 0.03 0z/T Ag; in dump, 300,000 T with 0.04 oz/T Au, 0.012 0.012 oz/T Ag; other inferred other inferred, 13,500 T with 0.11 0z/T Au, 0.04 oz/T Ag.		
SI037	Lillian & Prin-cella	P	57-39-42	136-06-43	A013273	Au	Au-bearing(?) Qtz-Cal veinlet up to 30 cm thick in a joint in graywacke locally contains Py, Gn.	36a	Berg, 1984, p.263.
SI038	Gold Reef	P	57-39-33	136-06-43	A013273	Au	Au-bearing(?) Qtz fissure vein in graywacke.	36a	Berg, 1984, p.262.
SI039	Alaska-Chichagof	M*	57-39-30	136-06-06	A013271	Au	Au-bearing Qtz fissure veins up to 1.6 m thick in faults in graywacke. Production: at least 660 T ore mined in early 1900's with recovery of 1.0 oz/T Au, some Ag.	36a	Berg, 1984, p.262.
SI040	Handy Andy	P	57-39-36	136-05-26	A013277	Au	Au-bearing(?) Qtz fissure veins in faults or shear zone in graywacke contains Py.	36a	Berg, 1984, p.263.
SI041	McKellick placer	O	57-38-22	136-08-40	A013285	Au	Residual Au placer probably derived from nearby unspecified Qtz veins.	36a	Berg, 1984, p.264.
SI042	American Gold Co.	P	57-39-03	136-06-57	A013270	Au	Au-bearing Qtz fissure vein in fault in graywacke.	36a	Berg, 1984, p.262.
SI043	Jumbo, Duluth	M*	57-39-18	135-06-18	A013272	Au,Pb,Zn	Qtz veinlets in crushed zone in graywacke locally contain Au, Py, Gn, Sp. Production: small production reported in 1921	36a	Berg, 1984, p.262.
SI044	Hill & Berkland	P	57-39-17	136-05-26	A0133279	Au	Au-bearing(?) Qtz fissure veins up to 2 m thick in faults in graywacke.	36a	Berg, 1984, p.263.
SI045	Chichagof Exten-sion	P	57-39-17	136-04-58	A013278	Au	Au-bearing(?) Qtz fissure veins up to 1 m thick in graywacke.	36a	Berg, 1984, p.263.
SI046	Lucky Shot	P	57-38-38	136-03-04	A013280	Au,Pb,Zn	Au-bearing(?) Qtz fissure veins in faults in graywacke contain Apy, Gn, Sp, Po.	36a	Berg, 1984, p.264.
SI047	Baney	P	57-37-16	136-06-24	A013282	Au	Qtz fissure veinlets up to 30 cm thick in fault in graywacke reported to have about 0.5 oz/T Au.	36a	Berg, 1984, p.264.
SI048	Lake Anna	P	57-37-29	136-04-35	A013284	Au,Pb,Zn	Qtz in 1 to 1.6 m wide fault zone in slaty rock contains Py, Gn, Po, Sp, Au.	36a(?), 22c(?)	Berg, 1984, p.264.
SI049	Elbow Passage	P	57-36-51	136-05-02	A013283	Au	Au-bearing, locally Py-bearing ribbon Qtz	36a	Berg, 1984, p.264.

Table 2-SI. Summary mine, prospect, and mineral-occurrence information for Sitka quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							veins up to 30 cm thick in faults and joints in graywacke.		
SI050	Anderson	P	57-38004	136-01-27	A013281	Au	Au-bearing(?) Qtz fissure veins in faults in graywacke and interbedded greenstone.	36a	Berg, 1984, p.264.
SI051	Patterson Bay, W of	O	57-37-18	135-52-27	A013286	Cu	Ccp, Py, secondary Cu minerals in amygdaloidal greenstone.	23(?)	Berg, 1984, p.265.
SI052	Falcon Arm	P	57-33-19	135-55-33	A013287	Ag,Au,Pb,Zn	Felsic aphanite dikes in massive graywacke contain Py, Gn, Sp, and reported Ag, Au; faults in graywacke locally contain Qtz veinlets.	?	Berg, 1984, p.265.
SI053	Cobol, NE of	O	57-31-47	135-48-35	A013288	Cu	Secondary Cu minerals in Qtz and Ep amygdules in greenstone.	23(?)	Berg, 1984, p.265.
SI054	Cobol (Slocum Arm)	M*	57-29-37	135-52-05	A013289	Au,Pb	Qtz veinlets up to about 30 cm thick in fault zone in graywacke contain sparse Py, Gn, Au. Production: reported, but amount not known.	36a	Berg, 1984, p.265.
SI055	Slocum Arm	P	57-28-30	135-46-13	Ao13291	Mo	Disseminated(?) Mol in Qtz veinlets, in dikes, and in metamorphosed country rocks near a diorite(?) pluton.	?	Berg, 1984, p.265.
SI056	Lake Suloia, NW of	O	57-25-44	135-45-41	A013290	Cu	Disseminated sulfides and secondary Cu minerals in greenstone; Tr Cu, Tr Zn in geochem sample.	23(?)	Berg, 1984, p.265.
SI057	Sea Lion Cove	O	57-17-08	135-50-20	A013296	Cu,Mo	Qtz veins in hornfels near pegmatite contain sparse Ccp, Mol.	?	Berg, 1984, p.266.
SI058	Fish Bay Hot Springs	N.A.	57-22-00	135-23-00	None	Gèothermal	High reservoir temperature system; discharge temp. 47 degrees C; flow rate 95 l/min; estimated mean accessible resource base is 0.93 +/- 0.31 X 10 power 18 J.	N.A.	Brooks and others, 1979; J.R. Bliss, 1989, unpub. data.
SI059	Rodman Creek	P	57-23-17	135-20-42	A013299	Au(?)	Qtz veins in slate reported to contain Au and sulfides.	36a	Berg, 1984, p.265.
SI060	Magoun Island	P	57-28-30	135-46-13	A013297	Mo	Qtz veinlet up to 15 cm thick in Qtz diorite contains Ccp, Mol, Cv, Py; Mol also in Qtz diorite near veinlet.	?	Berg, 1984, p.266.
SI061	Siginaka Island	O	57-10-07	135-26-50	A013298	Cu	Py, Ccp, Cv in Fe-stained greenstone.	?	Berg, 1984, p.266.
SI062	Harbor Mountain, NE of	O	57-06-07	135-18-03	A013300	Cr	Serpentinite contains Mag, Chr; one sample contained a little Ni.	8a	Berg, 1984, p.266.
SI063a	Cascade (alternative loc. 1)	P	57-04-28	135-16-23	A013301	Au(?),Cu(?)	Shattered quartzite zone 1.1 to 6 m wide cemented with Qtz veinlets contains Po, Apy, Ccp, Au(?).	?	Berg, 1984, p.266.
SI063b	Cascade (alternative loc. 2)	P	57-03-45	135-15-45	A013301	Au(?),Cu(?)	Alternative location for prospect.	?	Berg, 1984, p.266.
SI064	Billy Basin	P	57-04-48	135-13-44	A013302	Ag,Au,Pb	Qtz fissure veinlets in graywacke contain	36a	Berg, 1984, p.267.

Table 2-SI. Summary mine, prospect, and mineral-occurrence information for Sitka quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							Po, Gn; mill test about 1900 gave $7/T Au (about 1/3 oz/T), $1/T Ag.		
SI065	Blue Lake	O	57-04-08	135-13-27	A-13303	Cr	Sample of Fe-stained mafic igneous rock contains Tr Cr, Tr Ni, Tr Cu, Tr Co, Tr Zn; serpentinite nearby contains Mag, Chr, and a sample contained Tr Ni.	?	Berg, 1984, p.267.
SI066	Boston	O	57-02-00	135-15-00	None	Au	Au reported early 1900's.	?	Berg, 1984, p.267.
SI067	Haley & Hanlon	P	57-02-32	135-11-24	A013304	Co,Cu,Ni	Masses of Po, Ccp up to 15 cm wide and 60 to 95 cm wide in hornblendite; one sample contained 0.99% Cu, 0.20% Ni, 0.09% Co.	?	Berg, 1984, p.267.
SI068	Liberty	M*	57-00-11	135-10-25	A013305	Ag,Au,Cu	Qtz veins in slate cut by diorite dikes contain Cal, Chl, Py, Ccp, Apy. Production(?): mill tests of up to $5.00/T (combined Au(?), Ag(?)) reported in late 1800's.	36a	Berg, 1984, p.267.
SI069	Mount Edgecumbe	N.A.	57-05-00	135-45-00	None	Geothermal	Energy in and adjacent to active igneous system estimated to be 603 X 10 eighteenth power J.	N.A.	Shaw, 1979, J.R. Bliss, 1989, unpub. data.
SI070	Kelp Bay, Middle Arm	O	57-19-58	134-59-33	A013308	Cu	Fe-stained Qtz vein in greenschist(?) contains Py, Ccp, Cv, Bn, other(?) sulfides.	22c(?)	Berg, 1984, p.269.
SI071	Kelp Bay, Portage Arm, loc. 1	O	57-20-50	134-55-41	A013306	Cu	Fe-stained Qtz vein in greenschist(?) contains Py, Ccp, Cv, Bn.	22c(?)	Berg, 1984, p.268.
SI072	Kelp Bay, Portage Arm, loc. 2	O	57-20-37	134-54-08	A013307	Cu	Qtz vein in greenschist(?) contains Py, Ccp.	22c(?)	Berg, 1984, p.269.
SI073	Kelp Bay, Basin	O	57-16-20	134-53-57	A013310	Cu,Ni	Lm-stained vuggy Qtz vein in aplite and volcanic rock contains Py, Ccp; one sample contained Ni.	22c(?)	Berg, 1984, p.269.
SI074	Kelp Bay, South Arm	O	57-16-27	135-00-55	A013309	Cu,Zn	Fe-stained brecciated siliceous rock contains Py, Cu sulfides; one sample contained Zn.	?	Berg, 1984, p.269.
SI075	Baranof Hot Springs	N.A.	57-05-06	134-50-20	None	Geothermal	Low reservoir temperature system; discharge temp. 51 degrees C; flow rate 30 l/min; total dissolved solids 249 mg/l; estimated mean accessible resource base is 0.123+/-0.051 X 10 power 18 J.	N.A.	Bliss, 1983, p.7; J.R. Bliss, 1989, unpub. data.
SI076	Warm Springs Bay	P	57-05-15	134-47-30	None	Co,Mo	Reported porphyry Cu-Mo prospect with grades of 0.25% Cu, 0.07% MoS2.	17(?)	Berg, 1984, p.269.
SI077	Nylen Hot Springs	N.A.	57-38-38	135-19-59	None	Geothermal	Low reservoir temperature system; discharge temp. 49 degrees C; flow rate not known; total dissolved solids 91 mg/l; estimated mean accessible resource base is 0.089+/-0.036 X 10 power 18 J.		Bliss, 1983, p.57-58; J.R. Bliss, 1989, unpub. data.
SI078	Kook Lake, W of	O	57-41-30	135-04-00	None	Ag,Au,U	Syenite, syenodiorite, and trondjhemite complex; one float sample contained	FP/THRE (?) or	Berg, 1984, p.268.

Table 2-SI. Summary mine, prospect, and mineral-occurrence information for Sitka quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-Type No.	9 Reference(s)
							0.012 oz/T Au, 0.014 oz/T Ag; sample of Fe-stained Py-bearing rock contained 10 ppm U.	FP/UREE (?)	
SI079	N Tenakee Inlet Hot Springs	N.A.	57-59-26	135-56-19	None	Geothermal	High reservoir temperature system; discharge temp. 80 degrees C; flow rate 90 l/min; total dissolved solids 91 mg/l; estimated mean accessible resource base is 1.03+/-0.29 X 10 power 18 J.	N.A.	Brooks and others. 1979; Bliss. 1983, p.82-83; J.R. Bliss, unpub. data.
SI080	Tenakee Hot Springs	N.A.	57-46-52	135-13-01	None	Geothermal	Low reservoir temperature system; discharge temp. 42 degrees C; flow rate not known; total dissolved solids 736 mg/l; estimated mean accessible resource base is 0.106+/-0.945 X 10 power 18 J.	N.A.	Bliss, 1983, p.81-82; J.R. Bliss, 1989, unpub. data.
SI081	Tenakee Cannery, NE of	O	57-47-53	135-06-16	A013293	Cu	Ccp, Mal, Hem, Cv in Cal vein in diabase dike.	?	Loney and others, 1963.
SI082	3-J	O	57-46-43	13-03-10	A013294	Cu,Mo	Ccp, Mol in Qtz diorite and in aplite dikes; chip sample of dike contained 0.01% Mo, 0.07% Cu; chip sample of diorite contained < 0.01% of each.	?	Berg, 1984, p.268.
SI083	Baldy	P	57-47-58	135-02-13	A-013292	Cu	Fe-stained skarn zone at contact of limestone and granitic pluton contains Py, Mag, Hem, Po.	18b(?)	Berg, 1984, p.268.
SI084	Big Ledge	P	57-48-11	134-59-33	A013295	Cu,Ni,Zn	Mafic dike about 6 m wide intrudes conglomerate and contains disseminated Po, Ccp, Pnt, Sp, Py.	?	Berg, 1984, p.268.
SI085	Wukuklook Creek	P	57-58-00	135-06-00	None	Cu	Diabase dike contains Ccp, secondary Cu minerals; samples contained tr Ni, tr Cr, tr Zn.	?	Berg, 1984, p.268.
SI086	Gypsum Creek	M*	57-55-00	134-58-00	None	Gypsum	Gypsum apparently associated with Missippian carbonate rocks. Production: 500,000 T Gp produced from this deposit and SI088.	N.A.	Flint and Cobb, 1953, p.27-37.
SI087	Gypsum Camel	M*	57-55-00	134-59-00	None	Gypsum	Gypsum apparently associated with Missippian carbonate rocks. Production: 500,000 T Gp produced from this deposit and SI087.	N.A.	Flint and Cobb, 1953, p.27-37.
SI088	Pyrola, N of	O	57-59-30	134-33-30	None	Co(?),Cu,Zn	Py, Ccp, Mal in laminated quartzite, marble, and schist.	?	Berg, 1984, p.271.
SI089	Wheeler Creek, N of	O	57-58-30	134-39-00	None	Cu,Pb(?),Zn	Py, Ccp in Qtz veins in Fe- and Cu-stained Qtz-Ms schist.	?	Berg, 1984, p.271.
SI090	Pyrola	P	57-58-00	134-32-00	None!	Ag,Pb,Zn, barite	Upper Triassic interlayered felsic or intermediate flows and tuff, carbonaceous siltstone and argillite,limestone, dolomite host interbedded massive sulfide deposit and barite, also siliceous stockwork; massive sulfide contains Py, Sp, Gn, Ccp, jameson-	28c	Berg, 1984, p.271.

Table 2-SI. Summary mine, prospect, and mineral-occurrence information for Sitka quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
							ite, boulangerite; stockwork contains disseminated Py reported to contain significant Au, Ag. Reserves: USBM inferred estimate exists, but is not yet available.		
SI091	Pyrola, NE of	O	57-58-30	134-31-00	None	Cu	Py, Ccp, Po(?) veinlets in marble and calcareous greenschist.	?	Berg, 1984, p.271.
SI092	Seymour Canal	P	57-56-39	134-18-23	A013311	Au,Cu	Qtz veinlets in siliceous schist in zone up to 6 m wide contains Ccp, Py, Au(?).	?	Berg, 1984, p.269.
SI093	President	P	57-47-38	134-41-48	A013312	Au,Cu,Pb,Zn	Three 9 m wide parallel zones of Qtz and schist contain Py, Po, Ccp, Gn, Sp, Au.	?	Berg, 1984, p.269.
SI094	Windfall Harbor, W of	O	57-48-30	134-21-45	None	REE	Niobium-bearing rutile crystals up to 10 cm long in felsic pegmatite veins in migmatite and gneiss.	FP/UREE (?) or FP/THRE (?)	Berg, 1984, p.270.
SI095	Marble Cove, N shore	O	57-42-30	134-43-00	None	Cu	Py-, Ccp-rich pods in amphibolite near contact with plutonic rock.	?	Berg, 1984, p.272.
SI096	Marble Cove, S shore	O	57-41-30	134-42-30	None	Cu	Py, Ccp,- in Cal and Qtz veinlets in mica schist.	?	Berg, 1984, p.272.
SI097	Hasselborg Lake, W of	O	57-44-08	134-21-14	A013315	Cu	Disseminated Po, Ccp in schist; Cu content estimated to be 0.1%.	?	Berg, 1984, p.270.
SI098	Thayer Mountain	O	57-41-15	134-21-15	None	Cu	Veinlets and disseminated grains of Py, Ccp in Fe-stained sheared and brecciated hornfels.	?	Berg, 1984, p.272.
SI099	Thayer Lake Lodge, N of	O	57-39-50	134-32-00	None	Cu	Sparse Ccp, Py in schistose greenstone.	?	Berg, 1984, p.272.
SI100	Hasselborg Lake	P	57-39-42	134-14-40	A013313	Ag,Au,Cu	Massive Py, Ccp with some Qtz in sheared and fractured chert-like metarhyolite(?); chip sample contained 2.0% Cu, 0.04 oz/T Au, 0.66 oz/T Ag.	28c(?)	Berg, 1984, p.270.
SI101	EBBA	P	57-39-51	134-13-33	A013314	Ag,Au,Cu,Ni	Gabbro float contains Po, Ccp; assays indicate 0.03% Cu, 0.16% Ni, 0.02 oz/T Au, 1.18 oz/T Ag.	7a(?)	Berg, 1984, p.270.
SI102	Mole Harbor	O	57-40-30	134-03-30	None	Cu(?)	Disseminated Py, Po in siliceous greenstone or hornblendite.	?	Berg, 1984, p.273.
SI103	Mount Distik	O	57-36-00	134-09-00	None	Cu(?)	Py, Po veinlets in sheared mafic volcanic rock.	?	Berg, 1984, p.273.
SI104	Kootznahoo Inlet coal	M	57-30-00 (approx.)	134-30-00 (approx.)	None	Coal	Lignitic coal in thin seams in Tertiary sandstone, shale, and conglomerate. Production: minor production for local and steamship use reported.	N.A.	Lathram and others, 1965, p.R46.
SI105	Kanalku Lake, E of	O	57-30-00	134-17-00	None	Fe(?)	Disseminated Mag in mafic igneous rock.	?	Berg, 1984, p.273.

Table 2-SI. Summary mine, prospect, and mineral-occurrence information for Sitka quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
SI106	Gambier Bay, loc. 1	P	57-31-32	134-03-22	A013316	Au,Cu	Cu- and Au(?)-bearing veins in limestone(?).	?	Berg, 1984, p.270.
SI107	Gambier Bay, loc. 2	P	57-29-29	134-07-14	A013317	Au,Cu	Limestone partially replaced by Qtz and small masses of Py, Ccp; low Au values reported in early 1900's.	18b(?), 19a(?)	Berg, 1984, p.270.
SI108	Gambier Bay, loc. 3	O	57-29-00	134-04-00	None	Cu	Ccp, Mol in Qtz- and Cal-cemented silicified limestone breccia.	18b(?), 19a(?)	Berg, 1984, p.273.
SI109	Kanalku Lake, SE of, loc. 1	O	57-28-30	134-15-00	None	Cu(?)	Disseminate Py, Po in Bt hornfels.	?	Berg, 1984, p.273.
SI110	Kanalku Lake, SE of, loc. 2	O	57-27-30	134-13-15	None	Cu(?)	Po, Py, Mag in porphyritic igneous rock.	?	Berg, 1984, p.273.
SI111	Kanalku Lake, SE of, loc. 3	O	57-27-15	134-14-30	None	Cu(?)	Disseminated Po, Py in foliated plutonic rock.	?	Berg, 1984, p.273.
SI112	Rocky Point	O	57-18-15	134-34-00	None	Cu(?)	Sparse Py, Ccp in schistose greenstone.	?	Berg, 1984, p.274.

Table 2-SK. Summary mine, prospect, and mineral-occurrence information for Skagway quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No., if any	Commodities/ resources	Brief description	Deposit-type No.	Reference(s)
			Latitude	Longitude					
SK001	Margarie Glacier	P	59-00-48	137-05-14	A013114	Ag,AuCu,W	Porphyry Cu deposit; Qtz veins, mineralized shear zones, Po-rich massive sulfide bodies, and disseminatyed sulfides in and near an altered Tertiary porphyritic Qtz monzonite stock; minerals includes Ccp, Py, Apy, Sp, Po, Mol, Pow, Sch, Au, Ag. Reserves: estimated inferred of 160 million T with 0.2% Cu, 0.008 oz/T Au, 0.13 oz/T Ag, 0.01% W.	17	Berg, 1984, p. 275; Kimball and others, 1978, p. C149-C162.
SK002	Tarr Inlet Knob	P	59-00-30	137-00-30	A013115	Ag,Cu,Pb,Zn	Sheared and altered Qtz monzonite, xenoliths of hornfelsed country rocks, and plugs of porphyritic granite contain Py, Ccp, Apy, Sp; samples of richer parts of deposit contained up to 3,300 ppm Cu, 5,000 ppm Zn, 3,100 ppm Pb, 50 ppm Ag, 0.15 ppm Au; Bi, Sn, W reported in semiquant. spectographic analyses.	17	Berg, 1984, p. 276; Kimball and others, 1978, p. C162-C168.
SK003	Mount Barnard nunatak	O	59-05-22	136-54-00	A013116	Ag,Au,Cu	Pods up to 15 cm thick of Po, Py, tr Ccp associated with andesite, greenstone, marble; grab sample contained 1,000 ppm Cu, 0.1 ppm Au, 0.5 ppm Ag, 100 ppm Co.	?	Berg, 1984, p. 287; Kimball and others, 1978, p. C189.
SK004	Rendu Glacier	O	59-01-30	136-47-27	A013117	Ag,Au,Cu,Zn, W	3.2-km long zone of discontinuous carbonate-calcsilicate lenses along contact of Paleozoic sedimentary and Cretaceous granitic rocks; skarn deposits contain Ccp, Po, Sch, Sp, Ag, Au. Reserves: estimated inferred in one deposit of Ccp-rich sulfide is 4,300 T with 0.5% W, 5.0% Cu, 7.0 oz/T Ag, 0.25 oz/T Au.	18b	Berg, 1984, p. 276; Kimball and others, 1978, p. C180-C186.
SK005	Gable Mountain	O	59-05-07	136-33-18	A013118	Ag,Cu,Mo,W	Fe-stained sulfide coated joints in Qtz diorite; 7 grab samples contained up to 970 ppm Cu, 3 ppm Ag, 200 ppm Mo, 150 ppm W; also secondary Cu minerals in diorite and Qtz diorite float below 21 cm-wide shear zone; samples contained up to 7 ppm Ag, 8,000 ppm Cu, tr Mo.	?	Berg, 1984, p. 287; Kimball and others, 1978, p. C317-C318.
SK006	Minnesota Ridge	O	59-00-45	135-16-33	A013119	Cu	Joints in Qtz diorite contain Py, Ccp, secondary Cu and Fe minerals; samples contained up to 700 ppm Cu, 0.7 ppm Ag, 0.10 ppm Au, 30 ppm Mo.	?	Berg, 1984, p. 277; Kimball and others, 1978, p. C310-C315.
SK007	Mount Brack	O	59-06-40	136-16-33	A013120	Au,Cu,Pb,Zn	15 to 20 cm-wide veins and altered zones in Paleozoic graywacke, limestone, hornfels, and younger mafic dikes contain Sp, Gn, Ccp, sulfosalts, some Au and Ag; Sb, As, Cd	?	Berg, 1984, p. 277; Kimball and others, 1978, p. C319-C324.

Table 2-SK. Summary mine, prospect, and mineral-occurrence information for Skagway quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-type No.	9 Reference(s)
							reported in semiquant. spectographic analyses.		
SK008	LeBlondeau Glacier	O	59-14-15	136-14-00	None	Ag,Au,Co,Cu, Zn	Skarn and Fe-stained diorite contain Py, Ccp, Po, Mag; Ag, Au reported in atomic absorption analyses.	18b, 18d	Gilbert (1984, loc. 1-6).
SK009	Takhin River, near head of	O	59-16-14	136-08-22	None	Au	Au-bearing gravels reported.	39a	Cobb, 1972, loc. 31.
SK010	Glacier E of Takhin Glacier	O	59-12-32	136-04-10	None	Cu,Mo,Zn	Mol disseminated in Bt granodiorite.	21a(?)	Wells and others, 1986, p.257; Berg, 1984, p. 278, no. 18.
SK011	McBride Glacier, W of	O	59-05-30	136-04-07	None	Ag,Au,Cu	Ank-bearing zones up to 60 cm thick and 30 m long conform to bedding near marble-phyllite contact and contain Apy, Ccp, Po, Py, Ag, Au; samples contained up to 0.087 oz/T Au, 15 ppm Ag; 1.2 m-wide andesite dike contains Ccp, Py.	?	Wells and others, 1986, p.259; Berg, 1984, p. 278.
SK012	York Creek	P	59-01-15	136-06-08	None	Cu?	About 15 widely spaced Py-rich Qtz veins to 15 cm wide and altered zones to 15 m wide with pods of Py in hornfels; Fe-stained zone 750 m long in siliceous limestone contains 5 to 10% Po; grab sample of one vein contained 150 ppm Co, 1,500 ppm Cu, 150 ppm Ni, tr Au; sample from Fe-stained zone contained 2,260 ppm Cu, tr Au.	?	Wells and others, 1986, p.261; Kimball and others, 1978, p. 365.
SK013	Casement Glacier	O	59-03-00	135-57-20	None	Mo	Mol-bearing float found on moraine.	?	Wells and others, 1986, p.260; Berg, 1984, p. 278, no. 16.
SK014	Willard Glacier	O	59-13-00	135-52-00	None	Cu,Zn	Hornfels with minor Po(?), Ccp(?), Py; samples contained 200 ppm Zn, tr Co, tr Cr, tr Cu, tr Ni, tr Pb.	?	Wells and others, 1986, p.259; Berg, 1984, p. 278, no. 19.
SK015	Rainbow Glacier Peak	P/O	59-08-10	135-30-00	None	Ag,Ba,Co,Cu, Pb,Zn	Stratiform altered zones contain Py, Po, Ccp.	?	Gilbert, 1988, loc. 87-95.
SK016a	Hayes (Cobb, 1972k, location)	P	59-01-50	135-24-38	None	Cu,Fe	Float in talus slope below prospect in metasedimentary rocks contains Mag, Hem, Ccp; correct location uncertain.	?	Wells and others, 1986, p.265; Berg, 1984, p. 278.
SK016b	Hayes (USBM location)	P	59-01-43	135-26-00	None	Cu,Fe	Float in talus slope below prospect in metasedimentary rocks contains Mag, Hem, Ccp; correct location uncertain.	?	Wells and others, 1986, p.264; Berg, 1984, p. 278.

Table 2-SK. Summary mine, prospect, and mineral-occurrence information for Skagway quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-type No.	9 Reference(s)
SK017	Jarvis Glacier	P	59-25-09	136-27-23	A013092	Ag,Ba,Co,Cu, Pb,Zn	Reported to be stratiform Brt-sulfide deposit. Reserves: USBM estimated inferred: 750,000 T with 1.8 oz/T Ag, 1.7% Zn, 6.0% Brt.	28c(?)	Still and others, 1987, loc. A; Baggs and others, 1990; Coldwell, 1990.
SK018	Mount Henry Clay	P	59-24-05 ?	136-27-43	A013093	Ag,Ba,Cu,Pb, Zn	Abundant boulders of massive Ccp, Py, Po below hanging glacier; drilling and prospecting have not located their source for certain.	28c(?)	Still and others, 1987, loc. D.
SK019	Little Jarvis Glacier, N side	O	59-24-45	136-20-00	None	Ag,Ba,Cu,Pb, Zn	Stratiform sulfide masses; samples contain Ag, Zn, Pb, Ba, Cu.	28c(?)	Still and others, 1987, loc. B1.
SK020	Little Jarvis Glacier, S side	O	59-24-13	136-24-00	None	Ag,Pb,Zn	Stratiform sulfide masses; samples contain Ag, Zn, Pb, Ba, Cu.	28c(?)	Still and others, 1987, loc. B2.
SK021	Glacier Creek	P	59-23-40	136-23-10	A010664	Ag,Ba,Pb,Zn	Stratiform layers and lenses of Brt and massive and disseminated Sp, Gn, Ccp, Py, Mag, Td, and possibly sulfosalts occur in a sequence of Mesozoic(?) mafic pillow flows, felsic volcanic rocks, and fine-grained clastic and carbonate rocks; deposit is reported to be a 15- to 18-m thick zone of 60% Brt with a 0.6- to 2.4-m thick basal massive sulfide zone that contains 2.0% Pb, 3.0% Zn, 1.0% Cu, 2.0 to 4.0 oz/T Ag, 0.12 oz/T Au.	28c	Still and others, 1987, loc. C; Berg, 1984, p.281.
SK022	Hanging Glacier	P	59-23-20	136-25-00	A013091	Ag,Ba,Cu,Pb, Zn	Stratiform sulfide masses; samples contained Zn, Ag, Pb, Ba, Cu.	28c	Still and others, 1987, loc. E.
SK023	Cap	P	59-22-40	136-25-00	A013090	Ag,Ba,Cu,Pb, Zn	Stratiform sulfide masses; samples contained Zn, Ag, Pb, Ba, Cu.	28c	Still and others, 1987, loc. F.
SK024	Nunatak (Saksaia)	P	59-22-10	136-25-40	A013089	Ag,Ba,Cu,Pb, Zn	Altered fault(?) zone in metavolcanic rocks contains Qtz, Cal, Py, Brt, Sn, Sp, and probably sulfosalts; samples contained up to 500 ppm Ag.	?	Still and others, 1987, loc. G; Berg, 1984, p.280.
SK025	Glacier Creek (Christmas Creek)	O	59-23-45	136-18-52	A013087	Zn	Float of Sp-bearing vein material.	?	Cobb, 1972, loc. 24; 1978, p. 84; Berg, 1984, p.281, no. 40.
SK026	Glacier Creek (Christmas Creek)	M*	59-24-45	136-18-52	A013087	Au	Placer Au discovered 1899 or 1900; Au-bearing gravels 12- to 15-m deep; probably only small production.	39a	Cobb, 1972, loc. 25; 1978, p. 84; Berg, 1984, p.281, no. 41.
SK027	Tsirku River, loc. 1	O	59-19-00	136-26-58	A013099	Au?	Float sample near head of river contained vein Qtz with Gn, Sp.	?	Cobb, 1972, loc. 23; 1978, p. 107; Berg, 1984, p.280.
SK028	Tsirku River, loc. 2	O	59-16-45	136-20-37	A013098	Au	Au reported in stream-sediment sample.	39a(?)	Still and others, 1984, loc. 170.
SK029	Quartz Swarm	P	59-18-43	136-19-00	None	Au	Au-Qtz vein in slate.	36a	Still and others,

Table 2-SK. Summary mine, prospect, and mineral-occurrence information for Skagway quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-type No.	9 Reference(s)
									1987, loc. L.
SK030	Clair Bear	P	59-20-43	136-19-32	A013083	Ag,Co,Cu	Cu, Co-bearing skarn next to diorite.	18b(?)	Still and others, 1987, loc. H.
SK031	Golden Eagle	P	59-22-28	136-13-27	A013081	Au	Au-Qtz vein in slate; Ay in slate, also.	36a	Still and others, 1987, loc. K.
SK032	Cahoon Creek	M*	59-22-30	136-15-00	A013082	Ag,Au	Au-placer mining near mouth of creek in early 1900's; probably only small production; also sample of Py-bearing slate contained 0.02 ppm Au.	39a, ?	Cobb, 1972, loc. 26; 1978, p. 77; Berg, 1984, p.282.
SK033	McKinley Creek	M*	59-23-13	136-13-55	A013080	Ag,Au	Stream and bench Au placers mined in early 1900's; amount of production uncertain; also, slate bedrock contains disseminated Py and Qtz-Cal veins; sample of Py-bearing slate contained 0.12 oz/T Au.	39a, 36a(?)	Cobb, 1972, loc. 26; 1978, p. 97; Berg, 1984, p.282.
SK034	Annex #1	P	59-23-15	136-15-38	None	Au	Au-Qtz vein in slate; Au in slate also.	36a, ?	Still and others, 1987, loc. J.
SK035	Porcupine Creek, loc. 1	M*	59-23-40	136-15-00	A013079	Ag,Au,Cu,Pb, Zn	About 60,000 oz Au produced from creek, bench, and old channel deposit placers in early 1900's. Reserves: USBM estimated inferred figure exists, but is not yet available. Bedrock is slate with disseminated Py and and many Qtz-Cal veins, some with Sp; sample from barren-appearing Qtz vein contained 0.25 oz/T Au.	39a, 36a	Cobb, 1972, loc. 26; 1978, p. 102-104; Berg, 1984, p.282; Baggs and others, 1990; Coldwell, 1990
SK036	Porcupine Creek, loc. 2	M*	59-24-30	136-14-32	A0130704	Ag,Au,Cu,Pb, Zn	See above.	39a, 36a	Cobb, 1972, loc. 26; 1978, p. 102-104; Berg, 1984, p.282.
SK037	Klehini River (near Porcupine Creek)	P	59-25-30	136-13-12	None	Au	Placer Au reported near mouths of Jarvis and Porcupine Creeks.	39a	Cobb, 1972, loc. 27; 1978, p. 91; Berg 1984, p.281.
SK038	Cottonwood Creek	P	59-17-23	136-11-42	A013086	Au	Placer Au discovered 1899; development in 1902; no further information.	39a	Cobb, 1972, loc. 29; 1978, p. 82; Berg 1984, p.279.
SK039	Nugget Creek	M*	59-18-00	136-10-53	A013085	Ag,Au	About 300 oz Au produced from stream or bench gravels in early 1900's.	39a	Cobb, 1972, loc. 30; 1978, p. 101; Berg 1984, p.279.
SK040	Tsirku River, loc. 3	O	59-19-00	136-07-33	None	Ag	Py-bearing silicified argillite sample contained 0.6 ppm Ag.	?	Wells and others, 1986, p. 254.
SK041	Tsirku River, loc. 4	O	59-19-15	136-06-35	None	Ag,As	Fe-stained silicified argillite sample contained 1,700 ppm As, 0.5 ppm Ag.	?	Wells and others, 1986, p. 255.

Table 2-SK. Summary mine, prospect, and mineral-occurrence information for Skagway quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- type No.	9 Reference(s)
SK042	Tsirku River, loc. 5	O	59-19-30	136-04-50	None	Cr,Cu,Mo,Ni	Altered zone 45 cm thick; sample contained 200 ppm Cr, 150 ppm Cu, 70 ppm Ni, 10 ppm Mo, tr Co, tr Pb.	?	Wells and others, 1986, p. 253.
SK043	Lost Silver Ledge	M	59-20-02	136-05-48	None	Ag,Au,Cu,Pb, Sb, Zn	Ag- and base-metal-bearing veins reported.	22c(?)	Still and others, 1987, loc. N.
SK044	Summit Creek	P	59-20-30	136-05-48	A013097	Ag,Au,Cu,Pb	Many Gn-bearing veins in metased-imentary(?) rocks; samples contained up to 60 oz/T Ag, 0.145 oz/T Au, about 35.0% Pb, 3.0% Cu.	22c(?)	Cobb, 1972, loc. 13; 1978, p. 110; Berg 1984, p.35.
SK045	Little Salmon River	O	59-22-40	136-05-27	None	Ag,Co,Cu,Zn	Sample of Qtz contained 0.43 ppm Ag; samples of sulfide-bearing country rock contained up to 130 ppm Co, 190 ppm Cu, 140 ppm Zn.	?	Wells and others, 1986, p. 250.
SK046	Merrill's Silver	P	59-23-30	136-04-22	A013101	Ag,Au,Pb,Zn	Ag- and base-metal-bearing vein reported.	22c(?)	Still and others, 1987, loc. M.
SK047	Tsirku River, loc. 6	O	59-23-15	136-03-00	None	Zn	Py-bearing shale; sample contained 210 ppm Zn.	?	Wells and others, 1986, p. 247.
SK048	Tsirku River, loc. 7	O	59-23-00	136-02-48	None	Zn	Limestone; sample contained 240 ppm Zn.	?	Wells and others, 1986, p. 248.
SK049	Tsirku River, loc. 8	O	59-23-17	135-58-00	None	?	Qtz vein; samples contained tr Ag, tr As, tr Cu, tr Pb.	?	Wells and others, 1986, p. 249.
SK050	Takhin River, N side	O	59-15-02	135-52-27	None	Cu	Qtz vein 15 cm thick; sample contained 150 ppm Cu, tr Cr, tr Mo, tr Ni, tr Pb.	22c(?)	Wells and others, 1986, p. 256.
SK051	Big Boulder Quartz Ledge	P	59-26-35	136-13-00	None	Au	Au-Qtz vein reported.	36a	Still and others, 1987, loc. I.
SK052	Big Boulder Creek	O	59-26-00	136-11-30	A013100	Ag,Au	Modern stream gravels sampled; samples contained Ag, Au; also, sample of argillite float contained Au.	39a, ?	Still and others, 1984, loc. 40, 41.
SK053	Klehini River, loc. 1	O	59-25-28	136-05-00	None	Cu	Chl-bearing Qtz vein; sample contained tr Cu.	?	Wells and others, 1986, p. 241.
SK054	Klehini River, loc. 2	O	59-25-28	136-04-18	None	?	9-m-wide altered zone; chip sample contained tr Cu, tr Cr, tr Ni, tr Pb.	?	Wells and others, 1986, p. 242; Still and others, 1984, loc. 207.
SK055	Klehini River, loc. 3	O	59-25-32	136--03-12	None	Zn	Sample of limestone contained 240 ppm Zn.	?	Wells and others, 1986, p. 248; Still loc. 229.
SK056	Mosquito Valley, loc. 1	O	59-25-53	136-01-45	None	?	1.5-m-wide altered zone; chip sample contained tr Co, tr Cr, tr Cu, tr Ni, tr Pb.	?	Wells and others, 1986, p. 244.

Table 2-SK. Summary mine, prospect, and mineral-occurrence information for Skagway quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-type No.	9 Reference(s)
SK057	Mosquito Valley, loc. 2	O	59-26-28	136-02-00	None	?	Qtz lens; sample contained tr Cu.	?	Wells and others, 1986, p. 240.
SK058	Mosquito Valley, loc. 3	O	59-26-42	136-02-50	None	?	1-m-thick altered zone; sample contained tr Cu.	?	Wells and others, 1986, p. 238.
SK059	Mosquito Valley, loc. 4	O	59-26-42	136-01-52	None	Au,Cu,Zn	Qtz vein in amphibolite contains Ccp; sample of vein contained 0.033 ppm Au; sample of amphibolite contained 150 ppm Zn.	22c(?)	Wells and others, 1986, p. 239.
SK060	Bear Creek, loc. 1	P	59-33-28	136-08-20	A013096	Cu,Zn	Qtz vein several cm thick contains Py, Po, Ccp, Sp.	22c	Cobb, 1972, loc. 14; 1978, p. 75.
SK061	Bear Creek, loc. 2	P	59-32-15	136-05-52	None	Au	Au-bearing stream gravels discovered 1900.	39a	Cobb, 1972, loc. 28; 1978, p. 75.
SK062	Chilkat River, loc. 1	O	59-29-20	136-03-50	None	?	Qtz vein 30 cm thick; sample contained tr Cu.	22c(?)	Wells and others, 1986, p. 235.
SK063	Chilkat River, loc. 2	O	59-28-33	136-02-58	None	?	Altered zone 30 cm thick; sample contained tr Co, tr Cr, tr Cu, tr Ni.	?	Wells and others, 1986, p. 236.
SK064	Chilkat River, loc. 3	O	59-27-35	136-01-37	None	Cu,Pb,Zn	Phyllite contains Py; sample contained 190 ppm Cu, 500 ppm Pb, 220 ppm Zn.	?	Wells and others, 1986, p. 237.
SK065	Klutshah Mountain	O	59-32-18	136-57-23	None	?	Stream-sediment sample contained anomalous Ag, Au.	?	Gilbert and others, 1988, sample 67.
SK066	Klukwan Lode	P	59-25-40	135-53-00	A013094	Fe,PGE,Ti,V	Several tabular zones of Ti-bearing Mag in pyroxenite surrounded by diorite; Mag interstitial to Hbl and Pyx; Mag is 15-20% of rock; also Ccp, Po, Spl, Lcx; no production; samples contain as much as 0.11% P, 0.03% S, 0.03% Ni. Reserves: 3,500 million T with 16.8% Fe, 0.2% V(?), 2.0% Ti, and 50 million T with 0.3 oz/T Au, 0.1% Cu, 0.03 oz/T Pt, 0.03 oz/T Pd.	9	Wells and others, 1986, p. 268; Berg, 1984, p. 284; Baggs and others, 1990; Coldwell, 1990.
SK067	Klukwan Fan	P	59-24-45	135-54-12	A013095	Fe,PGE,Ti,V	Colluvial/alluvial fan below SK066; no production. Reserves: 980 million T broken rock with 10.8% Fe, 2.0% Ti.	N.A.	Wells and others, 1986, p. 269; Berg, 1984, p. 284.
SK068	Mt. Kashagnak, N. of	O	59-23-22	135-42-00	A013102	Au,Ag,Mo	Qtz veins 1-4mm wide and several m long; sample contained 0.7 ppm Au, 2.3 ppm Ag, 137 ppm Mo.	36a(?), 22c(?)	Wells and others, 1986, p. 273.
SK069	Tukgahko Mtn, N. of, loc. 1	O	59-20-12	135-4010	None	Cu	Qtz veins contain Bn, Hem.		Wells and others, 1986, p. 274.
SK070	Tukgahko Mtn,	O	59-19-28	135-40-00	A013103	Ag,Cu	25 m-wide, 100 m long zone of Mal-	?	Wells and others,

Table 2-SK. Summary mine, prospect, and mineral-occurrence information for Skagway quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit-type No.	9 Reference(s)
	N. of, loc. 2						stained Bn-Ccp-Qtz veins in diorite at 025, dip 55 E.; sample contained 5.73% Cu, 21 ppm Ag.		1986, p.275.
SK071	Chilkat River, loc. 4	O	59-17-50	135-41-00	None	Ag,Cu	Ccp-bearing Qtz veins 2 to 25 cm thick, 10 m long cut diorite dike in metabasalt; sample contained 520 ppm Cu, 0.3 ppm Ag.	?	Wells and others, 1986, p. 278.
SK072	Chilkat River, loc. 5	O	59-16-22	135-37-20	None	Fe,Ti	Mag-rich metabasalt.	?	Wells and others, 1986, p. 280.
SK073	Chilkat River, loc. 6	O	59-16-25	135-36-42	None	Fe, Ti	Mag-rich metabasalt.	?	Wells and others, 1986, p. 281.
SK074	Mt. Ripinski, N. of,	O	59-16-41	135-36-00	None	Fe, Ti	Mag-rich metabasalt.	?	Wells and others, 1986, p. 282.
SK075	Mt. Ripinski, loc. 1	O	59-15-42	135-31-12	None	Fe, Ti	Ti-bearing Mag deposits associated with mafic and ultramafic rocks.	9	Wells and others, 1986, p. 283.
SK076	Mt. Ripinski, loc. 2	O	59-14-32	135-30-42	None	Fe, Ti	Tunnel in Mag-bearing pyroxenite; see SK077.	9	Wells and others, 1986, p. 284.
SK077	Haines	P	59-14-30	135-30-00	A013107	Fe, Ti	Pyroxenite apparently surrounds a small body of Ep-bearing granite and in turn is surrounde by meta-basalt; pyroxenite probably contains <10% Ti-bearing Mag. Reserves: several billion T with <10% Mag and 1.3 to 1.8% TiO2.	9	Wells and others, 1986, p. 286.
SK078	Roadcut (I)	P	59-11-43	135-24-52	None	Au,Cu	69 m-long fault zone has 6 to 107cm-thick Qtz-Cal zone with Py, Ccp; samples of zone contained 3.01 ppm Au, 5.9 ppm Ag, 0.8% Cu across a 0.9 m mining width; drillhole samples contained lower values. Reserves: USBM estimated inferred figure exists, but is not yet available.	36a, 22c(?)	Still, 1988, p.12-17; Baggs and others, 1990; Coldwell, 1990.
SK079	Roadcut (II)	P	59-11-18	135-24-12	None	Ag,Au,Cu,Zn	Py, Ccp, Sp occur in altered meta-basalt; sampled contained up to 0.21 ppm Au, 2.5 ppm Ag, 0.69% Cu, 1.83% Zn.	24a?	Still, 1988, p.19-20.
SK080	Chilkat Peninsula	P	59-12-22	135-22-00	A013108	Cr,Cu	Ccp-bearing metabasalt/greenstone; samples contained 150 ppm Cr, 300 ppm Cu, tr Co, tr Ni.	24a?	Wells and others, 1986, p. 288.
SK081	Kataguni I.	O	59-01-00	135-15-10	None	Cu,Zn	Mineralized silicified shear zones 6 to 43 cm-thick in metabasalt; samples contained up to 2.54 ppm Au, 22.5 ppm Ag, 6.9% Cu, 2.14% Zn.	24a?	Still, 1988, p. 20.
SK082	Parsons Peak, N. of	O	59-29-40	135-28-00	None	Ag,Cu,Mo,Pb	Qtz vein float; sample contained 50.5 ppm Ag, 580 ppm Cu, 128 ppm	?	Wells and others, 1986, p. 296.

Table 2-SK. Summary mine, prospect, and mineral-occurrence information for Skagway quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O = occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location		MRDS No.,	Commodities/	Brief description	Deposit-	Reference(s)
			Latitude	Longitude	if any	resources		type No.	
							Mo, 170 ppm Pb.		
SK083	Halutu Ridge	O	59-25-08	135-25-13	None	Ag,Cu	6 cm-long Po pods with tr Ccp in Qtz associated with fault zone in paragneiss; sample contained 3.1 ppm Ag, 555 ppm Cu.	?	Wells and others, 1986, p. 306.
SK084	Inspiration Point	M*	59-37-00	135-08-00	None	Ag,Au,Pb,Zn	Small lenses and masses of Ag-bearing Gn in Qtz diorite; a few tons of ore containing Au(?), Ag, Pb, Zn, Cu reportedly produced in early 1900's.	?	Berg, 1984, p.286.
SK085	Clifton	P	59-31-30	135-13-32	None	Mo	Leucocratic granite contains about 1.0% disseminated Mol, locally concentrated along joints.	21b?	Berg, 1984, p. 285.
SK086	Skagway	O	59-28-30	135-18-00	None	RA	Small altered rhyolite(?) body surrounded by faulted Qtz diorite is intruded by andesite dikes; U minerals adjacent to steep fracture in rhyolite; selected sample contained 0.72% eU, 1.2% U; Fe-stained altered rhyolite sample contained 0.22% eU.	FP/UREE	Wells and others, 1986, p. 298.

Table 2-TR. Summary mine, prospect, and mineral-occurrence information for Taku River quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are M=mine, M*=mine with production, P=prospect, O=occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	9 Deposit-Type No.	9 Reference(s)
TR001	Boundary Creek #1	O	58-38-56	133-50-59	A012522	Ag,Cu,Mo	600 m wide, 3.2 km long Fe-stained Tertiary granodiorite and aplite dike in older tonalite contains Mol; samples contained up to 10 ppm Ag, 300 ppm Cu, 10 ppm Mo.	21b	Wells and others, 1986, p.311; Berg, 1984, p.297.
TR002	Boundary Creek #2	O	58-36-45	133-48-00	None	Mo	Bt alkali granodiorite with aplite dikes to 25-cm wide contains Tr to 2% Mol, also Py; Py-bearing Qtz veins without Mol also cut granodiorite Reserves: USBM estimated inferred figure exists, but is not yet available.	21b	Koch and others, 1987, p.124.
TR003	West Hill	O	58-33-42	133-41-53	A012523	Ag,Au,Cu,Pb, Zn	Qtz veins 0.3 to 3 m wide (avg. 0.6 m) in schist and slate contain Sp, Po, Py, Gn, Ccp, Au, Gn.	22c	Wells and others, 1986, p.312; Berg, 1984, p.297.
TR004	Mount Ogden	P	58-26-15	133-23-47	A012524	Au,Cu,Mo,Pb, W,Zn	Porphyry stock in zone of rhyolite dikes has sericitic, potassic, chloritic alteration and contains Mol both disseminated and in cavities, fractures, and Qtz veins; Sch, Fl, Rds, Apy, Sp, Gn, Au reported in veins and breccia; most of mineralization is in Canada. Reserves: USBM concluded that there is not enough information to make an inferred reserve estimate.	22b(?), 16(?)	Wells and others, 1986, p.315.
TR005	Mount Brundage	O	58-16-00	133-19-52	A012525	Cu(?)	Fe-stained siliceous gneiss contains Ccp, Po.	?	Wells and others, 1986 p.316; Berg, 1984, p.297
TR006	Prospect Creek	O	58-05-12	133-52-04	None	Ag,Be	Qtz veins 1 to 7 cm wide in thinly layered Fe-stained slate contain Py, Po; disseminated Py, also in fractures and along cleavage; one sample contained 1 ppm Ag, 1.5 ppm Be.	36a(?)	Wells and others, 1986, p.320.
TR007	Sunrise Canyon	P	58-04-30	133-50-00	A012526	Mn	Zone of schistose phyllite has Mn-bearing veins up to 1.1 m wide and 1,800 m long with Rds, Rdn, Mn-oxides, Qtz; one channel sample 1.1 m long contained 22% Mn, a 0.3 m long sample contained 32% Mn.	?	Wells and others, 1986, p.321; Berg, 1984, p.298.
TR008	Enterprise	M*	58-02-33	133-58-00	A012527	Au,Cu,Pb,Zn	Two parallel sheeted Qtz veins up to 3 m wide (avg. 1 m) in slate and greenstone intruded by porphyritic diorite(?) contain Au, Gn, Sp, Ccp, Py; USBM reported 100 oz Au produced, most of it from ore with 0.28 oz/T Au. Reserves: USBM estimated inferred figure exists, but is not yet available.	36a(?), 22c(?)	Wells and others, 1986, p.322; Berg, 1984, p.298; Redman and others, 1986, p.45.
TR009	Lost Charlie Ross	M	58-02-41	133-26-43	A012528	Ag,Au,Cu,Pb, Zn	Qtz fissure veins up to 1.6 m wide and 25 m long in dolomite screen in diorite pluton contain Apy, Py, Po, Gn, Sp, Ccp. Reserves: USBM estimated	22c	Wells and others, 1986, p.328; Berg, 1984, p.298.

Table 2-YA. Summary mine, prospect, and mineral-occurrence information for Yakutat quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O =occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1 Map No.	2 Name	3 Category	4 Location Latitude	 Longitude	5 MRDS No., if any	6 Commodities/ resources	7 Brief description	8 Deposit- Type No.	9 Reference(s)
YA001	Logan Beach	M	59-49-11	139-35-22	A013398	Au	Black sands and gravel along beach of Yakutat Bay worked intermittently for Au by early miners.	39a	Cobb, 1972p; 1979, p. 22; MacKevett and Hollaway, 1977, p. 84.
YA002	Khaantak Beach	M	59-37-02	139-44-53	A013399	Au	Old placer Au workings along beach, mainly in black or "ruby" sands.	39a	Cobb, 1972p; 1979, p. 21; MacKevett and Hollaway, 1977, p. 84.
YA003	Yakutat Beach	O	59-29-38	139-43-27	A013400	Au,Fe,Ti,V	Beach placers contain local concentrations of Mag, Ilm, and minor anomalous amounts of Au, V.	39a	Cobb, 1972p; 1979, p. 27; MacKevett and Hollaway, 1977, p. 84.
YA004	Blacksand Beach, loc. 1	P	59-26-01	139-33-18	A013401	Au,Fe,Pt(?), Ti	Beach placers similar to Yakutat Beach (YA003); possibly worked on a small scale by early miners.	39a	Cobb, 1972p; 1979, p. 19; MacKevett and Hollaway, 1977, p. 84.
YA005	Blacksand Beach, loc. 2	P	59-25-03	139-31-45	A013402	Au,Fe,Ti	Beach placers similar to Yakutat Beacn (YA003); possibly worked on a small scale by early miners.	39a	Cobb, 1972p; 1979, p. 19; MacKevett and Hollaway, 1977, p. 84.
YA006	Blacksand Island	P	59-26-09	139-30-24	A013403	Au,Fe,Ti	Beach placers similar to Yakutat Beach (YA003); possibly worked on a small scale by early miners.	39a	Cobb, 1972p; 1979, p. 19; MacKevett and Hollaway, 1977, p. 84.
YA007	Akwe Beach	O	59-18-40	139-09-40	A013404	Au,Fe,Ti	Local concentrations of Mag, Ilm in beach placers.	39a	Cobb, 1972p; 1979, p. 17; MacKevett and Hollaway, 1977, p. 84.
YA008	Nunatak Fiord	O	59-50-26	139-02-18	None	Au	Sulfide-bearing Qtz veins cut metamorphic rocks near Fairweather fault; country rocks are of original Mesozoic and older(?) age; Tertiary and(or) Mesozoic granitic intrusive rocks are about 2 km distant.	36a(?)	Cobb, 1972p; 1979, p. 23; MacKevett and Hollaway, 1977, p. 84.
YA009	Mount Wade, W of	O	59-48-00	138-42-28	None	Cu,Zn	Disseminated sulfide sin amphibolite of Mesozoic and older(?) age; selecetd samples contained 500 ppm Cu, 1,500 ppm Zn.	?	MacKevett and Hollaway, 1977, p. 84; MacKevett and Plafker,
YA010	Battle Glacier, S of	O	59-38-02	138-23-24	None	Ag,Mo	Altered zone in foliated Mesozoic and older(?) metamorphic rocks; selected samples contained 0.7 ppm Ag, 70 ppm Mo.	?	MacKevett and Hollaway, 1977, p. 84; MacKevett and Plafker, 1970, p. L4, L5, L9.
YA011	Alsek River, N of	O	59-29-28	138-08-27	None	Au	Altered zone in Mesozoic granitic rocks; selected sample contained 0.08 ppm Au.	?	Cobb, 1972p; 1979, p. 28; MacKevett and Hollaway, 1977, p. 84.
YA012	Emile Creek-Split Creek	P	59-12-15	138-28-27	None	Fe,Ti	Local concentrations of Ilm, Mag in black sands.	39a	MacKevett and Hollaway, 1977, p. 84; U.S. Bureau of Mines, 1973.

Table 2-YA. Summary mine, prospect, and mineral-occurrence information for Yakutat quadrangle, southeastern Alaska. (See text for complete explanation of headings. Categories in column 3 are: M = mine, M* = mine with production, P = prospect, O =occurrence. MRDS numbers in column 5 refer to U.S. Geological Survey Mineral Resources Data System (U.S. Geological Survey (1989). Deposit type numbers in column 8 refer to Table 1 and to Cox and Singer (1986)).

1	2	3	4		5	6	7	8	9
Map No.	Name	Category	Location Latitude	Longitude	MRDS No., if any	Commodities/ resources	Brief description	Deposit-Type No.	Reference(s)
YA013	Bear Island	P	59-10-29	138-27-04	None	Fe,Ti	Local concentrations of Ilm, Mag in black sands.	39a	MacKevett and Hollaway, 1977, p. 84; U.S. Bureau of Mines, 1973.
YA014	Colorado Oil and Gas Core Hole 1	-	59-32-32	139-31-45	None	Oil and gas	Well/core hole drilled for oil and(or) gas in Cenozoic sedimentary rocks.	N.A.	Plafker, 1967,1971; Bruns, 1988b.
YA015	Colorado Oil and Gas Yakutat 1	-	59-30-40	139-38-40	None	Oil and gas	Well/core hole drilled for oil and(or) gas in Cenozoic sedimentary rocks.	N.A.	Plafker, 1967,1971; Bruns, 1988b.
YA016	Colorado Oil and Gas Yakutat 3	-	59-31-10	139-37-40	None	Oil and gas	Well/core hole drilled for oil and(or) gas in Cenozoic sedimentary rocks.	N.A.	Plafker, 1967,1971; Bruns, 1988b.
YA017	Colorado Oil and Gas Yakutat A-1(2)	-	59-30-42	139-35-20	None	Oil and gas	Well/core hole drilled for oil and(or) gas in Cenozoic sedimentary rocks.	N.A.	Plafker, 1967,1971; Bruns, 1988b.
YA018	Colorado Oil and Gas Dangerous River No. 1	-	59-24-05	139-14-40	None	Oil and gas	Well/core hole drilled for oil and(or) gas in Cenozoic sedimentary rocks.	N.A.	Plafker, 1967,1971; Bruns, 1988b.
YA019	Colorado Oil and Gas Core Hole 2	-	59-21-35	139-20-25	None	Oil and gas	Well/core hole drilled for oil and(or) gas in Cenozoic sedimentary rocks.	N.A.	Plafker, 1967,1971; Bruns, 1988b.
YA020	Colorado Oil and Gas Core Hole 3	-	59-15-05	139-55-40	None	Oil and gas	Well/core hole drilled for oil and(or) gas in Cenozoic sedimentary rocks.	N.A.	Plafker, 1967,1971; Bruns, 1988b.
YA021	Colorado Oil and Gas Core Hole 4	-	59-05-35	139-24-40	None	Oil and gas	Well/core hole drilled for oil and(or) gas in Cenozoic sedimentary rocks.	N.A.	Plafker, 1967,1971; Bruns, 1988b.

Table 3-AL. Tongass National Forest mineral resource tract information for Atlin quadrangle. (See text for complete explanation of data).

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01AL	Meade Glacier (A) and Lace River (B)	Paleozoic and older(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons.	None	None	a) W-skarn, 14a b) Cu-skarn, 18b c) Pb-Zn skarn, 18c	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.
02AL	Chilkoot Range ultramafic bodies (A), (B), (C)	Alpine-type peridotite bodies associated with amphibolite and greenstone and intruded by Tertiary granitic bodies.	None	None	Podiform chromite, 8a(?)	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.
03AL	Chilkoot Range metabasalts	Low-grade metabasalt flows and tuffs of Triassic age associated with clastic and carbonate rocks.	None	None	Cyprus massive sulfide, 24a	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.

headings. Information for tract (s) 01 through 03 based on D.A. Brew, A.B. Ford, and G.R. Himmelberg, 1989, unpub.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Remote; steep; extensive glacier cover. 100% Tongass National Forest.	Permissive geology; good exposures, but most metamorphic rocks belong to pre-Paleozoic(?) section that is typically unmineralized; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	69	Same undiscovered resources as in adjoining tract 12JU.
Remote; steep; extensive glacier cover. 100% Tongass National Forest.	Permissive geology; good exposures; small tract.	0 0 0 0 1	Yes	18	
Remote; steep; extensive glacier cover. 100% Tongass National Forest.	Permissive geology; good exposures; minor secondary Cu minerals present locally.	0 0 0 0 1	Yes	21	

Table 3-BC. Tongass National Forest mineral resource tract information for Bradfield Canal quadrangle. (See text for complete (1990); that for tracts 03BC and 09BC on Brew and others (1989).)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-BC)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01BC	Elbow Mountain (A), Mount Whipple (B); Craig River (C); North Bradfield River-Mount Lewis Cass (D)	Vein, skarn, and disseminated sulfide deposits occur in schist, gneiss, marble of original Paleozoic and Mesozoic(?) age.	(A): None (B): None (C): BC006 (D): BC005,009	Reserves: USBM has inferred estimate for BC005, but it is not yet available.	a)Polymetallic vein, 22c b)Zn-Pb skarn, 18c c)Fe skarn, 18d d)Porphyry Mo, 21b	Reconnaissance geologic and geochemical sampling by USGS.
02BC	Cone Mountain	Leucocratic Bt-bearing alkali granite stock in NE part of tract; Qtz porphyritic rhyolite dikes in SW part.	BC004	None	a)Felsic plutonic U and REE, FP/UREE, or Felsic plutonic Th and REE, FP/THRE b)Polymetallic vein, 22c c)Porphyry Mo, 21b(?)	Reconnaissance geologic and geochemical sampling by USGS; moderate amount of private prospecting and some drilling.
03BC	Groundhog Basin	Amphibolite and upper greenschist grade metapelitic, metacarbonate, and metavolcanic rocks of original Mesozoic and Paleozoic age near the great tonalite sill are intruded by evolved Late Tertiary Sn-bearing granite and related rhyolite sill more or less along the Coast Range megalineament; stratiform Sn-base metal replacement deposits present in tract 20PE to NW.	None	None	a)Replacement Sn, 14c b)Metamorphosed massive sulfide, RM/MS (model as Sierran massive sulfide, 28c) c)Au-Qtz vein, 36a	Reconnaissance geologic and geochemical mapping by USGS; older detailed USGS mapping; moderate to high level of prospecting, including deep drilling in adjacent tract 20Pe.
04BC	Glacier Basin-Berg Basin	Deformed and metamorphosed Paleozoic and Mesozoic clastic and volcanic rocks are intruded by Late Cretaceous granodiorite and tonalite and by the latest Cretaceous-earliest Tertiary great tonalite sill; vein deposits present.	BC002,003	None	a) Metamorphosed massive sulfide, RM/MS (model as Sierran massive sulfide, 28c) b)Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting in N part of tract, less to S.
05BC	Harding River	Schist, gneiss, and minor marble of original Paleozoic and(or) Mesozoic age bounded to NE by Early Tertiary plutons and on SW by earliest Tertiary great tonalite sill.	None	None	a)Polymetallic vein, 22c b)Zn-Pb skarn, 18c	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
06BC	Mount Stoeckl	Eocene porphyritic Qtz monzonite intrudes schist, gneiss, marble of original Paleozoic and Mesozoic(?) age.	BC010	None	Felsic plutonic U and REE, FP/UREE, or Felsic plutonic Th and REE, FP/THRE	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.

explanation of headings. Information for tracts 01BC, 02BC, 04BC through 08BC, and 10BC through 13BC on Koch

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Remote; rugged; significant glacier and permanent snow cover. (A): 100% in USFS Stikine-LeConte Wilderness; (B),(C): 100% USFS Tongass National Forest; (D): 20% in USFS Misty Fiords Wilderness.	Known deposits; permissive geology; stream-sediment and bedrock geochemistry suggest presence of Cu, Pb, Zn, Ag, Mo, Au resources; close to active exploration in Jurassic plutons and volcanic rocks in nearby British Columbia.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 1 2 d) 0 0 0 0 1	Yes Yes Yes Yes	(A) 14 (B) 28 (C) 52 (D) 118 Tot. 212	Fe skarn resources in subtract (D) only.
Remote; rugged; some thick timber and brush locally. 100% in USFS Tongass National Forest.	Permissive geology; aeroradioactivity anomaly; Pb, Y, Be, Nb, Sn, Mo, Zn, Ag, Cu geochemical anomalies; moderately well explored.	a) No estimate b) 0 0 0 0 1 c) 0 0 0 0 1	Maybe Yes No	219	
Relatively remote; steep; extensive snow and glacier cover. 100% in USFS Tongass National Forest.	Deposits to NW; permissive geology; strong Sn, Mo, W stream-sediment anomalies; Sn, Cu, Pb, Zn, Mo, Ni, Cr, Co bedrock anomalies in adjacent tract 20PE; small tract.	a) 0 0 1 2 3 b) No estimate c) No estimate	Yes No Yes	7	Same undiscovered resources as in adjoining tract 20PE.
In part close to tidewater; in part remote; steep; very extensive glacier cover locally. 5% in proposed USFS Anan Creek Wilderness; 95% in USFS Tongass National Forest.	Known deposits; permissive geology; Zn, Cu, Mo, Ag, Au, Pb, Sn, stream-sediment anomalies; Zn, Cu, Pb, Mo, Au, Ag bedrock anomalies.	a) No estimate. b) 0 0 1 2 4	Yes Yes	0.0425	Same undiscovered resources as in adjoining tract 19PE.
In part close to tidewater; in part remote; steep; very extensive glacier cover locally. 100% in USFS Tongass National Forest.	Permissive geology; Mo, Ag, Cu, Pb, Zn bedrock geochemical anomalies.	a) 0 0 0 0 1 b) No estimate.	Yes Yes	142	
Remote; rugged; much glacier and permanent snow cover. 100% in USFS Misty Fiords Wilderness.	Permissive geology; U bedrock geochemical anomalies; relatively small tract.	No estimate	Maybe	39	

Table 3-BC. Tongass National Forest mineral resource tract information for Bradfield Canal quadrangle. (See text for complete (1990); that for tracts 03BC and 09BC on Brew and others (1989).)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-BC)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
07BC	Eulachon Creek	Schist, gneiss, and minor marble of original Paleozoic and(or) Mesozoic age.	BC008	None	a)Zn-Pb skarn, 18c b)Fe skarn, 18d	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
08BC	Gracey Creek Glacier	Schist, gneiss, and minor marble of original Paleozoic and(or) Mesozoic age.	BC011	None	Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS.
09BC	Outer Etolin	Mesozoic turbidites, other metasedimentary and metavolcanic rocks, and Cretaceous granitic rocks are intruded by Middle Tertiary alkalic and subalkalic granitic rocks, producing permissive vein and skarn environments; intrusive rocks elsewhere (in tract 05PE) have close relation to volcanic rocks.	None	None	a)Polymetallic vein, 22c b)W vein, 15a(?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
10BC	Burroughs Bay	Qtz porphyry dikes associated with Mol-bearing K-spar porphyritic Bt granite and Qtz monzonite of Miocene age in tract 02KC to S.	None	None	Porphyry Mo, 21b	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting.
11BC	Chickamin River	Schist, gneiss, and minor marble of original Paleozoic and(or) Mesozoic age.	None	None	a)Zn-Pb skarn, 18c b)Polymetallic vein, 22c c)Cu skarn, 18b d)Metamorphosed massive sulfide, RM/MS	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting.
12BC	Chickamin Glacier	Numerous sulfide deposits occur within 300 m above or below the contact of the Early Jurassic Texas Creek granodiorite and the metasedimentary and metavolcanic rocks of the Triassic age Hazelton Group(?).	BC013-050	Production: some from BC026-047. Reserves: USBM inferred estimates for BC018, 022-024, 028, 032, 035, 040 047, but they are not yet available.	a)Polymetallic vein, 22c b)Porphyry Cu-Mo, 21a c)Sierran massive sulfide, 23c	Reconnaissance geologic and geochemical mapping by USGS; also some detailed USGS mapping; very heavily prospected.

ɘxplanation of headings. Information for tracts 01BC, 02BC, 04BC through 08BC, and 10BC through 13BC on Koch

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Not far from tidewater; rugged; heavy timber and brush locally. 100% in USFS Misty Fiords Wilderness.	Known occurrence; permissive geology; Cu, ag, Au, Pb, Zn, Mo, Sn bedrock geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	76	
Remote; rugged; extensive glacier and permanent snow cover. 100% in USFS Misty Fiords Wilderness.	Permissive geology; Cu, Zn, Pb, Ag bedrock anomalies.	0 0 0 0 1	Yes	60	
In part close to tidewater; some parts steep and rugged; some thick brush and timber. 100% in USFS Tongass National Forest.	Permissive geology; Cr, Ni, Mo, W, Pb, Nb stream-sediment anomalies; Cu, Pb, Au, Mo, Zn, Cr, Ni bedrock anomalies in tract 15PE to W.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	25	Same undiscovered resources as in adjoining tracts 15PE, 05CR and 01KC.
In part close to tidewater; some parts steep and rugged; some thick brush and timber. 100% in USFS Misty Fiords Wilderness.	Permissive geology; Mo, Cu, Pb, Zn bedrock and stream-sediment geochemical anomalies; relatively small tract.	0 0 0 0 1	Yes	42	Same undiscovered resources as in adjoining tract 02KC.
Not far from tidewater; rugged; heavy timber and brush locally. 100% in USFS Misty Fiords Wilderness.	Permissive geology; Cu, Ag, Au, Pb, Zn, Mo, Sn bedrock geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Yes No	18	Same undiscovered resources as in adjoining tract 03KC.
Remote; rugged; extensive glacier and permanent snow cover; old trails give access from Hyder, AK. 60% in USFS Misty Fiords Wilderness. 40% in USFS Tongass National Forest.	Known deposits; permissive geology; Ag, Cu, Mo, Pb, Zn bedrock and stream-sediment anomalies; also Au stream-sediment anomalies; tract has been very heavily prospected.	a) 0 1 2 3 5 b) 0 0 0 1 2 c) 0 0 0 0 1	Yes Yes Yes	190	Same undiscovered resources as in adjoining tract 04KC.

Table 3-BC. Tongass National Forest mineral resource tract information for Bradfield Canal quadrangle. (See text for complete (1990); that for tracts 03BC and 09BC on Brew and others (1989).)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-BC)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
13BC	Texas Creek-Hyder	Qtz and sulfide veins and shear zones cut Early Jurassic Texas Creek granodiorite and Hazelton Group(?) metavolcanic rocks.	BC052-075	Production: some from BC033, 059, 062, and 075; significant from BC074.	a)Polymetallic vein, 22c b)Porphyry Cu-Mo, 21a c)Sierran mas-	Reconnaissance geologic and geochemical mapping by USGS; also some detailed

explanation of headings. Information for tracts 01BC, 02BC, 04BC through 08BC, and 10BC through 13BC on Koch

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to road and trail system; locally rugged. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; Au, Ag, As, Mo, Sb, Co, Ni bedrock geochemical anomalies; tract has been very heavily prospected.	a) 0 0 0 1 2 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	44	Same undiscovered resources as in adjoining tract 05KC.

Table 3-CR. Tongass National Forest mineral resource tract information for Craig quadrangle. (See text for complete explanation of headings. data (1989); that for tracts 04CR through 06CR on Brew and others (1989).)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-CR)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01CR	Coronation Island	Small high-grade Pb-Ag replacement deposits in limestone; possibly related to nearby felsic pluton.	CR001	Production: > 100 T Ag-bearing ore produced early 1900's from CR001.	Polymetallic replacement, 19a	Reconnaissance geologic and geochemical mapping by USGS; extensive private drilling in 1970's.
02CR	Warren Island	Felsic pluton intrudes Descon Fm. graywacke and minor carbonate rocks; permissive skarn and porphyry environment.	None	None	a) Polymetallic vein, 22c b) Zn-Pb skarn, 18c c) Porphyry Cu, 17 d) Porphyry Mo, 16	Reconnaissance geologic and geochemical mapping by USGS.
03CR	Sweetwater Lake	Silurian turbidites and minor volcanic rocks of locally heterogeneous section that elsewhere contains volcanogenic massive sulfide deposits.	CR003	None	Besshi massive sulfide, 24b(?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
04CR	Coffman Cove	Silurian turbidites and minor volcanic rocks are intruded by mid-Cretaceous granodiorite; permissive vein environment.	None	None	Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
05CR	Outer Etolin	Mesozoic turbidites, other metasedimentary and metavolcanic rocks, and Cretaceous granitic rocks are intruded by Middle Tertiary alkalic and subalkalic granitic rocks, producing permissive vein and skarn environments; intrusive rocks elsewhere (in tract 05PE) have close relation to volcanic rocks.	None	None	a)Polymetallic vein, 22c b)W vein, 15a(?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
06CR	Canoe Passage	Fault cuts Cretaceous turbidites intruded by Late Cretaceous tonalite and Middle Tertiary granite.	None	None	Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.

Information for tracts 01CR through 03CR and 07CR through 24CR based largely on D.J. Grybeck unpub.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater; locally very steep and heavy timber. 100% in USFS Coronation Island Wilderness Area.	Known deposit; permissive geology; Pb, Sb geochemical anomalies.	0 0 0 1 2	Yes	73	
Close to tidewater; locally very steep and heavy timber. 100% in USFS Warren Island Wilderness Area.	Permissive geology; small tract.	a) No estimate b) No estimate c) No estimate d) No estimate	Yes Yes Yes Yes	44	No estimates because of insufficient data.
In part close to tidewater; moderate relief; heavy timber and brush; some logging roads. 10% in proposed USFS Sarkar Lakes Wilderness; 90% in USFS Tongass National Forest.	Known deposit; permissive geology; scattered low-level Zn stream-sediment anomalies.	0 0 0 0 1	Yes	523	Same resources as in adjoining tract 09PE.
Close to tidewater; moderate relief; thick timber and brush; some logging roads. 100% in USFS Tongass National Forest.	Permissive geology; Cr, Ni, Cu stream-sediment anomalies; Cu, Pb, Zn, Cr, Ni, Co bedrock anomalies in tract 11PE to N; small tract.	No estimate.	Yes	8	Same resources as in adjoining tract 11PE.
In part close to tidewater; some parts steep and rugged; some thick brush and timber; some logging roads. 65% in proposed USFS South Etolin Wilderness; 35% in USFS Tongass National Forest.	Permissive geology; Cr, Ni, Mo, W, Pb, Nb stream-sediment anomalies; Cu, Pb, Au, Mo, Zn, Cr, Ni bedrock anomalies in tract 15PE to N.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	70	Same undiscovered resources as in adjoining tracts 09BC and 15PE.
Close to tidewater; local thick brush and timber. 100% in proposed USFS South Etolin Wilderness.	Permissive geology; Cu, Mo, Ni bedrock anomalies in tract 16PE to N; very small tract.	No estimate.	Yes	4	Same undiscovered resources as in adjoining tract 16PE.

Table 3-CR. Tongass National Forest mineral resource tract information for Craig quadrangle. (See text for complete explanation of headings. data (1989); that for tracts 04CR through 06CR on Brew and others (1989).)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-CR)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
07CR	Lava Creek	Large felsic pluton intrudes Silurian and (or) Ordovician andesitic breccia with minor limestone; pluton may be alkalic and an environment permissive for Th, U, REE deposits may be present.	None	None	a)Felsic plutonic U and REE, FP/UREE(?) b)Felsic plutonic Th and REE veins FP/THRE (?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
08CR	Union Bay	Alaskan-type concentrically zoned mafic-ultramafic plutonic body of mid-Cretaceous age intrudes flysch and volcanic rocks of the Gravina overlap assemblage.	CR165	Reserves: at CR165, one billion T of Ti-bearing 18 to 20% Fe ore. USBM may have revised inferred estimate, but it is not yet available.	Alaskan PGE, 9	Reconnaissance geologic and geochemical mapping by USGS; some semidetailed mapping by USGS and others; little prospecting for PGE metals.
09CR	Lower Cleveland Peninsula	Au-Qtz veins crosscut and parallel shear zones in low metamorphic grade Jura-Cretaceous pelitic and felsic(?) rocks.	CR166-172	Production: uncertain, but several mines produced 100's to 1,000's of T of Au ore from 1910 through 1930's. Reserves: USBM has inferred estimates for CR168 and CR170, but they are not yet available.	a) Au-Qtz vein, 36c b) Simple Sb, 27c	Reconnaissance geologic and geochemical mapping by USGS; moderate to high level of prospecting.
10CR	South-central Prince of Wales Island	Scattered and varied deposits in broad expanse of Ordovician, Mississippian, and Devonian sedimentary and volcanic rocks.	CR004-006, 012, 030, 031, 049, 063, 095-099, 127	None	a) Kuroko massive sulfide, 28a b) Polymetallic vein, 22c c) Porphyry Cu, 17 d) Cu skarn, 18b	Reconnaissance geologic and geochemical mapping by USGS; some prospecting.

Information for tracts 01CR through 03CR and 07CR through 24CR based largely on D.J. Grybeck unpub.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater; local thick brush and timber; some logging roads. 100% in USFS Tongass National Forest.	Permissive geology, scattered Nb, La anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1	Maybe Maybe	68	
Close to tidewater; local thick brush and timber. 100% in USFS Tongass National Forest.	Known deposit; permissive geology; Cr geochem anomalies.	0 0 0 0 1	No	61	
Close to tidewater; local thick brush and timber; limited outcrop. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; Au, Sb, Pb geochem anomalies.	a) 0 1 3 7 12 b) 0 0 0 0 1	Yes Yes	101	Same resources as in tract 06KC.
In part close to tidewater; heavy timber, limited outcrop; part has logging roads. 20% in proposed USFS Outside Islands Wilderness Area; 10% in proposed USFS Karta River Wilderness Area; 40% in Alaska Native lands; 30% in USFS Tongass National Forest.	Known deposits; permissive geology; numerous Cu geochem anomalies; scattered Pb, Zn, Ba, Ag anomalies; very large tract.	a) 0 1 2 3 5 b) 0 3 6 8 10 c) 0 0 1 2 3 d) 0 1 2 4 6	Yes Yes Yes Yes	1,606	Same resources as in tracts 03DE and 11KC.

Table 3-CR. Tongass National Forest mineral resource tract information for Craig quadrangle. (See text for complete explanation of headings. data (1989); that for tracts 04CR through 06CR on Brew and others (1989).)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-CR)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
11CR	Kasaan Bay Salt Chuck	Complicated gabbroic pluton contains a magmatic Cu-PGE-Au deposit.	CR065,067,068	Production: at CR067, about 300,000 T 0.9% Cu, 0.02 oz/T Au, 0.1 oz/T Ag, 0.05 oz/T Pd. Reserves: USBM has an inferred estimate for CR067, but it is not yet available.	Undescribed magmatic Cu-Au-PGE	Detailed geologic and reconnaissance geochemical mapping by USGS; some by USBM; moderate amount of prospecting.
12CR	Kasaan Peninsula	Many Fe and Cu skarn deposits associated with Paleozoic felsic to intermediate plutons that intrude Lower Paleozoic calcareous metasedimentary rocks.	CR064, 066, 069-094	Production: major, from several mines 1900 to 1917 estimated to be about 274,400 T with 12.78 million lbs Cu, 57,800 oz Ag. Reserves: estimated 3.02 million T. Reserves: USBM has inferred estimates for CR077, 079, 083, 087, and CR088, but they are not yet available.	a) Cu skarn, 18b b) Fe skarn, 18d	Detailed geologic and reconnaissance geochemical mapping by USGS and some by USBM; some industry activity.
13CR	Baker Island	Mo-bearing porphyry system and polymetallic veins probably associated with Mesozoic or Paleozoic pluton that intrudes Silurian and(or) Ordovician Descon Fm. metasedimentary rocks.	CR009-011	None	a) Porphyry Mo, 21b b) Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; some drilling on CR010
14CR	San Juan Bautista Island	Sulfide occurrences related to small granitic pluton.	CR013,014	None	a) Porphyry Cu, 17 b) Polymetallic vein, 22c	Semidetailed geologic and geochemical mapping by USGS of shoreline; reconnaissance inland; drilling on one prospect in 1970's.

Information for tracts 01CR through 03CR and 07CR through 24CR based largely on D.J. Grybeck unpub.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater and to State and logging roads; thick forest; limited exposure. 100% in USFS Tongass National Forest.	Known deposit; permissive geology; scattered Cu geochemical anomalies; very small tract.	No estimate	No	16	No estimate because tract is small.
Close to tidewater; some logging roads in W part; heavy timber; locally steep; limited outcrop. 65% in Alaska Native lands; 35% in USFS Tongass National Forest.	Known deposits; permissive geology; scattered Cu, Pb, Zn anomalies.	a) 0 1 2 3 5 b) 0 1 2 3 5	Yes Yes	196	
Close to tidewater; local thick brush and timber; locally steep. 100% in proposed USFS Outer Islands Wilderness Area.	Known deposits; permissive geology; scattered Mo, Ba, Cu anomalies.	a) 0 0 0 0 1 b) 0 0 0 1 2	Yes Yes	85	
Close to tidewater; local thick brush and timber; locally steep. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; scattered Pb, Zn, Cu anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 1 2	Yes Yes	21	

Table 3-CR. Tongass National Forest mineral resource tract information for Craig quadrangle. (See text for complete explanation of headings. data (1989); that for tracts 04CR through 06CR on Brew and others (1989).)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-CR)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
15CR	Port Saint Nicholas	Syenitic and(or) granitic plutons intrude Lower and Middle Paleozoic volcanic and sedimentary rocks.	CR015	None	a)Felsic plutonic U and REE, FP/UREE(?) b)Felsic plutonic Th and REE veins, FP/THRE (?) c)Porphyry Mo, 21b	Reconnaissance and some semi-detailed geologic and geochemical mapping by USGS.
16CR	Black Lake (A), Lake Saint Nicholas (B)	Lower Paleozoic andesitic breccia and some Middle Paleozic carbonate rocks intruded by Cretaceous granitic pluton with possible Mo mineralization.	(A)CR018-020; (B)CR025	None	Porphyry Mo, 21b	Reconnaissance and some semi-detailed geologic and geochemical mapping by USGS; drilling on one prospect in 1970's
17CR	Pin Peak	Lower Paleozoic andesitic breccia and some Middle Paleozic carbonate rocks intruded by Cretaceous granitic pluton with possible Mo mineralization; polymetallic(?) veins also.	CR016,017,021-024	None	a) Porphyry Mo, 21b b) Polymetallic veins, 22c	Reconnaissance and some semi-detailed geologic and geochemical mapping by USGS.
18CR	Maybeso Creek	Ordovician shale and graywacke contain numerous polymetallic(?) veins.	CR026-029, 032-048	Production: Several thousand oz Au 1900 to 1940's.	a) Porphyry Mo, 21b b) Polymetallic veins, 22c	Reconnaissance and some semi-detailed geologic and geochemical mapping by USGS; intermittent re-examination by industry.
19CR	Suemez Island	Mo-bearing porphyry system and polymetallic veins probably associated with Mesozoic or Paleozoic pluton that intrudes Silurian and(or) Ordovician Descon Fm. metasedimentary rocks; possible REE-bearing system on E part of island.	None	None	a) Porphyry Mo, 21b b) Polymetallic vein, 22c c) Felsic plutonic U and REE, FP/UREE(?) d) Felsic plutonic Th and REE veins, FP/THRE (?)	Reconnaissance geologic and geochemical mapping by USGS.

Information for tracts 01CR through 03CR and 07CR through 24CR based largely on D.J. Grybeck unpub.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater in part; locally steep; close to State roads; also logging roads. 100% in Alaska Native lands.	Known deposit; permissive geology; Nb, Be, Y, La stream-sediment anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Maybe Maybe Yes	157	
Close to tidewater in part; locally steep; close to State roads; also logging roads. 50% in Alaska Native lands; 15% in proposed USFS Karta River Wilderness Area; 35% in USFS Tongass National Forest.	Known occurrences; permissive geology; Mo geochem anomalies; moderate size tract.	0 0 0 0 1	Yes	233	
Close to tidewater in part; locally steep; close to State roads; also logging roads. 25% in Alaska Native lands; 50% in proposed USFS Karta River Wilderness Area; 25% in USFS Tongass National Forest.	Known occurrences; permissive geology; Mo geochem anomalies; small tract.	a) 0 0 0 1 2 b) 0 0 0 0 1	Yes Yes	60	
Close to tidewater in part; locally steep; close to State roads; also logging roads. 15% in Alaska Native lands; 50% in proposed USFS Karta River Wilderness Area; 35% in USFS Tongass National Forest.	Known deposits; permissive geology; widespread Zn, Pb, Mo, Cu geochem anomalies; small tract.	a) 0 0 0 0 1 b) 0 1 3 6 8	Yes Yes	90	
Close to tidewater; locally steep; some heavy timber. 100% in USFS Tongass National Forest.	Permissive geology; Nb, La stream-sediment geochemical anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Maybe Maybe	141	

Table 3-CR. Tongass National Forest mineral resource tract information for Craig quadrangle. (See text for complete explanation of headings. data (1989); that for tracts 04CR through 06CR on Brew and others (1989).)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-CR)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
20CR	Trocadero Bay-Cholmondeley Sound	Small, structurally conformable Cu-, Pb-, Zn-bearing sulfide lenses and bedded Brt occur in low-grade metamorphic rocks of the Proterozoic(?) to Cambrian Wales Group.	CR050-058, 100, 102-105, 117, 122, 123, 125, 126, 128-131, 140, 143, 144	Reserves: USBM has inferred estimates for CR102 and 126 (Brt), but they are not yet available.	Kuroko massive sulfide, 28a(?)	Reconnaissance geologic and geochemical mapping by USGS; some prospecting.
21CR	Copper Mountain	Paleozoic carbonate rocks adjacent to Cretaceous granodiorite plutons contain numerous Cu and Fe skarn deposits.	CR101,106-121	Production: 1902 to 1922 from several mines totaled 10 million lbs Cu, 280,000 oz Ag, 7,000 oz Au. Reserves: at CR112, 65,000 T with 45% Fe, 0.75% Cu. USBM has revised inferred estimate for CR112, but it is not yet available.	a) Cu skarn, 18b b) Fe skarn, 18d	Detailed and reconnaissance geologic and geochemical mapping by USGS; some prospecting.
22CR	Dora Bay	Syenite pluton in Proterozoic(?) and(or) Cambrian Wales Group metasedimentary and metavolcanic rocks has associated REE geochem and radioactivity anomalies.	CR132	None	a) Felsic plutonic U and REE, FP/UREE(?) b) Felsic plutonic Th and REE veins, FP/THRE (?)	Detailed and reconnaissance geologic and geochemical mapping by USGS; extensive prospecting.
23CR	Dolomi	Proterozoic(?) and(or) Cambrian Wales Group marble contains Au-Qtz and(or) polymetallic veins.	CR133-137, 139-142, 153-163	Production: in 1900 to 1930's, mainly from Valpariso (CR153) of 1,000 to 5,000 oz Au.	a) Polymetallic vein, 22c b) Au-Qtz, 36a	Detailed and reconnaissance geologic and geochemical mapping by USGS; some prospecting.
24CR	Northern Dall Island	Paleozoic sedimentary and volcanic rocks intruded by granitic plutons.	CR059-062	None, except marble production.	a) Polymetallic vein, 22c b) Zn-Pb skarn, 18c c) Porphyry Mo, 21b	Reconnaissance geologic and geochemical mapping by USGS.

Information for tracts 01CR through 03CR and 07CR through 24CR based largely on D.J. Grybeck unpub.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater in part; locally steep; close to State roads; also logging roads; low relief; heavily wooded. 40% in Alaska Native lands; 20% in proposed USFS Nutkwa Wilderness Area; 5% in proposed USFS Kegan Lake Wilderness Area; 35% in USFS Tongass National Forest.	Known deposits; permissive geology; scattered Ba, Zn, Pb, Cu geochemical anomalies; large tract with many poorly known or puzzling deposits.	0 0 1 2 3	Yes	761	Same resources as in tract 04DE.
Close to tidewater in part; locally steep; heavily wooded. 40% in Alaska Native lands; 10% in proposed USFS Nutkwa Wilderness Area; 50% in USFS Tongass National Forest.	Known deposits; permissive geology; Ba, Zn, Pb, Cu geochemical anomalies; small to moderate size tract.	a) 0 0 0 1 2 b) 0 0 0 1 2	Yes Yes	116	
Close to tidewater in part; locally very steep; heavily wooded. 30% in Alaska Native lands; 70% in USFS Tongass National Forest.	Known occurrence; permissive geology; REE geochem anomalies; radioactivity anomalies; small tract.	a) 0 0 0 1 2 b) 0 0 0 1 2	Maybe Maybe	31	
Close to tidewater in part; low to moderate relief; some logging roads. 30% in Alaska Native lands; 70% in USFS Tongass National Forest.	Known deposits; permissive geology; Mo, Zn, Pb, Cu geochemical anomalies; small to moderate size tract.	a) 0 0 1 2 4 b) 0 0 0 1 2	Yes Yes	118	Same resources as in tract 12KC.
Close to tidewater in part; locally very steep; heavily wooded. 45% in Alaska Native lands; 55% in USFS Tongass National Forest.	Permissive geology; Mo, Zn, Pb, Sb, Ba stream sediment anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	226	Same resources as in tract 02DE.

Table 3-CR. Tongass National Forest mineral resource tract information for Craig quadrangle. (See text for complete explanation of headings. data (1989); that for tracts 04CR through 06CR on Brew and others (1989).)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-CR)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
25CR	Southeast Sukkwan Island	Lower Paleozoic sedimentary rocks are intruded by syenite pluton of Pennsylvanian age.	CR124	None	a) Felsic plutonic U and REE, FP/UREE(?) b) Felsic plutonic Th and REE veins FP/THRE (?)	Reconnaissance geologic and geochemical mapping by USGS.
26CR	Moira Sound	Cretaceous granitic plutons intrude Proterozoic(?) and Cambrian Wales Group metasedimentary and metavolcanic rocks, giving permissive porphyry and vein environment.	None	None	a) Porphyry Mo, 21b b) Polymetallic vein, 22c c) Zn-Pb skarn, 18c	Reconnaissance geologic and geochemical mapping by USGS; some industry prospecting and drilling.
27CR	Niblack	Felsic volcanic lenses in the Ordovician Descon Fm. contain Cu- and Zn-bearing massive sulfide deposits.	CR145-152	Production: at CR149, at least 1.4 million lbs Cu, 1,100 oz Au, 15,000 oz Ag from 1902 to 1909.	Kuroko massive sulfide, 28a	Reconnaissance geologic and geochemical mapping by USGS; intense industry prospecting and drilling.

Information for tracts 01CR through 03CR and 07CR through 24CR based largely on D.J. Grybeck unpub.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater in part; wooded; moderate relief. 35% in Alaska Native lands; 65% in USFS Tongass National Forest.	Permissive geology; Nb, Be, Y stream sediment anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1	Maybe Maybe	23	
Close to tidewater in part; locally steep; locally heavily wooded. 25% in proposed USFS Nutkwa Wilderness Area; 50% in proposed USFS Kegan Lake Wilderness Area; 25% in USFS Tongass National Forest.	Permissive geology; Mo stream-sediment anomalies; moderate-size tract.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) 0 0 0 0 1	Yes Yes Yes	214	Same resources as tracts 07DE, 01PR, and 13KC.
Close to tidewater in part; locally steep; locally heavily wooded. 40% in proposed USFS Kegan Lake Wilderness Area; 60% in USFS Tongass National Forest.	Known deposits; permissive geology; Ba, Zn, Pb, Cu geochemical anomalies; small tract.	0 0 1 2 3	Yes	78	

Table 3-DE. Tongass National Forest mineral resource tract information for Dixon Entrance quadrangle. (See text for complete

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-DE)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01DE	Forrester Island	Granodiorite of uncertain (Cretaceous or Silurian-Ordovician) age contains porphyry Mo deposit.	DE001,002	None	Porphyry Mo, 21b	Reconnaissance geologic and geochemical mapping by USGS.
02DE	North and Central Dall Island	Paleozoic sedimentary and volcanic rocks intruded by granitic plutons.	None	None	a) Polymetallic vein, 22c b) Zn-Pb skarn, 18c c) Porphyry Mo, 21b	Reconnaissance geologic and geochemical mapping by USGS.
03DE	South-central Prince of Wales Island	Scattered and varied deposits in broad expanse of Ordovician, Mississippian, and Devonian sedimentary and volcanic rocks in Craig quad to N.	DE008	None	a) Kuroko massive sulfide, 28a b) Polymetallic vein, 22c c) Porphyry Cu, 17 d) Cu skarn, 18b	Reconnaissance geologic and geochemical mapping by USGS; some prospecting.
04DE	Trocadero Bay-Cholmondeley Sound	Small, structurally conformable Cu-, Pb-, Zn-bearing sulfide lenses occur in low-grade metamorphic rocks of the Proterozoic (?) to Cambrian Wales Group.	None	None	Kuroko massive sulfide, 28a(?)	Reconnaissance geologic and geochemical mapping by USGS; some prospecting.
05DE	Kassa Inlet	Small Paleozoic plutons in mostly Proterozoic(?) to Cambrian Wales Group rocks may be permissive for U-Th deposits.	None	None	a) Felsic plutonic-related U and REE, FP/UREE(?) b) Felsic plutonic-related Th and REE veins, FP/THRE(?)	Reconnaissance and some detailed geologic and geochemical mapping by USGS and by ADGGS; some prospecting.
06DE	Bokan Mountain	Veins, dikes, and pegmatites related to Jurassic peralkaline granite at Bokan Mtn. contain U and Th minerals.	DE028,030-040	Production: at DE039, about 110,000 T with about 1.3% U308 from 1955 to 1975 Reserves: USBM has inferred estimate, but it is not yet available.	a) Felsic plutonic-related U and REE, FP/UREE(?) b) Felsic plutonic-related Th and REE veins, FP/THRE(?)	Detailed geologic and some geochemical mapping by USGS; also some sampling by USBM; intensely prospected.
07DE	Moira Sound	Cretaceous granitic plutons intrude Proterozoic(?) and Cambrian Wales Group metasedimentary and metavolcanic rocks, giving permissive porphyry and vein environment.	None	None	a) Porphyry Mo, 21b b) Polymetallic vein, 22c c) Zn-Pb skarn, 18c	Reconnaissance and some detailed geologic and geochemical mapping by USGS; some prospecting
08DE	Southern Dall and Long Islands	Polymetallic veins with up to several % sulfides cut metasedimentary rocks of the Proterozoic(?) and Lower Paleozoic Wales Group; minor granitic intrusives.	DE003-007	None	a) Kuroko massive sulfide, 28a b) Polymetallic vein, 22c	Reconnaissance and some detailed geologic and geochemical mapping by USGS; some prospecting

explanation of headings. Information for tracts 01DE through 10DE based on D.J. Grybeck, unpub. data, 1989.)

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
All close to tidewater, most of which is open ocean. 100% in USFWS Forrester Island Wildlife Refuge.	Known deposit; permissive geology; small tract.	0 0 0 0 1	Yes	11	
Close to tidewater in part; locally very steep; heavily wooded. 40% in Alaska Native lands; 60% in USFS Tongass National Forest.	Permissive geology; Mo, Zn, Pb, Sb, Ba stream sediment anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	50	Same resources as in tract 24CR.
In part close to tidewater; heavy timber, limited outcrop; part has logging roads. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; numerous Cu geochem anomalies; scattered Pb, Zn, Ba, Ag anomalies; very large tract in quad to N, very small part here.	a) 0 1 2 3 5 b) 0 3 6 8 10 c) 0 0 1 2 3 d) 0 1 2 4 6	Yes Yes Yes Yes	1	Same resources as in tracts 10CR and 11KC.
Close to tidewater in part; locally steep; logging roads; heavily wooded; low relief. 10% in USFS South Prince of Wales Wilderness Area; 90% in proposed USFS Nutkwa Wilderness Area.	Permissive geology; large tract in Craig quad to N; small part here.	0 0 1 2 3	Yes	37	Same resources as in tract 20CR.
Mostly close to tidewater; moderate relief. 50% in USFS South Prince of Wales Wilderness Area; 50% in proposed USFS Nutkwa Wilderness Area.	Permissive geology; anomalous Nb and Y stream-sediment samples.	a) 0 0 0 0 1 b) 0 0 0 0 1	No Maybe	26	
In part wooded and steep; road from tidewater into tract. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; small tract.	a) 0 0 0 0 1 b) 0 0 1 2 5	No Maybe	33	
Close to tidewater in part; locally steep; locally heavily wooded. 100% in USFS Tongass National Forest.	Permissive geology; Mo stream-sediment anomalies; moderate-size tract in Craig quad to N, small tract here.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) 0 0 0 0 1	Yes Yes Yes	52	Same resources as tract 26CR.
Close to tidewater in part; locally steep; locally heavily wooded. 40% in Alaska Native lands; 60% in USFS Tongass National Forest.	Known deposits; permissive geology; large tract.	a) 0 0 0 0 1 b) 0 1 2 4 8	Yes Yes	436	

Table 3-DE. Tongass National Forest mineral resource tract information for Dixon Entrance quadrangle. (See text for complete

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-DE)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
09DE	Barrier Islands	Lower Paleozoic Descon Fm. metasedimentary and metavolcanic rocks contain scattered massive sulfide occurrences.	DE009-015, 017	None	Kuroko massive sulfide, 28a	Reconnaissance and some detailed geologic and geochemical mapping by USGS; some recent prospecting.
10DE	Southeasternmost Prince of Wales Island	Complicated geology with granitic rocks of different ages in Lower Paleozoic metasedimentary and metavolcanic rocks.	DE018-031	None	a) Polymetallic vein, 22c b) Porphyry Mo, 21b c) Felsic plutonic-related U and REE, FP/UREE(?) d) Felsic plutonic-related Th and REE veins, FP/THRE(?) e) Carbonatites, 10	Reconnaissance and some detailed geologic and geochemical mapping by USGS; some recent prospecting.

explanation of headings. Information for tracts 01DE through 10DE based on D.J. Grybeck, unpub. data, 1989.)

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater; low relief; heavily forested in part. 90% in USFS Southern Prince of Wales Wilderness Area; 10% in USFS Tongass National Forest.	Known deposits; permissive geology; moderate-size tract.	0 0 2 4 6	Yes	117	
Close to tidewater; much is steep and heavily wooded. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; moderate-size tract.	a) 0 0 0 0 1	Yes	131	Same resources as in adjacent tract 02PR.
		b) 0 0 0 0 1	Yes		
		c) 0 0 0 1 2	Maybe		
		d) 0 0 0 1 2	Maybe		
		e) 0 0 0 0 1	Yes		

Table 3-JU. Tongass National Forest mineral resource tract information for Juneau quadrangle. (See text for complete explanation D1-D44); that for tract 04JU on Baggs and others (1990) and D.A. Brew (unpub. data); that for tracts 06JU, 07JU, 09JU

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-JU)	5 Production and reserve information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01JU	White Glacier	Complex clastic, carbonate, and volcanic section of Permian age is intruded and metamorphosed by Tertiary and Cretaceous granitic plutons; stratiform massive sulfide deposits present.	JU012,013	None	Sierran massive sulfide, 28c	Reconnaissance geologic mapping by USGS and USBM; geochemical mapping by USGS; some prospecting by USBM.
02JU	Casement Glacier	Paleozoic clastic and carbonate rocks are intruded by Cretaceous and Tertiary granitic dikes; fracturing and alteration are quite local; Mo-Cu porphyry stockwock and disseminated mineralization known in tract 08MF to W.	JU001,002,003	None	a) Porphyry Cu-Mo, 21a b) Porphyry Cu, skarn-related, 18a c) Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; some prospecting by USBM; extensive private prospecting of then-deglaciated areas in 1960's and 1970's.
03JU	Berg Creek	Slightly metamorphosed Paleozoic volcanic and carbonate rocks; minor Cu mineralization in volcanics.	JU004, 005, 009, 010	None	Basaltic Cu, 23	Reconnaissance geologic and geochemical mapping by USGS; probably essentially unprospected.
04JU	Sullivan Mountain to Sullivan River	Skarn and stratiform mineralization occurs in Paleozoic metaclastic, metacarbonate, and metavolcanic rocks in simple W-dipping structure.	JU006-008	None	a)Cu skarn, 18b b)Zn-Pb skarn, 18d c)Besshi massive sulfide, 24b(?)	Reconnaissance geologic and geochemical mapping by USGS; also by USBM; moderate to high-level of recent prospectting.
05JU	Excursion River	Silurian graywacke and argillite with some carbonate beds are intruded by scattered granitic plugs and stocks with possibly associated veins.	JU018, 022-24	None	Polymetallic veins, 22c	Reconnaissance geologic and geochemical mapping by USGS; some prospecting by USBM and private industry.
06JU	Nun Mountain	Silurian graywacke and argillite with some carbonate beds are intruded by a large Cretaceous granodiorite pluton; permissive skarn environment, but no known deposits.	None	None	a)Cu skarn, 18b b)Zn-Pb skarn, 18d	Reconnaissance geologic and geochemical mapping by USGS; minor prospecting by USBM and private industry.

of headings. Information for tracts 01Ju through 03JU and 05JU based largely on Brew and others (1978), p. A1-A18, through 014JU on D.A. Brew (unpub. data); and that for tract 08JU on Ford and others (1989).

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
In part close to tidewater; steep terrain in part; some glacier cover; brush and timber at lower elevations. 100% in USNPS Glacier Bay National Park.	Known deposits; permissive geology; Cu, Mo, Pb, Co, Cr, Ni, Hg stream sediment anomalies; relatively small and well-known tract.	0 0 0 1 2	Yes	63	
In part close to tidewater; locally rugged, but generally moderate relief. 80% in USNPS Glacier Bay National Park. 20% in USFS Tongass National Forest.	Permissive geology; Mo stream sediment geochem anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	330	Same undiscovered resources as in adjoining tracts 08MF and 06SK.
Remote; steep; some glacier cover. 85% in USNPS Glacier Bay National Park; 15% in USFS Tongass National Forest.	Known deposit; permissive geology.	0 0 0 0 1	Yes	132	
In part close to tidewater; locally steep and rugged. 15% in USFS Endicott River Wilderness; 85% in USFS Tongass National Forest.	Known deposits; permissive geology; As, Ni, Ag, Cu, Zn bedrock geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 1 1 2	Yes Yes Yes	246	Same undiscovered resources as in adjoining tract 08SK.
In part remote; some parts very steep and rugged; some glacier cover; timber at lower elevations. 70% in USNPS Glacier Bay National Park; 25% in USFS Tongass National Forest. 5% in Sealaska Native lands.	Known deposits; permissive geology; Ag, Be, Co, Hg, Ni, Pb, Zn, Au stream-sediment geochem anomalies.	0 0 0 1 2	Yes	430	
In part close to tidewater; W part steep and rugged; some glacier cover; timber at lower elevations. 10% in USNPS Glacier Bay National Park; 90% in USFS Tongass National Forest.	Permissive geology; aeromagnetic anomaly associated with pluton.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	246	

Table 3-JU. Tongass National Forest mineral resource tract information for Juneau quadrangle. (See text for complete explanation D1-D44); that for tract 04JU on Baggs and others (1990) and D.A. Brew (unpub. data); that for tracts 06JU, 07JU, 09JU

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-JU)	5 Production and reserve information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
07JU	Neka Bay, W of	Paleozoic carbonate and clastic rocks are intruded and hornfelsed by Cretaceous granodiorite plutons; permissive skarn environment, but no known deposits.	None	None	a)Cu skarn, 18b b)Zn-Pb skarn, 18d	Reconnaissance geologic and geochemical mapping by USGS.
08JU	Seal Creek	Paleozoic carbonate rocks are intruded and hornfelsed by Cretaceous Qtz monzonite pluton; Mississippian section may contain evaporite deposits; carbonate rocks may host skarns.	None	None	a)Cu skarn, 18b b)Zn-Pb skarn, 18d c)marine evaporites	Some detailed geologic mapping but mostly reconnaissance geologic and geochemical mapping by USGS.
09JU	Admiralty Island	Highly deformed and slightly metamorphosed Late Triassic mafic and intermediate volcanic rocks, fine-grained clastic rocks, and ultramafic masses host, in different places, significant massive sulfide, Ni-Cu magmatic segregation, and polymetallic vein deposits.	JU028-045	Significant past production from polymetallic vein deposits JU032, 034, 037; and from synorogenic-syn-volcanic Ni-Cu deposit JU033. Reserves: JU033 contains discovered reserve of about 560,000 T with 0.35% Cu, 0.34% Ni, 0.15% Co; deposit JU044 has just started production; it has discovered reserve of about 3.5 million T with 3.9% Pb, 9.7% Zn, 23.8 oz/T Ag,0.18 oz/T Au.	a)Sierran massive sulfide, 28c b)Synorogenic-synvolcanic Ni-Cu, 7a	Reconnaissance and some detailed geologic and geochemical mapping by USGS; intense private prospecting in non-National Monument part of tract.
10JU	King Salmon Bay	Slightly metamorphosed Late Triassic(?) intermediate and mafic volcanic rocks are permissive environment for massive sulfide deposits.	None	None	a)Sierran massive sulfide, 28c b)Basaltic Cu, 23	Reconnaissance geologic mapping by USGS.
11JU	Kensington-Jualin (A) and Eagle River-Juneau(B)	At (A): Au-bearing Qtz veins in shear zones in middle Cretaceous Qtz monzonite pluton and in adjacent hornfelsed Late Triassic(?) basalt; at (B): Au-bearing Qtz veins in phyllite, slate, greenstone, greenschist, and metagabbro of Permian(?) through middle Cretaceous age that are variously deformed and metamorphosed; also in highly altered Qtz monzonite sills of middle or Late Cretaceous age; significant production from several mines.	(A): JU047-055, 057-059; (B): JU060-134	(A): Significant production in past from deposits JU047, 049, 050, 051, 055, 058; Kensington (JU051) and Jualin (JU058) now being reopened. Reserves: JU051 has reserve of 20 million T with 0.14 oz/T;	a)Au-Qtz veins, 36a b)Sierran massive sulfide, 28c	Intense prospecting in the past; reconnaissance and some detailed geologic and geochemical mapping by USGS; some detailed sampling by USBM.

of headings. Information for tracts 01Ju through 03JU and 05JU based largely on Brew and others (1978), p. A1-A18, through 014JU on D.A. Brew (unpub. data); and that for tract 08JU on Ford and others (1989).

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater, locally heavy timber; steep in part. 100% in USFS Tongass National Forest.	Permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	48	Same undiscovered resources as in adjoining tract 09SI.
Close to tidewater, locally heavy timber; steep in part. 100% in USFS Tongass National Forest.	Permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes No	30	Same undiscovered resources as in adjoining tract 10SI.
Close to tidewater, locally heavy timber; steep in part. 15% in USFS Admiralty Island National Monument; 75% in USFS Tongass National Forest; 10% in proposed USFS Young Bay Wilderness.	Known deposits and mines; permissive geology; abundant and varied geochemical anomalies; relatively well prospected.	a) 0 0 0 1 3 b) 0 0 0 0 1	Yes Yes	409	Same undiscovered resources as in adjoining tract 13SI.
Close to tidewater; heavy timber. 100% in USFS Admiralty Island National Monument and Wilderness.	Permissive geology.	0 0 0 0 1	Yes	4	Same undiscovered resources as in adjoining tract 14SI.
Close to tidewater; heavy timber; some mines and prospects close to roads. 3% in proposed USFS Berners Bay Wilderness; other parts in Sealaska Native lands, in USFS Tongass National Forest, in Alaska State Park, in City and Borough of Juneau, in Alaska State lands, and privately owned.	Permissive geology; many large mines and significant prospects; large tract, but relatively well explored.	a) 0 1 2 3 5 b) 0 0 1 2 3	Yes Yes	801	Same undiscovered resources as in adjoining tract 01TR.

Table 3-JU. Tongass National Forest mineral resource tract information for Juneau quadrangle. (See text for complete explanation D1-D44); that for tract 04JU on Baggs and others (1990) and D.A. Brew (unpub. data); that for tracts 06JU, 07JU, 09JU

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-JU)	5 Production and reserve information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
				JU058 reported to have 1.19 million T with 0.236 oz/T Au. (B)Very large production in past from deposits JU072(Eagle River), JU101(Alaska-Juneau), JU125 (Treadwell Group); Alaska-Juneau now being evaluated for reopening. Reserves: JU101 has 100 million T with 0.047 oz/T Au.		
12JU	Lace River	Paleozoic and younger(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons; carbonates are permissive skarn environments, but no deposits known.	None	None	a) Cu-skarn, 18b b) Pb-Zn skarn, 18c	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.
13JU	Juneau Icefield	Paleozoic and younger(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons; carbonates are permissive skarn environments, but no deposits known.	None	None	a) Cu-skarn, 18b b) Pb-Zn skarn, 18c	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.

of headings. Information for tracts 01Ju through 03JU and 05JU based largely on Brew and others (1978), p. A1-A18, through 014JU on D.A. Brew (unpub. data); and that for tract 08JU on Ford and others (1989).

8	9	10	11	12	13
Accessibility and related factors, including percent of tract in different land status(es)	Summary of undiscovered resource information	Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	Grade and tonnage model available?	Tract area, in square kilometers	Remarks
Remote; steep; extensive glacier cover. 100% Tongass National Forest.	Permissive geology; good exposures, but most metamorphic rocks belong to pre-Paleozoic(?) section that is typically unmineralized.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	15	Same undiscovered resources as in adjoining tract 01AL.
Remote; steep; very extensive glacier cover. 100% Tongass National Forest.	Permissive geology; good exposures, except for extensive glaciers; some metamorphic rocks may belong to pre-Paleozoic(?) section that is typically unmineralized, but most are probably Paleozoic and Mesozoic.	a) 0 0 0 1 2 b) 0 0 0 1 2	Yes Yes	506	

Table 3-KC. Tongass National Forest mineral resource tract information for Ketchikan quadrangle. (See text for complete tracts 02KC, 03KC, 06KC through 10KC, and 14KC through 19KC on Berg and others (1978) and on Berg (1984);

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-KC)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01KC	Outer Etolin Island	Mesozoic turbidites, other metasedimentary and metavolcanic rocks, and Cretaceous granitic rocks are intruded by Middle Tertiary alkalic and subalkalic granitic rocks, producing permissive vein and skarn environments; intrusive rocks elsewhere (in tract 05PE) have close relation to volcanic rocks.	None	None	a)Polymetallic vein, 22c b)W vein, 15a(?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
02KC	Burroughs Bay	Qtz porphyry dikes associated with Mol-bearing K-spar porphyritic Bt granite and Qtz monzonite of Miocene age.	KC003	None	Porphyry Cu-Mo, 21a	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting.
03KC	Chickamin River	Schist, gneiss, and minor marble of original Paleozoic and(or) Mesozoic age.	KC084-087	None	a)Zn-Pb skarn, 18c b)Polymetallic vein, 22c c)Cu skarn, 18b d)Metamorphosed massive sulfide, RM/MS	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
04KC	Chickamin Glacier	Numerous sulfide deposits occur within 300 m above or below the contact of the Early Jurassic Texas Creek granodiorite and the metasedimentary and metavolcanic rocks of the Triassic age Hazelton Group(?) in tract 12BC to N.	None	None	a)Polymetallic vein, 22c b)Porphyry Cu-Mo, 21a c)Sierran massive sulfide, 23c	Reconnaissance geologic and geochemical mapping by USGS; also some detailed USGS mapping to N; very heavily prospected to N.
05BC	Texas Creek-Hyder	Qtz and sulfide veins and shear zones cut Early Jurassic Texas Creek granodiorite and Hazelton Group(?) metavolcanic rocks.	KC101-105	USBM has inferred estimate for KC104, but it is not yet available.	a)Polymetallic vein, 22c b)Porphyry Cu-Mo, 21a c)Sierran massive sulfide, 23c	Reconnaissance geologic and geochemical mapping by USGS; also some detailed USGS mapping; very heavily prospected.
06KC	Southern Cleveland Peninsula	Au-Qtz veins crosscut and parallel shear zones in low metamorphic grade Jura-Cretaceous pelitic and felsic(?) rocks.	KC004-014	Production: a few 1,000 oz Au from KC004, 1898 to 1917. Reserves: USBM has inferred estimates for KC005, 007, and 009, but they are not yet available.	a) Au-Qtz vein, 36c b) Simple Sb, 27c	Reconnaissance geologic and geochemical mapping by USGS; moderate to high level of prospecting.

explanation of headings. (Information for tracts 01KC, 04KC, and 05KC based largely on Koch (1990); that for that for tracts 11KC through 13KC based on D.J. Grybeck, unpub. data, 1989.)

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
In part close to tidewater; some parts steep and rugged; some thick brush and timber; some logging roads. 100% in USFS Tongass National Forest.	Permissive geology; Cr, Ni, Mo, W, Pb, Nb stream-sediment anomalies; Cu, Pb, Au, Mo, Zn, Cr, Ni bedrock anomalies in tract 15PE to NW.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	50	Same undiscovered resources as in adjoining tracts 09BC, 05CR, and 15PE.
In part close to tidewater; some parts steep and rugged; some thick brush and timber. 40% in USFS Misty Fiords Wilderness. 60% in USFS Tongass National Forest.	Permissive geology; Mo, Be, Nb bedrock and stream-sediment geochemical anomalies; relatively small tract.	0 0 0 0 1	Yes	20	Same undiscovered resources as in adjoining tract 10BC.
In part distant from tidewater; rugged; large valleys; heavy timber and brush locally. 100% in USFS Misty Fiords Wilderness.	Known deposit; permissive geology; nonspecific geochemical anomalies reported.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Yes No	130	Same undiscovered resources as in adjoining tract 11BC.
Remote; rugged; extensive glacier and permanent snow cover; old trails give access from Hyder, AK. 100% in USFS Misty Fiords Wilderness.	Permissive geology; tract 12BC to N also has known deposits and Ag, Cu, Mo, Pb, Zn bedrock and stream-sediment anomalies; also Au stream-sediment anomalies; tract 12BC has been heavily prospected.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	9	Same undiscovered resources as in adjoining tract 12BC.
Close to road and trail system; locally rugged. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; nonspecific geochemical anomalies reported; tract has been heavily prospected.	a) 0 0 0 1 2 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	24	Same undiscovered resources as in adjoining tract 13BC.
Close to tidewater; local thick brush and timber; limited outcrop; old roads and trails. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; Au, Sb, Pb geochem anomalies in tract 09CR to W.	a) 0 1 3 7 12 b) 0 0 0 0 1	Yes Yes	44	Same undiscovered resources as in adjoining tract 09CR.

Table 3-KC. Tongass National Forest mineral resource tract information for Ketchikan quadrangle. (See text for complete tracts 02KC, 03KC, 06KC through 10KC, and 14KC through 19KC on Berg and others (1978) and on Berg (1984);

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-KC)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
07KC	Chickamin-Rudyerd	Gneiss, schist, and minor marble of original Paleozoic and(or) Mesozoic age.	KC088, 090-093	None	a)Polymetallic vein, 22c b)Cu skarn, 18b c)Metamorphosed massive sulfide, RM/MS	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
08KC	Southern Revillagigedo Island	Argillite, phyllite, some greenschist, Ms schist, marble intruded by now-metamorphosed aplite and granodiorite and by unmetamorphosed granodiorite and gabbro.	KC015-017, 022-037, 096, 097	Production: 400 to 500 T Pb-Zn-Ag ore produced from KC022 in 1947. Reserves: estimated at KC022, about 2,500 T with 6 to 7% Pb, 28% Zn; at KC025 100,000 T ore with 7.5% Zn, 1.0% Cu, and 100,000 T at lower grade. Also, USBM has inferred estimates KC017, 022, 023, 025, 027, 032, and 033, but they are not yet available.	a)Au-Qtz vein, 36c b)Polymetallic vein, 22c c)Sierran massive sulfide, 28c d)Metamorphosed massive sulfide, RM/MS	Reconnaissance geologic and geochemical mapping by USGS; some recent prospecting.
09KC	Alava Bay	Ti-bearing Mag occurs in Cretaceous(?) zoned ultramafic body that intrudes Paleozoic country rocks.	KC038	None	Alaskan PGE, 9	Reconnaissance geologic and geochemical mapping by USGS; some recent prospecting.
10KC	Boca de Quadra-Quartz Hill	Gneiss, schist, minor marble of original Paleozoic and(or) Mesozoic age and pegmatite and gneissic Qtz diorite intruded by altered epizonal Miocene granite plutons and Qtz porphyry dikes.	KC095	No production; Reserves: estim-for KC095 is 1.5 billion T with 0.136% Mo. Also, USBM has an inferred estimate, but it is not yet available.	a)Porphyry Mo, 21b b)Polymetallic vein, 22c c)Cu skarn, 18b	Reconnaissance and some detailed geologic and geochemical mapping by USGS; local intense prospecting.
11KC	South-central Prince of Wales Island	Scattered and varied deposits in broad expanse of Ordovician, Mississippian, and Devonian sedimentary and volcanic rocks.	None	None	a) Kuroko massive sulfide, 28a b) Polymetallic vein, 22c c) Porphyry Cu, 17 d) Cu skarn, 18b	Reconnaissance geologic and geochemical mapping by USGS; some prospecting.
12KC	Dolomi	Proterozoic(?) and(or) Cambrian Wales Group marble contains Au-Qtz and(or) polymetallic veins in tract 23CR to W.	None	None	a) Polymetallic vein, 22c b) Au-Qtz vein, 36a	Detailed and reconnaissance geologic and geochemical mapping by USGS; some prospecting.

explanation of headings. (Information for tracts 01KC, 04KC, and 05KC based largely on Koch (1990); that for that for tracts 11KC through 13KC based on D.J. Grybeck, unpub. data, 1989.)

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
In part close to tidewater, but mostly remote; rugged; heavy timber and brush. 100% in USFS Misty Fiords Wilderness.	Known deposits; permissive geology; nonspecific geochemical anomalies reported; large tract.	a) 0 0 0 1 2 b) 0 0 0 0 1 c) No estimate	Yes Yes No	764	
Much is close to tidewater, but some is remote; locally rugged; heavy timber and brush; some logging roads. 30% in USFS Misty Fiords Wilderness; 10% in proposed USFS Naha River Wilderness; 40% in USFS Tongass National Forest; 20% in Alaska Native lands.	Known deposits; permissive geology; Zn geochemical anomalies; large tract.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) 0 0 0 0 1 d) No estimate	Yes Yes Yes No	1,237	
Close to tidewater; heavy timber and brush locally. 100% in USFS Misty Fiords Wilderness.	Known deposit; permissive geology; aeromagnetic anomaly.	No estimate	No	11	
In part close to tidewater; generally rugged; local heavy timber and brush. 40% in USFS Misty Fiords Wilderness. 60% in non-Wilderness part of USFS Misty Fiords National Monument.	Known world-class porphyry Mo deposit; permissive geology; Be, Mo, Nb stream sediment anomalies; most of tract is heavily prospected; large tract.	a) 0 0 0 1 3 b) 0 0 0 1 2 c) 0 0 0 1 2	Yes Yes Yes	627	
Close to tidewater; low relief; timber and brush. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; numerous Cu geochem anomalies; scattered Pb, Zn, Ba, Ag anomalies in tract 10CR to W; adjoins that very large tract.	a) 0 1 2 3 5 b) 0 3 6 8 10 c) 0 0 1 2 3 d) 0 1 2 4 6	Yes Yes Yes Yes	1	Same resources as in trac 10CR.
Close to tidewater; low relief; timber and brush. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; Mo, Zn, Pb, Cu geochemical anomalies; small to moderate size tract.	a) 0 0 1 2 4 b) 0 0 0 1 2	Yes Yes	9	Same resources as in trac 23CR.

Table 3-KC. Tongass National Forest mineral resource tract information for Ketchikan quadrangle. (See text for complete tracts 02KC, 03KC, 06KC through 10KC, and 14KC through 19KC on Berg and others (1978) and on Berg (1984);

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-KC)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
13KC	Moira Sound	Cretaceous granitic plutons intrude Proterozoic(?) and Cambrian Wales Group metasedimentary and metavolcanic rocks, giving permissive porphyry and vein environment.	None	None	a) Porphyry Mo, 21b b) Polymetallic vein, 22c c) Zn-Pb skarn, 18c	Reconnaissance geologic and geochemical mapping by USGS.
14KC	Southwestern Gravina Island(A); Eastern Annette Island(B)	Upper Triassic Puppets Fm. metarhyolite and metadacite flows and tuff host massive, disseminated, and vein sulfide deposits.	(A): KC042, 043, 047-062, 064, 067, 070; (B): KC076-081, 083	Production: at KC056, small test shipment in early 1900's. Reserves: USBM has inferred estimates for KC055 and 056, but they are not yet available.	a) Sierran massive sulfide, 28c b) Polymetallic vein, 22c	Reconnaissance and some detailed geologic, geochemical, and geophysical mapping by USGS; intense past and recent prospecting.
15KC	Yellow Hill	Ti-bearing Mag occurs in Cretaceous(?) zoned ultramafic body that intrudes Paleozoic country rocks.	KC074,075	None	Alaskan PGE, 9	Reconnaissance and some detailed geologic, geochemical, and geophysical mapping by USGS; some past and recent prospecting.
16KC	Tongass Narrows	Phyllite, schist, greenschist intruded by now-metamorphosed diorite and by Tertiary leucogabbro host Au-Qtz veins vicinity of the Tongass Narrows fault.	KC018-021, 039-041, 044-046, 063, 066, 071, 072	Production: several 1,000 oz Au produced from tract before 1917. Reserves: USBM has inferred estimates for KC018-020, 039, 040, 044-046.	a) Au-Qtz vein, 36a b) Polymetallic vein, 22c	Reconnaissance and some detailed geologic, geochemical, and geophysical mapping by USGS; some prospecting.
17KC	Duke Island	Ti-bearing Mag occurs in Cretaceous(?) zoned ultramafic body that intrudes Paleozoic country rocks.	None	None	Alaskan PGE, 9	Reconnaissance and some detailed geologic, geochemical, and geophysical mapping by USGS and others; some intense prospecting
18KC	Boca de Quadra-Sitlan Island	Paleozic and Mesozoic metasedimentary and some metavolcanic rocks intruded by Cretaceous granodiorite plutons and Cretaceous or Tertiary trondjhemite sills; metavolcanic rocks are permissive massive sulfide environments.	None	None	a) Metamorphosed massive sulfide, RM/MS b) Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; little past or recent prospecting.
19KC	Marten Arm	Gneiss, schist, minor marble intruded by pegmatite, gneissic Qtz diorite and granodiorite; schist derived from metavolcanic rocks are permissive massive sulfide environments.	KC098-100	None	Metamorphosed massive sulfide, RM/MS	Reconnaissance geologic and geochemical mapping by USGS; little past or recent prospecting.

explanation of headings. (Information for tracts 01KC, 04KC, and 05KC based largely on Koch (1990); that for that for tracts 11KC through 13KC based on D.J. Grybeck, unpub. data, 1989.)

8	9	10	11	12	13
Accessibility and related factors, including percent of tract in different land status(es)	Summary of undiscovered resource information	Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	Grade and tonnage model available?	Tract area, in square kilometers	Remarks
Close to tidewater in part; locally steep; locally heavily wooded. 100% in USFS Tongass National Forest.	Permissive geology; Mo stream-sediment anomalies in tract to W; moderate-size tract.	a) 0 0 0 1 2 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	3	Same resources as tracts 07DE, 01PR, and 26CR.
Close to tidewater in part; locally steep; locally heavily wooded. (A): 80% in USFS Tongass National Forest; 20% in Metlakatla Indian Reservation; (B): 100% in Metlakatla Indian Reservation.	Known deposits; permissive geology; nonspecific geochemical anomalies reported; moderate-size tract.	a) 0 0 1 2 4 b) 0 0 0 1 2 c) 0 0 0 0 1	Yes Yes Yes	(A): 130 (B): 53 Tot: 183	
Close to roads; low relief; little timber and brush; poor outcrops. 100% in Metlakatla Indian Reservation.	Known deposit; permissive geology; aeromagnetic anomaly.	No estimate	No	21	
Close to tidewater and, in part, to roads; heavy timber and brush; moderate level of past prospecting, little recent. 40% in Ketchikan City and private lands; 30% in Alaska Native lands; 10% in Metlakatla Indian Reservation; 20% in USFS Tongass National Forest.	Known deposits; permissive geology; nonspecific geochemical anomalies reported; moderate-size tract.	a) 0 0 1 2 4 b) 0 0 0 0 1	Yes Yes	224	
Close to tidewater; low relief; limited outcrop. 100% in USFS Tongass National Forest.	Known deposit in quad to S; permissive geology; aeromagnetic anomaly; non-specific geochem anomalies reported.	No estimate	No	3	Same resources as in tract 03PR.
Close to tidewater in part; moderately rugged; heavy timber. 100% in USFS Misty Fiords Wilderness.	Permissive geology, an extension of tract 08KC to NW, but without all the deposit types expected in that tract.	a) 0 0 0 0 1 b) 0 0 0 0 1	No Yes	172	Same resources as in tract 04PR.
Close to tidewater in part; moderately rugged; heavy timber. 100% in USFS Misty Fiords Wilderness.	Known deposits; permissive geology; relatively small tract.	No estimate	No	56	

Table 3-MF. Tongass National Forest mineral resource tract information for Mount Fairweather quadrangle. (See text for that for tracts 02MF through 11MF on Brew and others, 1978; that for tracts 12MF through 15MF in part on Ford

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-MF)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01MF	Fairweather Range	Altered zones and disseminated sulfides occur in Mesozoic and older(?) metamorphic rocks intruded by Jurassic, Cretaceous,and Tertiary granitic plutons.	None	None	a)Cyprus massive sulfide, 24a b)Au-Qtz vein, 36c c)Porphyry Cu-Mo, 21a	Reconnaissance geologic and some geochemical mapping by USGS; essentially unprospected.
02MF	Yakutat Range	Thin Au-bearing Qtz veins occur in greenschist or lower grade flyschoid rocks; spatially related to Tertiary plutons.	None	None	Au-Qtz vein, 36a	Reconnaissance geologic and some geochemical mapping by USGS; little prospected.
03MF	Yakutat to Cape Spencer beach placers	Fe- and Ti-bearing beach and (locally) stream placers border Gulf of Alaska; includes both modern beaches and older upraised marine terrace placers; Fe- and Ti-bearing black sands are 1 to 3 m thick and are of limited lateral extent.	MF002,011,019	Approximately 4,000 oz Au produced from beach sands between 1890 and 1917 by small-scale mining operations; reserves calculated by USBM for 12 blocks covering a total area of 2.6 square km; two areas within the blocks contain reserves with higher grades than present overall; those discovered inferred reserves are: 4.6 million m3 with 1.0% Ilm, minor Au, for 1977 value of $1.11/m3; this includes (a) 153,000 m3 with 3.4% Ilm at one locality with 1977 value of $3.83/m3 & (b) 102,000 m3 with 4.2% Ilm with 1977 value of $5.22/m3.	Shoreline placer Ti, 39c	Reconnaissance and some detailed sampling by USBM; moderate amount of prospecting.
04MF	Mount Fairweather	Layered cumulus-type Tertiary gabbro body with some mineralization (known from float) is similar to that in tract 09MF; intrudes metamorphosed Mesozoic flyschoid and volcanic rocks.	None	None	Synorogenic-synvolcanic Ni-Cu(?), 7a	Reconnaissance geologic and some geochemical mapping by USGS; essentially unprospected.

complete explanation of headings. Information for tract 01MF based largely on Mackevett and others, 1978; and others, 1989).

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Mostly very remote, very rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	A few known occurrences in nearby 01YA; permissive geology; some Mo,Ag,Au,Cu,Zn geochemical anomallies in 01YA.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	170	Same undiscovered resources as in adjoining tract 01YA.
Mostly very remote, quite rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	One known occurrence in nearby 01YA; permissive geology; some Mo, Ag, Au, Cu, Zn , Ni, Ti, Cr, V geochemical anomalies in 01YA.	0 0 1 3 5	Yes	214	Same undiscovered resources as in adjoining tracts 02YA and 02SK.
Modern bare beaches are easy to explore and sample; dense vegetation impedes exploration of back beach deposits, which are poorly known. 100% in USNPS Glacier Bay National Park.	USGS/USBM hypothetical resource estimate is 70 milliom cu. yd. with 1.0% Ilm, minor Au.	See estimate in column 9.	Yes, but N.A.	127	Joins 03YA; resources are not the same as 03YA.
Very, very remote, very rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	USGS/USBM speculative resource estimate: 96 million T with 0.53% Ni, 0.33% Cu; this estimate based on many float samples containing Cu, Ni, Cr, Pt; large Cu-stained zones; large aeromagnetic anomaly; Co, Cr, Cu, Ni bedrock geochemical anomalies not far to W.	See estimate in column 9.	Yes, but N.A.	81	

Table 3-MF. Tongass National Forest mineral resource tract information for Mount Fairweather quadrangle. (See text for that for tracts 02MF through 11MF on Brew and others, 1978; that for tracts 12MF through 15MF in part on Ford .

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-MF)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
05MF	Tarr Inlet	Complex clastic, volcanic, and carbonate secttion of Permian(?) and(or) Triassic(?) age is intruded and metamorphosed by Tertiary and Cretaceous granitic plutons and dikes; known porphyry Cu and massive sulfide deposits.	MF023-025, 027, 029-031	Reserves: USBM/ USGS estimate at MF027: 270,000 T with 2.7% Cu, 5.2% Zn, 0.03 oz/T Au, 1.0 oz/T Ag; and 530,000 T with 0.4% Cu, 0.3% Zn, 0.006 oz/T Au, 0.35 oz/T Ag.	a) Porphyry Cu, 17 b) Sierran massive sulfide, 28c	Reconnaissance geologic mapping by USGS and USBM; geochemical mapping by USGS; extensive prospecting by USBM.
06MF	Reid Inlet	Narrow discontinuous sulfide-bearing Qtz veins in altered Cretaceous granitic rocks and hornfelsed Paleozoic clastic rocks.	MF032-042, 067	About 7,150 oz Au produced during 1940's, mostly from Leroy and Rainbow mines (MF033, 034); no USBM/USGS estimate of reserves.	Au-Qtz vein, 36a	Reconnaissance geologic and geochemical mapping by USGS; much early surface prospecting.
07MF	Muir Inlet	Paleozoic clastic and carbonate rocks are intruded by Cretaceous and Tertiary granitic dikes; fracturing and alteration are widespread; Mo-Cu porphyry stockwock and disseminated mineralization known.	MF074, 076-080	Reserves: USBM/ USGS estimate for MF079: indicated: 8.2 million T with 0.06% Mo, 0.02% Cu; and 137 million T with 0.04% Mo, 0.02% Cu; also inferred: 9.1 million T with 0.06% Mo, 0.02% Cu.	a) Porphyry Cu-Mo, 21a b) Porphyry Cu, skarn-related, 18a c) Polymetallic vein, 22c d) Polymetallic replacement, 19a	Reconnaissance geologic and geochemical mapping by USGS; some prospecting by USBM; extensive private prospecting of then-deglaciated areas in 1960's and 1970's.
08MF	Casement Glacier	Similar to 07MF, above, but less fracturing and fewer dikes.	None	None	a) Porphyry Cu-Mo, 21a b) Porphyry Cu, skarn-related, 18a c) Polymetallic vein, 22c	Similar to 07MF, above, but less prospecting.

complete explanation of headings. Information for tract 01MF based largely on Mackevett and others, 1978; and others, 1989).

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater, quite rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	USGS/USBM hypothetical resource estimate: a) 50 million T with 0.4% Cu b) 1.0 million T with 1.5% Cu and 2.0% Zn	a) See estimate in column 9. b) See estimate in column 9.	Yes, but N.A. Yes, but N.A.	90	Same undiscovered resources as in adjoining tract 03SK.
Close to tidewater, locally rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	USGS/USBM hypothetical resource estimate is about 14,000 oz Au; based on numerous Au-lode showings, possible placer prospects(?); Au, Cu stream-sediment geochemical anomalies.	See estimate in column 9.	Yes, but N.A.	74	
In part close to tidewater; locally rugged, but generally moderate relief. 100% in USNPS Glacier Bay National Park.	USGS/USBM hypothetical resource estimate for (a) and (b): 100 million T with 0.15 to 0.20% Mo.	a)See estimate in column 9. b)See estimate in column 9. c) 0 0 0 0 1 d) 0 0 0 0 1	Yes, but N.A. Yes, but N.A. Yes Yes	243	Same undiscovered resources as in adjoining tract 05SK.
In part close to tidewater; locally rugged, but generally moderate relief. 100% in USNPS Glacier Bay National Park.	Permissive geology; Mo stream sediment geochem anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	104	Same undiscovered resources as in adjoining tracts 06SK and 02JU

Table 3-MF. Tongass National Forest mineral resource tract information for Mount Fairweather quadrangle. (See text for that for tracts 02MF through 11MF on Brew and others, 1978; that for tracts 12MF through 15MF in part on Ford .

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-MF)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
09MF	Crillon-La Perouse	Layered cumulus-type Tertiary gabbro body intrudes metamorphosed Mesozoic flyschoid and volcanic rocks; known magmatic segregation Ni-Cu deposit in peridotite at base.	MF005-007, 012-015	Reserves: USBM/ USGS estimate for MF079: indicated: 90 million T with 0.53% Ni, 0.33% Cu, unspecified amount of PGE; inferred: 90 million T with 0.53% Ni, 0.33% Cu, unspecified amount of PGE.	Synorogenic-synvolcanic Ni-Cu(?), 7a	Reconnaissance geologic and some geochemical mapping by USGS; little prospected.
10MF	Cape Spencer North	Biotite schist and gneiss derived from Mesozic flyschoid and volcanic rocks are intruded by Tertiary and Tertiary and(or) Cretaceous granitic and layered gabbroic stocks, the latter with mineralization.	MF018, 020 (both related to gabbro stocks)	None	a) Polymetallic vein, 22c b) Synorogenic-synvolcanic Ni-Cu(?), 7a	Reconnaissance geologic and some geochemical mapping by USGS; little prospected.
11MF	Dundas River	Paleozoic carbonate, clastic and minor volcanic rocks intruded by voluminous Tertiary and Cretaceous granitic rocks; skarn deposits in carbonates near intrusions.	MF050b, 052-055, 057-061	Reserves: USBM/ USGS estimate for MF054: indicated resource: 27,000 T with 1.0% Cu, 0.1 oz/T Au, 2.0 oz/T Ag.	a) Cu skarn, 18b b) Polymetallic vein, 22c c) Porphyry Cu-Mo, 21a	Reconnaissance geologic and some geochemical mapping by USGS; little recent prospecting.
12MF	Yakobi-Chichagof	Cretaceous graywacke and Triassic(?) and Cretaceous greenstone are intruded by Tertiary granitic and gabbroic rocks; permissive environments for veins and massive sulfide deposits.	None	None	a) Au-Qtz veins, 36a b) Basaltic Cu, 23 c) Cyprus massive sulfide, 24a	Semidetailed geologic and geochemical mapping by USGS; also geochemical sampling by USBM.
13MF	Yakobi-Mirror Harbor	Cretaceous graywacke and Triassic(?) and Cretaceous greenstone are intruded by Tertiary gabbroic rocks that locally contain magmatic sulfide concentrations.	None	None	Synorogenic-synvolcanic Ni-Cu massive sulfide, 7a	Detailed geologic and geochemical mapping by USGS; also geochemical sampling by USBM.
14MF	Lisianski Inlet	Cretaceous and older greenstone, clastic, and minor carbonate rocks intruded by locally foliated, generally sheared and altered Jurassic and Cretaceous granitic rocks that contain Au-Qtz veins.	MF020,021	None	a) Au-Qtz veins, 36a b) W veins, 15a	Semidetailed geologic and geochemical mapping by USGS; also geochemical sampling by USBM.
15MF	Tarn Mountain	Paleozoic carbonate layers in clastic rock section are hornfelsed by Cretaceous plutons, producing permissive skarn deposit environments.	None	None	a) Zn-Pb skarn, 18c b) Cu skarn, 18b c) Polymetallic replacement, 19a d) Polymetallic veins, 22c	Reconnaissance geologic mapping by USGS.

complete explanation of headings. Information for tract 01MF based largely on Mackevett and others, 1978; and others, 1989).

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Essentially remote, very rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park, but patented claims cover part of deposit.	USBM/USGS hypothetical resource estimate: 90 million T with 0.53% Ni, 0.33% Cu, unspecified amount of PGE; this is based on numerous showings of Cu, Ti, Fe mineralization in N and W parts of tract.	See estimate in column 9.	Yes, but N.A.	290	
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 100% in USNPS Glacier Bay National Park.	Known deposits, permissive geology, Be, Cr, Co, Cu, Ni, Zn, Hg, Pb geochemical anomalies.	a) 0 0 1 2 3 b) 0 0 0 0 1	Yes Yes	437	
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 85% in USNPS Glacier Bay National Park. 15% in proposed USFS Pleasant-Lemesurier Islands Wilderness.	Known deposits; permissive geology; Cu, Zn, Pb, Sn, W geochemical anomalies.	a) 0 0 1 2 3 b) 0 0 1 2 3 c) 0 0 0 0 1	Yes Yes Yes	413	
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 100% in USFS West Chichagof-Yakobi Wilderness.	Permissive geology; NW-trending gravity high to W; (a) Ag, As, Au, Cu, Mo, Pb, W, Zn geochemical anomalies associated with Cretaceous graywacke; (b and c) Ag, Cu, Pb, Zn geochemical anomalies associated with Triassic(?) and Cretaceous greenstone.	a) 0 1 2 3 5 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes No Yes	17	Same undiscovered resources as in adjoining tract 02SI.
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 50% in USFS West Chichagof-Yakobi Wilderness; 50% in USFS Tongass National Forest	Permissive geology; NW-trending gravity high to W; Ag, As, Au, Co, Cr, Cu, Ni, W, Zn geochem anomalies nearby.	0 0 0 1 2	Yes	12	Same undiscovered resources as in adjoining tract 01SI.
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 100% in USFS Tongass National Forest.	Known deposits, permissive geology; NW-trending gravity high to W; along major fault/shear zone; Ag, As, Au, Ba, Cu, Mo, Pb, W, Zn geochem anomalies.	a) 0 0 0 1 2 b) 0 0 0 0 1	Yes Yes	50	Same undiscovered resources as in adjoining tract 03SI.
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 100% in USFS Tongass National Forest.	Permissive geology; magnetic low; little recent prospecting.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Yes Yes	9	Same undiscovered resources as in adjoining tract 07(A)SI.

Table 3-PA. Tongass National Forest mineral resource tract information for Port Alexander quadrnagle. (See text for com- tracts 02PA and 03PA largely on Ford and others, 1989; that for tract 04PA on D.A. Brew and R.A. Loney, unpub.

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-PA)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01PA	Mount Edgecumbe	Holocene volcanic field with residual magmatic system.	None	603 X 10 power 18 J (Smith and Shaw, 1979) '	Geothermal	Semi-detailed geologic mapping by USGS.
02PA	Yakobi-Chichagof	Cretaceous graywacke and Triassic(?) & Cretaceous greenstone are intruded by Tertiary granitic and (to N in Sitka quad) gabbroic rocks; large linear shear zones.	PA001-005	None	a) Au-Qtz veins, 36a b) Basaltic Cu, 23 c) Cyprus massive sulfide, 24a	Semidetailed geologic and geochemical mapping by USGS.
03PA	Takatz Bay(A), Crawfish Inlet-Gut Bay(B), Redfish Bay(C)	Leucocratic Tertiary and Cretaceous(?) (in Sitka quad to N) granodiorites intrude a variety of Cretaceous, older Mesozoic, and Paleozoic rocks.	(A) None (B) PA014,015 (C) PA018	None	a) Porphyry Cu-Mo, 21a b) Polymetallic veins, 22c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS.
04PA	Central Baranof (A), Red Bluff Bay(B)	In (A): elongate lenses of serpentinite occur as tectonic slivers in phyllite and slate and contain minor Chr pods and disseminations; at (B): magmatic segregations of Chr in serpentinized dunite of uncertain origin.	(A) PA006-013; (B) PA016	Reserves: at PA016, 8 separate deposits contain a total of 30,000 T with 18 to 40% Cr_2O_3.	Minor podiform chromite, 8a(?)	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; at (B) detailed geologic mapping and sampling by USGS.
05PA	Security Bay	Dominantly middle Paleozoic graywacke, conglomerate, and some carbonate rocks; significant faults.	None	None	Polymetallic veins, 22c(?)	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; little exploration.
06PA	Saginaw Bay-Cornwallis Peninsula	Dominantly middle Paleozoic graywacke, conglomerate, and some carbonate rocks in SW one-third of tract; mixed volcanic, carbonate, and clastic Mesozoic rocks to NE; Brt masses and veins in N part of tract.	PA018-027	None	a)Sierran massive sulfide, 28c b)SE Missouri Pb-Zn, 32a(?)	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; local intense exploration.

plete explanation of headings. Information for tract 01PA based on D.A Brew and others, unpub. data; that for data; and that for tracts 05PA through 08PA on Brew and others, 1989.)

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Near tidewater; tree- and brush-covered. 10(?)% in USFWS St. Lazaria Wildlife Refuge; 90(?)% in USFS Tongass National Forest.	N.A.	See estimate in column 5.	N.A.	3	Same resources as in tract 06SI.
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. Some parts of this tract are in Alaska StatelLand, City and Borough of Sitka land, in USFS Tongass National Forest and in private holdings.	Known deposits; permissive geology; Ag, As, Au, Cu, Mo, Pb, W, Zn geochemical anomalies associated with Cretaceous graywacke, and Ag, Cu, Pb, Zn geochemical anomalies associated with Triassic(?) and Cretaceous greenstone in Sitka quad to N.	a) 0 1 2 3 5 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes No Yes	139	Same resources as in adjoining tract 02SI.
In part close to tidewater; generally rugged; steep brush- and timber-covered slopes; some glacier cover. 80% of sub-part (B) in USFS South Baranof Wilderness; 100% of sub-parts (A), (C) in USFS Tongass National Forest; 20% of sub-part (B) in USFS Tongass National Forest.	Permissive geology; known deposit.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	(A) 31 (B) 775 (C) 39 Tot. 837	Same resources as in adjoining tract 04SI.
(A) is rugged and remote; (B) is close to tidewater with brush cover; 50% of subpart (A) in USFS South Baranof Wilderness; 100% of subpart (B) in USFS south Baranof Wilderness.	Known deposits; permissive geology; both (A) and (B) are small tracts.	0 0 1 2 3	Yes	(A) 28 (B) 4 Tot. 32	
Timber- and brush-covered; some logging roads. 100% in USFS Tongass National Forest	Permissive geology; Mo, Ba stream-sediment anomalies; Cu, Pb, Zn, Mo, Cr, Ni, Co bedrock anomalies ; centered on aeromagnetic low between two highs; prominent linears and faults.	0 0 0 1 2	Yes	239	
Timber- and brush-covered; some logging roads. 80%(?) in USFS Tongass National Forest; 20%(?) in Alaska Native lands.	Permissive geology; Pb, Ba, Zn, Nb stream-sediment anomalies; Cu, Zn, Pb, La, Nb, Mo, Cr, Ni, bedrock anomalies; large, deep aeromagnetic high; prominent faults.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	145	Same resources as in adjoining tract 02PE.

Table 3-PA. Tongass National Forest mineral resource tract information for Port Alexander quadrnagle. (See text for com-
tracts 02PA and 03PA largely on Ford and others, 1989; that for tract 04PA on D.A. Brew and R.A. Loney, unpub.

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-PA)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
07PA	Port Camden	Tertiary volcanic rocks cover Early Tertiary sandstone and conglomerate with possible U-Th resources.	None	None	Sandstone U, 30c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; little exploration.
08PA	Southwest Kuiu	Cretaceous granodionte plutons and dikes intrude middle Paleozoic graywacke, carbonate, and minor conglomerate; some large altered zones.	None	None	a) Porphyry Cu-Mo, 21a b) Polymetallic veins, 22c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; little exploration.

plete explanation of headings. Information for tract 01PA based on D.A Brew and others, unpub. data; that for data; and that for tracts 05PA through 08PA on Brew and others, 1989.)

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Timber- and brush-covered; some logging roads. 40% in USFS Tebenkof Bay Wilderness; 60% in USFS Tongass National Forest.	Permissive geology; U bedrock anomalies in part of tract 03PE adjacent to E .	0 0 0 0 1	Yes	93	Same resources as in adjoining tract 03PE.
Timber- and brush-covered; locally steep; in part close to tidewater; 100% in proposed USFS South Kuiu Wilderness.	Permissive geology; Mo, W, Zn stream-sediment anomalies in N part of tract; Y, Nb to S; weak Mo, Zn, Cu, Co bedrock anomalies in N part of tract; As, Ag, Au, Pb, Cu in SW part; Ag, As, Sb, Zn,Cu, Pb in SE part.	a) 0 0 0 0 1 b) 0 0 0 1 2	Yes Yes	263	Same resources as in adjoining tract 04PE.

Table 3-PE. Tongass National Forest mineral resource tract information for Petersburg quadrangle. (See text for complete explanation

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-PE)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01PE	Kake-Gunnuck and Sitkum Creeks	Deformed and slightly metamorphosed Mesozoic and Paleozoic clastic and volcanic rocks are permissive environment for massive sulfide deposits.	None	None	a) Sedimentary exhalative, 31a; b) Besshi massive sulfide, 24b(?)	Reconnaissance geologic mapping and geochemical sampling by USGS.
02PE	Saginaw Bay-Cornwallis peninsula	Mixed volcanic, carbonate, and clastic Mesozoic rocks.	None	None	a)Sierran massive sulfide, 28c b)SE Missouri Pb-Zn, 32a(?)	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS.
03PE	Port Camden	Tertiary intermediate and mafic volcanic rocks cover Early Tertiary sandstone and conglomerate with possible U-Th resources.	PE002,003	None	Sandstone U, 30c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; little exploration.
04PE	Southwest Kuiu	Cretaceous granodiorite plutons and dikes intrude middle Paleozoic graywacke, carbonate, and minor conglomerate; some large altered zones.	PE001	None	a) Porphyry Cu-Mo, 21a b) Polymetallic veins, 22c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; little exploration.
05PE	Southwest Kupreanof	Middle Tertiary felsic and intermediate volcanic rocks; possible eruptive center; close association with granitic rocks of tract 06PE; some areas of intense alteration; probably mostly underlain by Tertiary sandstone and conglomerate of the Kootznahoo Formation (see tract 03PE).	PE004,030	None	a)Epithermal vein, 25b b)Polymetallic vein, 22c c)Sandstone U, 30c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; moderate level of prospecting, including drilling.
06PE	Tunehean Creek-Castle River (A), Southeast Zarembo (B), Central Etolin (C), Niblack and Deer Islands (D)	Middle Tertiary alkalic and subalkalic granitic rocks intrude Cretaceous and Mesozoic turbidites, other metasedimentary and metavolcanic rocks, Cretaceous granitic rocks, and Tertiary sedimentary and volcanic rocks; closely associated with Tertiary volcanic rocks of tract 05PE to the NW, but more deeply eroded to the SE.	None	None	a)Felsic plutonic U and REE, FP/UREE(?) b)Felsic plutonic Th and REE veins, FP/THRE (?)	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; moderate level of prospecting locally.

of headings. Information for tracts 01PE through 25PE based on Brew and others, 1989.)

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater and logging roads; some heavy timber. 100%(?) in Alaska Native lands.	Permissive geology; Cu, Zn bedrock geochemical anomalies in N and W part of tract; in central and E part Cu, Pb, Ni, Cr, Mo bedrock and Co, Ni stream-sediment geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	75	Same undiscovered resources as in adjoining tract 08SD.
Timber- and brush-covered; some logging roads. 01% in proposed USFS Rocky Pass Wilderness; 99% in USFS Tongass National Forest.	Permissive geology; Pb, Ba, Zn, Nb stream-sediment anomalies; Cu, Zn, Pb, La, Nb, Mo, Cr, Ni, bedrock anomalies; large, deep aeromagnetic high; prominent faults.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	8	Same resources as in adjoining tract 06PA.
Timber- and brush-covered; some logging roads; 70% in proposed USFS Rocky Pass Wilderness; 15% in proposed USFS West Duncan Canal Wilderness; 15% in USFS Tongass National Forest, some of which is proposed Research Natural Area.	Permissive geology; U bedrock anomalies.	0 0 0 0 1	Yes	744	Same resources as in adjoining tract 07PA and underlying tract 05PE.
Timber- and brush-covered; locally steep; in part close to tidewater; 100% in proposed USFS South Kuiu Wilderness.	Permissive geology; known deposit; Mo stream-sediment anomaly; Ag, As, Sb, Zn, Cu, Pb bedrock anomalies.	a) 0 0 0 0 1 b) 0 0 0 1 2	Yes Yes	14	Same resources as in adjoining tract 08PA.
Most is close to tidewater; local heavy brush and timber; 30% in proposed USFS West Duncan Canal Wilderness. 70% in USFS Tongass National Forest.	Permissive geology; aeromagnetic low in SW part of tract; Cu, Pb, Mo, Sn, W, La, Y, Nb, Be stream-sediment anomalies; Zn, Cu, Pb, As, Ag, Nb, Be, La, Mo, Y, Sn bedrock anomalies.	a) 0 0 0 1 2 b) 0 0 0 1 2 c) 0 0 0 0 1	Yes Yes Yes	640	U resources (c) are the same as in adjoining tract 07PA and tract 03PE.
Most subtracts close to tidewater; some locally rugged and steep; most have heavy brush and timber; some logging roads in (B) and (C); (A) 50% in proposed USFS West Duncan Canal Wilderness; (C) 30% in proposed USFS South Etolin Wilderness; (B), (D), and remaining parts of (A) and (C) 75% in USFS Tongass National Forest.	Permissive geology; strong aeromagnetic anomalies; local aeroradioactivity anomalies; La, Nb, Y, Pb stream-sediment anomalies; Be, Nb, Y, Sn, Cu, Mo, La, Co, Cr bedrock anomalies.	a) 0 0 0 0 1 a) 0 0 0 0 1	No Maybe	(A) 28 (B) 80 (C) 213 (D) 9 Tot. 330	

Table 3-PE. Tongass National Forest mineral resource tract information for Petersburg quadrangle. (See text for complete explanation

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-PE)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
07PE	Kosciusko-Northern Prince of Wales	Contact metamorphosed hornfels and marble of original Paleozoic age in aureole of early Late Cretaceous granodiorite pluton are permissive skarn environment.	PE005(marble),006-012	Reserves: at PE007, 10,000 to 20,000 T with 1.5% MoS2.	a)Porphyry Cu-Mo, 21a b)Cu skarn, 18b c)Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting locally.
08PE	Salmon Bay	Silurian turbidites and volcanic rocks are intruded by carbonatite and felsic dikes.	PE013-015	None	a)Carbonatite, 10(?) b)Felsic plutonic U and REE, FP/UREE(?) c)Felsic plutonic Th and REE, FP/THRE(?)	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting.
09PE	Sweetwater Lake	Silurian turbidites and minor volcanic rocks.	None	None	Besshi massive sulfide, 24b(?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
10PE	Blashke Islands (A) and Kane Peak (B)	Alaskan-type zoned mafic-ultramafic bodies of mid-Cretaceous age intrude Silurian turbidites and minor volcanic rocks at (A) and Cretaceous turbidites at (B).	(A)PE016 (B)PE032	Reserves: a large tonnage with 1 to 2% sulfides.	Alaskan-type PGE, 9	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting.
11PE	Coffman Cove	Silurian turbidites and minor volcanic rocks are intruded by mid-Cretaceous granodiorite; permissive vein environment.	None	None	Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
12PE	Duncan Canal-Zarembo Island	Deformed and slightly metamorphosed Mesozoic and Paleozoic clastic and volcanic rocks in Duncan Canal fault zone; large blocks of Devonian carbonate suggest that the major unit present before youngest faulting was a melange; bedded barite and massive sulfide deposits present.	PE018-022, 027, 029, 031	Production: at PE022, 0.75 million T Brt mined 1965-1980. Reserves: USBM has inferred estimates for several prospects, but they are not yet available.	a)Sierran massive sulfide, 28c b)Bedded barite, 31b	Reconnaissance geologic mapping and geochemical sampling by USGS; locally heavily prospected.
13PE	Kupreanof Mountain	Low-grade Mesozoic metavolcanic and minor metasedimentary rocks in the Duncan Canal fault zone; enigmatic deposit present.	PE017	USBM has an inferred estimate for PE017, but it is not yet available.	a)Cyprus massive sulfide, 24a(?), and/or b)Cu skarn, 18b(?)	Reconnaissance geologic mapping and geochemical sampling by USGS; locally heavily prospected and drilled at PE017.

of headings. Information for tracts 01PE through 25PE based on Brew and others, 1989.)

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
In part close to tidewater; locally steep; heavy brush and timber; some logging roads; 55% in proposed USFS Calder/ Holbrook Wilderness; 45% in USFS Tongass National Forest.	Known deposits; permissive geology; minor W, Mo stream-sediment anomalies; Mo, Cu, Bi bedrock anomalies.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) 0 0 1 2 3	Yes Yes Yes	287	
Close to tidewater; heavy brush and timber; 100% in USFS Tongass National Forest.	Known deposits; permissive geology; scattered Mo, La, Nb stream-sediment anomalies; Mo, Zn, Pb, Au, Ag, Cu, Be, La, Nb, Ba bedrock anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes No Maybe	16	
In part close to tidewater; moderate relief; heavy timber and brush; 05% in proposed USFS Sarkar Lakes Wilderness 95% in USFS Tongass National Forest.	Permissive geology; scattered Mo, Cu, Pb, Zn stream-sediment anomalies; Cu, Pb, Zn, Cr, Ni bedrock anomalies.	0 0 0 0 1	Yes	126	Same resources as in adjoining tract 03CR.
Both subtracts close to tidewater; no relief at (A), moderate to steep at (B); locally thick brush and timber. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; strong, steep-sided aeromagnetic anomalies; at (A) Ni, Cr, Co stream-sediment anomalies; Ni, Cr, Cu, Co, Pb bedrock anomalies; at (B) Co, Ni, Cu stream-sediment anomalies; Ni, Cr, Cu, Co, Pb, Zn, Mo bedrock anomalies.	0 0 0 0 1	No	(A) 10 (B) 22 Tot. 32	
Close to tidewater; moderate relief; thick timber and brush; some logging roads. 100% in USFS Tongass National Forest.	Permissive geology; Cr, Ni, Cu stream-sediment anomalies; Cu, Pb, Zn, Cr, Ni, Co bedrock anomalies; small tract.	No estimate.	Yes	7	Same resources as in adjoining tract 04CR.
Close to tidewater; some heavy timber and brush. 5% in Petersburg Creek-Duncan Salt Chuck Wilderness; 20% in proposed USFS West Duncan Canal Wilderness; 75% in USFS Tongass National Forest.	Known deposits; permissive geology; scattered W, Mo, Cu, Ba, Pb stream-sediment anomalies; strong Ba, Zn, Pb, Cu, some Mo, Cr, Co bedrock anomalies.	a) 0 1 2 3 4 b) 0 0 0 1 2	Yes Yes	671	Same undiscovered resources as in adjoining tract 09SD.
Close to tidewater; some heavy timber and brush. 10% in Petersburg Creek-Duncan Salt Chuck Wilderness; 90% in USFS Tongass National Forest.	Known enigmatic deposit; permissive geology; Zn, Pb, Cu, Co, Ag bedrock anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	28	

Table 3-PE. Tongass National Forest mineral resource tract information for Petersburg quadrangle. (See text for complete explanation

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-PE)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
14PE	Woewodski Island	Triassic and other Mesozoic low-grade metavolcanic and metasedimentary rocks in the Duncan Canal fault zone intruded by a Cretaceous granodiorite pluton; Au mines present.	PE023-026	Production: at PE025, >100 oz Au. Reserves: none reported at this time.	a)Au-Qtz vein, 36a b)Sierran massive sulfide, 28c(?)	Reconnaissance geologic mapping and geochemical sampling by USGS; locally heavily prospected and drilled at several places.
15PE	Outer Etolin Island	Mesozoic turbidites, other metasedimentary and metavolcanic rocks, and Cretaceous granitic rocks are intruded by Middle Tertiary alkalic and subalkalic granitic rocks, producing permissive vein and skarn environments; intrusive rocks elsewhere (in tract 05PE) have close relation to volcanic rocks.	None	None	a)Polymetallic vein, 22c b)W vein, 15a(?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
16PE	Canoe Passage	Fault cuts Cretaceous turbidites intruded by Late Cretaceous tonalite and Middle Tertiary granite.	None	None	Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
17PE	Sukoi Islets(A), Northeast Mitkof (B)	Cretaceous turbidites and minor volcanic rocks are intruded by locally layered mid-Cretaceous Hbl gabbro and hornblendite bodies that are Mag-bearing.	None	None	Alaskan PGE, 9(?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
18PE	Tracy Arm-Stikine River	Deformed and metamorphosed Paleozoic and Mesozoic clastic and volcanic rocks are intruded by Late Cretaceous granodiorite and tonalite near the S end of the tract and intruded by latest Cretaceous-earliest Tertiary great tonalite sill for the whole length of the tract; massive sulfide deposits in metamorphic rocks close to the sill have been metamorphosed; they are inferred to have been Sierran-type massive sulfide deposits; vein deposits that are inferred to be young also present.	PE034	None	a)Metamorphosed massive sulfide, RM/MS (model as Sierran massive sulfide, 28c) b)Polymetallic vein, 22c c)Au-Qtz vein, 36a	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting in N 2/3 of tract, moderate in the S 1/3.
19PE	Glacier Basin-Berg Basin	Deformed and metamorphosed Paleozoic and Mesozoic clastic and volcanic rocks are intruded by Late Cretaceous granodiorite and tonalite and by the latest Cretaceous-earliest Tertiary great tonalite sill; vein deposits present.	PE038,041,042	Reserves: USBM has inferred estimates for two prospects, but they are not yet available.	a)Metamorphosed massive sulfide, RM/MS (model as Sierran massive sulfide, 28c) b)Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting.

of headings. Information for tracts 01PE through 25PE based on Brew and others, 1989.)

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater; some heavy timber and brush. 75% in proposed USFS West Duncan Canal Wilderness; 25% in USFS Tongass National Forest.	Known deposits; permissive geology; small, sharp-sided aeromagnetic anomaly may be from a concealed pluton; Au stream-sediment anomalies; Au, Ag, Cu, Pb, Zn, Co, Cr, Ni, Mo bedrock anomalies; small, well-explored tract.	a) 0 0 1 2 3 b) 0 0 0 0 1	Yes Yes	30	
In part close to tidewater; some parts steep and rugged; some thick brush and timber; some logging roads. 50% in proposed USFS South Etolin Wilderness; 50% in USFS Tongass National Forest.	Permissive geology; Cr, Ni, Mo, W, Pb, Nb stream-sediment anomalies; Cu, Pb, Au, Mo, Zn, Cr, Ni bedrock anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	316	Same undiscovered resources as in adjoining tracts 09BC, 01KC, and 05CR.
Close to tidewater; local thick brush and timber. 100% in proposed USFS South Etolin Wilderness.	Permissive geology; Cu, Mo, Ni bedrock anomalies; very small tract.	No estimate.	Yes	16	Same undiscovered resources as in adjoining tract 06CR.
At or close to tidewater; thick timber and brush. 100% in USFS Tongass National Forest.	Permissive geology; Cu, Co, Ni, Cr bedrock anomalies; very small tract.	No estimate.	No	12	
In part close to tidewater; in part remote; steep; very extensive glacier cover locally. 50% in USFS Stikine-LeConte Wilderness; 50% in USFS Tongass National Forest.	Known deposit; permissive geology; Ba, Pb, Zn, Au, As stream-sediment anomalies; Ba, Zn, Co, Ni, Cr, Mo, Pb, Cu, Ag, As bedrock anomalies; strong and steep aeromagnetic gradient; quite well prospected locally; large tract.	a) 0 0 0 1 2 b) 0 0 1 2 3 c) 0 0 0 0 1	Yes Yes Yes	407	Same undiscovered resources as in adjoining tract 04SD.
In part close to tidewater; in part remote; steep; very extensive glacier cover locally. 60% in USFS Stikine-LeConte Wilderness; 40% in USFS Tongass National Forest.	Known deposits; permissive geology; Au in stream sediments; Au, Pb, Cu, Zn, Mo, Ag, As bedrock anomalies; small- to medium-size tract.	a) No estimate. b) 0 0 1 2 4	Yes Yes	74	Same undiscovered resources as in adjoining tract 02BC.

Table 3-PE. Tongass National Forest mineral resource tract information for Petersburg quadrangle. (See text for complete explanation

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-PE)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
20PE	Groundhog Basin	Amphibolite and upper greenschist grade metapelitic, metacarbonate, and metavolcanic rocks of original Mesozoic and Paleozoic age near the great tonalite sill are intruded by evolved Late Tertiary Sn-bearing granite and related rhyolite sill more or less along the Coast Range megalineament; stratiform Sn-base metal replacement deposits present.	PE039,040	Reserves: at PE039, "several hundred thousand T with 8.0% Zn, 1.5% Pb, 1.5 oz/T Ag, in massive sulfide deposits and "several hundred thousand T" with 2.5% Zn, 1.0% Pb in disseminated deposits; at PE040, "many hundred thousand T" with 1.6% Zn, 0.1% Pb in disseminated deposits and "several million T with 0.14% Zn, 0.09% Pb in Qtz-Fl vein deposits. Also: USBM has inferred estimates for the prospects, but they are not yet available.	a)Replacement Sn, 14c b)Metamorphosed massive sulfide, RM/MS (model as Sierran massive sulfide, 28c) c)Au-Qtz vein, 36a	Reconnaissance geologic and geochemical mapping by USGS; older detailed USGS mapping; moderate to high level of prospecting, including deep drilling.

of headings. Information for tracts 01PE through 25PE based on Brew and others, 1989.)

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Relatively remote; steep; extensive snow and glacier cover. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; strong Sn, Mo, W stream-sediment anomalies; Sn, Cu, Pb, Zn, Mo, Ni, Cr, Co bedrock anomalies; small tract.	a) 0 0 1 2 3	Yes	36	Same undiscovered resources as in adjoining tract 03BC.
		b) No estimate	No		
		c) No estimate	Yes		

Table 3-PR. Tongass National Forest mineral resource tract information for Prince Rupert quadrangle. (See text for com-
1989; and that for tracts 03PR and 04PR on Berg and others, 1978; and on Berg, 1984.

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-PR)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01PR	Moira Sound	Cretaceous granitic plutons intrude Proterozoic(?) and Cambrian Wales Group metasedimentary and metavolcanic rocks, giving permissive porphyry and vein environment.	None	None	a) Porpnyry Mo, 21b b) Polymetallic vein, 22c c) Zn-Pb skarn, 18c	Reconnaissance geologic and geochemical mapping by USGS; some prospecting.
02PR	Southeasternmost Prince of Wales Island	Complicated geology with granitic rocks of different ages in Lower Paleozoic metasedimentary and metavolcanic rocks.	PR001,002	None	a) Polymetallic vein, 22c b) Porphyry Mo, 21b c)Felsic plutonic-related U and REE, FP/UREE(?) d)Felsic plutonic-related Th and REE veins, FP/THRE(?) e)Carbonatites, 10	Reconnaissance and some detailed geologic and geochemical mapping by USGS; some recent prospecting.
03PR	Duke Island	Ti-bearing Mag occurs in Cretaceous(?) zoned ultramafic body that intrudes Paleozoic country rocks.	PR003-019	None	Alaskan PGE, 9	Reconnaissance and some detailed geologic, geochemical, and geophysical mapping by USGS and others; some intense prospecting.
04PR	Boca de Quadra-Sitlan Island	Paleozic and Mesozoic metasedimentary and some metavolcanic rocks intruded by Cretaceous granodiorite plutons and Cretaceous or Tertiary trondjhemite sills; metavolcanic rocks are permissive massive sulfide environments.	PR020-023	None	a) Metamorphosed massive sulfide, RM/MS b) Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; little past or recent prospecting.

plete explanation of headings. Information for tracts 01PR and 02PR based largely on D.J. Grybeck, unpub. data,

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater in part; locally steep; locally heavily wooded. 100% in USFS Tongass National Forest.	Permissive geology; Mo stream-sediment anomalies in tracts to W and NW; small-size tract in this quad.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) 0 0 0 0 1	Yes Yes Yes	6	Same resources as tracts 07DE, 13KC, and 26CR.
Close to tidewater; much is steep and heavily wooded. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; small-size tract in this quad, moderate-size in quad to W.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 1 2 d) 0 0 0 1 2 e) 0 0 0 0 1	Yes Yes Maybe Maybe Yes	15	Same resources as in adjacent tract 10DE.
Close to tidewater; low relief; limited outcrop. 100% in USFS Tongass National Forest.	Known deposit in quad to S; permissive geology; aeromagnetic anomaly; non-specific geochem anomalies reported.	No estimate	No	162	Same resources as in tract 17KC.
Close to tidewater in part; moderately rugged; heavy timber. 100% in USFS Misty Fiords Wilderness.	Permissive geology, an extension of tract 18KC to NW.	a) 0 0 0 0 1 b) 0 0 0 0 1	No Yes	120	Same resources as in tract 18KC.

Table 3-SD. Tongass National Forest mineral resource tract information for Sumdum quadrangle. (See text for complete data; that for tracts 02SD through 05SD on Brew and others, 1984, and on Grybeck and others, 1984; that for tract

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-SD)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01SD	Admiralty Island	Highly deformed and slightly metamorphosed Late Triassic mafic and intermediate volcanic rocks, fine-grained clastic rocks, and ultramafic masses host, in different places, significant massive sulfide, Ni-Cu magmatic segregation, and polymetallic vein deposits.	SD001	None	a)Sierran massive sulfide, 28c b)Synorogenic-synvolcanic Ni-Cu, 7a	Reconnaissance and some detailed geologic and geochemical mapping by USGS; intense private prospecting locally in the past.
02SD	Snettisham	Au-bearing Qtz veins occur in and close to Cretaceous Mag-rich pyroxenite and diorite.	SD003-005	Production: at least 2,000 oz Au mined in early 1900's Reserves: Mag-rich estimate is about 500,000 T with 18.9% Fe, 2.6% Ti, 0.7% V; USBM has revised inferred estimates, but they are not yet available.	a)Au-Qtz vein, 36a b)Alaskan PGE, 9	Reconnaissance geologic and geochemical mapping by USGS; detailed sampling by USBM; extensive private drilling.
03SD	Snow Tower-Sawyer Glacier	Paleozoic and older(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons, creating an environment permissive for skarn deposits.	None	None	a)Cu skarn, 18b b)Zn-Pb skarn, 18d c)Polymetallic veins, 22c	Reconnaissance geologic mapping and geochemical sampling by USGS; little prospected.
04SD	Tracy Arm-Stikine River	Deformed and metamorphosed Paleozoic and Mesozoic clastic and volcanic rocks are intruded by latest Cretaceous-earliest Tertiary great tonalite sill; known sulfide deposits are in metamorphic rocks close to the sill and have been metamorphosed; they are inferred to have been Sierran-type massive sulfide deposits.	SD006,008,009-011, 015-017, 021, 025, 036	Production: at SD036, 50 oz Au in early 1900's. Reserves: at SD009-7,300 T with 0.23 oz/T Au, 0.31 oz/T Ag, 0.7% Cu; SD011-187,000 T with 3.42% Zn,1.42% Cu, 0.43 oz/T Ag, 0.008 oz/T Au; SD016,017-26.7 million T with 0.57% Cu, 0.37% Zn, 0.3 oz/T Ag; USBM has revised inferred estimates, but they are not yet available.	a)Metamorphosed massive sulfide, RM/MS (model as Sierran massive sulfide, 28c) b)Au-Qtz vein, 36a	Reconnaissance geologic mapping and geochemical sampling by USGS in N 2/3's of tract, less in S 1/3; extensive drilling at SD009, 011, 016, 017.

explanation of headings. Information for tract 01SD based largely on Ford and others, 1989, and on D.A. Brew unpub. 06SD on D.A. Brew and D.J. Grybeck, unpub. data: and for tracts 07SD through 11SD on Brew and others, 1990.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
In part close to tidewater; locally heavy timber; steep in part; 100% in USFS Admiralty Island National Monument and Wilderness.	Significant known deposits; permissive geology; abundant and varied geochemical anomalies; relatively well prospected locally.	a) 0 0 0 1 3 b) 0 0 0 0 1	Yes Yes	12	Same undiscovered resources as in adjoining tract 13SI.
In part close to tidewater; locally heavy timber; steep in part. 100% in USFS Tongass National Forest	Significant known deposits; permissive geology; small tract; quite well prospected.	a) 0 0 0 0 1 b)No estimate; see column 5	Yes No	23	
Remote; steep; very extensive glacier cover. 100% in USFS Tracy Arm-Fords Terror Wilderness.	Permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	100	Same undiscovered resources as in adjoining tract 04TR.
In part close to tidewater; in part remote; steep; very extensive glacier cover. 60% in USFS Tracy Arm-Fords Terror Wilderness;. 10% in proposed USFS Port Houghton-Sanborn Canal Wilderness.	Significant known deposits; permissive geology; large tract; significant geochemical anomalies; strong and steep aeromagnetic gradient; quite well prospected locally.	a) 0 0 1 2 4 b) 0 0 0 0 1	Yes Yes	705	Same undiscovered resources as in adjoining tract 18PE.

Table 3-SD. Tongass National Forest mineral resource tract information for Sumdum quadrangle. (See text for complete data; that for tracts 02SD through 05SD on Brew and others, 1984, and on Grybeck and others, 1984; that for tract

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-SD)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
05SD	Endicott Peninsula	Au-Qtz and polymetallic vein and possible metamorphosed Sierran-type massive sulfide deposits occur in highly deformed and variably metamorphosed Paleozoic and Mesozoic clastic, volcanic, and carbonate rocks that are intruded by Late Cretaceous granodiorite and tonalite plutons.	SD019, 022-024, 026-035, 037-040	Production: SD022 produced 24,000 oz Au and 24,000 oz Ag in early 1900's; several Au-Qtz veins in Windham Bay area each produced a few 1,000 oz Au at about the same time, average Au content about 0.25 oz/T. Reserves: USBM has inferred estimates for some localities, but they are not yet available.	a)Sierran massive sulfide, 28c b)Au-Qtz veins, 36a	Reconnaissance geologic mapping and geochemical sampling by USGS; intensely prospected in early 1900's.
06SD	Dawes Glacier-Buddington Range	Tertiary granodiorite crops out over a large area; several known occurrences of Cu minerals in thin veinlets.	SD042,043,045, 046	None	a)Porphyry Cu, 17 b)Polymetallic veins, 22c	Reconnaissance geologic mapping and geochemical sampling by USGS.
07SD	Tum Mountain	Cretaceous Mag-bearing gabbro intrudes Paleozoic and Mesozoic clastic and volcanic rocks; gabbro interpreted to be the outer envelope of an Alaskan-type PGE-bearing body	None	None	Alaskan PGE, 9	Reconnaissance geologic mapping and geochemical sampling by USGS.
08SD	Kake-Gunnuck and Sitkum Creeks	Deformed and slightly metamorphosed Mesozoic and Paleozoic clastic and volcanic rocks are permissive environment for massive sulfide deposits.	None	None	a) Sedimentary exhalative, 31a; b) Besshi massive sulfide, 24b(?)	Reconnaissance geologic mapping and geochemical sampling by USGS.
09SD	Duncan Canal-Zarembo Island	Deformed and slightly metamorphosed Mesozoic and Paleozoic clastic and volcanic rocks in Duncan Canal fault zone; large blocks of Devonian carbonate suggest that the major unit present before youngest faulting was a melange; bedded barite and massive sulfide deposits present.	None	None	a)Sierran massive sulfide, 28c b)Bedded barite, 31b	Reconnaissance geologic mapping and geochemical sampling by USGS; locally heavily prospected.
10SD	Missionary Range	Cretaceous Mag-bearing Alaskan mafic-ultramafic body intrudes Cretaceous graywacke and minor volcanic rocks and is intruded by younger Cretaceous granodiorite.	None	None	Alaskan PGE, 9	Reconnaissance geologic mapping and geochemical sampling by USGS; some local prospecting.

explanation of headings. Information for tract 01SD based largely on Ford and others, 1989, and on D.A. Brew unpub. 06SD on D.A. Brew and D.J. Grybeck, unpub. data: and for tracts 07SD through 11SD on Brew and others, 1990.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
In part close to tidewater; in part heavily bush- and timber-covered. 80% in proposed USFS Chuck River Wilderness; 20% in USFS Tongass National Forest.	Significant known deposits; permissive geology; large tract; significant geochemical anomalies; quite well prospected locally.	a) 0 0 0 1 2 b) 0 0 0 0 1	Yes Yes	537	
Remote; very rugged; much glacier cover. 05% in USFS Tracy Arm-Fords Terror Wilderness. 95% in USFS Tongass National Forest.	Permissive geology; some occurrences and geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 1 2	Yes Yes	320	
Close to tidewater and logging roads; some heavy timber. 100% in Alaska Native lands	Permissive geology; Co, Cr, Cu, Mo, Pb, Zn geochemical anomalies; strong aeromagnetic anomaly; small tract.	0 0 0 0 1	No	58	
Close to tidewater and logging roads; some heavy timber. 100%(?) in Alaska Native lands.	Permissive geology; Cu, Pb, Ni, Cr, Mo, Zn bedrock and Co, Ni stream sediment geochemical anomalies; small tract.	a) No estimate. b) No estimate.	Yes Yes	25	Same undiscovered resources as in adjoining tract 01PE.
Close to tidewater; some heavy timber and brush. 100% in Tongass National Forest	Permissive geology.	a) 0 1 2 3 4 b) 0 0 0 1 2	Yes Yes	5	Same undiscovered resources as in adjoining tract 12PE.
Close to tidewater; some heavy timber and brush; locally steep. 100% in Tongass National Forest	Permissive geology; Co, Cu, Ni stream-sediment and Ni, Cr, Co, Cu, Pb, Zn, Mo bedrock geochemical anomalies.	No estimate.	No	2	Same undiscovered resources as in adjoining tract 10(B)PE.

Table 3-SI. Tongass National Forest mineral resource tract information for Sitka quadrangle. (See text for complete expla- and on Johnson and others, 1982; that for tracts 04SI and 06SI on D.A. Brew and R.A. Loney, unpub. data, 1989; D.A. Brew, unpub. data.)

1	2	3	4	5	6	7
Map No.	Name	Description, including geologic units and controls of deposits	Mines, prospects, and occurrences (numbers are from table 2-SI)	Production and other resource information	Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	Status of geologic, geochemical, and geophysical information
01SI	Yakobi-Mirror Harbor	Cretaceous graywacke and Triassic(?) and Cretaceous greenstone are intruded by Tertiary gabbroic rocks that locally contain magmatic sulfide concentrations.	SI001, 002, 016-020, 021	Reserves: at Bohemia Basin (SI002): estimated reserve of 20.1 million T with 0.31% Ni, 0.18% Cu, 0.04% Co; at Mirror Harbor, one deposit contains 8,000 T with 1.57% Ni, 0.88% Cu; another has several million T with 0.2% Ni, 0.1% Cu. USBM has revised inferred estimates for SI018, 019, but they are not yet available.	Synorogenic-synvolcanic Ni-Cu massive sulfide, 7a	Detailed geologic and geochemical mapping by USGS; also geochemical sampling by USBM; intense local prospecting and drilling by private companies.
02SI	Yakobi-Chichagof	Cretaceous graywacke and Triassic(?) and Cretaceous greenstone are intruded by Tertiary granitic and (to N) gabbroic rocks; local swarms of Au-Qtz veins parallel the large linear shear zones; E side of tract includes greenstone, carbonate, and detrital clastic rocks in part older than main part of tract.	SI006, 021, 023-050, 052, 054, 061-068	Production: from Hirst-Chichagof (SI030), about 87,980 oz Au, 20,000 oz Ag; that from Chichagof (SI036), about 700,000 oz Au, 200,000 oz Ag. Reserves: in Chichagof Mining district: Chichagoff mine-indicated: 80,000 T with 0.025 oz/T Au, 0.08 oz/T Ag; inferred: 463,000 T with 0.3 oz/T Au, 0.09 oz/T Ag; Chichagoff tailings, indicated: 456,000 T with 0.11 oz/T Au, 0.03 oz/T Ag; other inferred: 13,500 T with 0.11 oz/T Au, 0.04 oz/T Ag, 300,000 T with 0.04 oz/T Au, 0.012 oz/T Ag; Hirst-Chichagof mine-inferred: 80,000 T with 1.0 oz/T Au, 0.25 oz/T Ag, 70,000 T with 0.25 oz/T Au, 0.06 oz/T Ag;	a) Au-Qtz veins, 36a b) Basaltic Cu, 23 c) Cyprus massive sulfide, 24a	Semidetailed geologic and geochemical mapping by USGS; also geochemical sampling by USBM; intense local prospecting and drilling by private companies.

nation of headings. Information for tracts 01SI through 03SI and for tract 05SI based largely on Ford and others, 1989, that for tracts 07SI through 12SI on Ford and others, 1989, and on D.A. Brew, unpub. data, 1989; and for tract 13SI on

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 50% in USFS West Chichagof-Yakobi Wilderness; 50% in USFS Tongass National Forest.	Known deposits; permissive geology; NW-trending gravity high to W; Ag, As, Au, Co, Cr, Cu, Ni, W, Zn geochem anomalies.	0 0 0 1 2	Yes	105	Same resources as in adjoining tract 13MF.
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 100% in USFS West Chichagof-Yakobi Wilderness.	Known deposits; permissive geology; NW-trending gravity high to W; (a) Ag, As, Au, Cu, Mo, Pb, W, Zn geochemical anomalies associated with Cretaceous graywacke; (b and c) Ag, Cu, Pb, Zn geochemical anomalies associated with Triassic (?) and Cretaceous greenstone.	a) 0 1 2 3 5 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes No Yes	680	Same resources as in adjoining tract 12MF.

Table 3-SI. Tongass National Forest mineral resource tract information for Sitka quadrangle. (See text for complete expla- and on Johnson and others, 1982; that for tracts 04SI and 06SI on D.A. Brew and R.A. Loney, unpub. data, 1989; D.A. Brew, unpub. data.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-SI)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
02SI	continued			tailings-inferred: 70,000 T with 0.14 oz/T Au, 0.03 oz/T Ag; dump-inferred: 70,000 T with 0.04 oz/T Au, 0.01 oz/T Ag.		
03SI	Lisianski Inlet	Cretaceous and older greenstone, clastic, and minor carbonate rocks intruded by locally foliated, generally sheared and altered Jurassic and Cretaceous granitic rocks that contain Au-Qtz veins.	SI003-005, 007-012, 015	Production: Apex-El Nido (SI005) greater than 17,000 oz Au, 2,400 oz Ag. Reserves: USBM has inferred estimate for SI005, but it is not yet available.	Au-Qtz veins, 36a	Semidetailed geologic and geochemical mapping by USGS; also geochemical sampling by USBM.
04SI	Lake Elfindahl(A), Rust Mountain(B), Granite Islands (C), Deep Bay(D), Kruzof Island(E), Takatz Bay(F), and Trap Bay(G)	Leucocratic Tertiary and Cretaceous(?) (at G) granodiorites intrude a variety of Cretaceous, older Mesozoic, and Paleozoic rocks; granodiorites are permissive environments for vein and porphyry deposits.	(A) None (B) None (C) None (D) None (E) None (F) SI076 (G) SI082, 083	None	a) Porphyry Cu-Mo, 21a b) Polymetallic veins, 22c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; also some company prospecting.
05SI	Mount Fritz-Lake Suloia	Upper Triassic(?) basalt flows and breccia are permissive environment for massive sulfide deposits.	SI013, 014, 051, 053, 055, 056	None	Basaltic Cu, 23	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS.
06SI	Mount Edgecumbe	Holocene volcanic field with residual magmatic system.	SI069	603 X 10 power 18 J (Smith and Shaw, 1979)	Geothermal	Semi-detailed geologic mapping by USGS.
07SI	Tam Mountain(A), Moore Mountains (B)	Paleozoic carbonate layers in clastic rock section are hornfelsed by Cretaceous plutons, producing permissive skarn deposit environments.	None	None	a) Zn-Pb skarn, 18c b) Cu skarn, 18b c) Polymetallic replacement, 19a d) Polymetallic veins, 22c	Reconnaissance geologic mapping by USGS.

nation of headings. Information for tracts 01SI through 03SI and for tract 05SI based largely on Ford and others, 1989, that for tracts 07SI through 12SI on Ford and others, 1989, and on D.A. Brew, unpub. data, 1989; and for tract 13SI on

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 80% in USFS West Chichagof-Yakobi Wilderness; 20% in USFS Tongass National Forest.	Known deposits, permissive geology; NW-trending gravity high to W; along major fault/shear zone; Ag, As, Au, Ba, Cu, Mo, Pb, W, Zn geochem anomalies.	0 0 0 1 2	Yes	292	Same resources as in adjoining tract 14MF.
In part close to tidewater; generally rugged; steep brush- and timber-covered slopes; some sub-parts largely water-covered. 100% of sub-parts (A), (B), (C), (D) are in USFS West Chichagof Wilderness; 100% of sub-parts (E), (F) are in USFS Tongass National Forest; 30% of sub-part (G) is in USFS proposed Trap Bay Wilderness 70% of sub-part (G) is in USFS Tongass National Forest.	Permissive geology; Ag, As, Au, Cu, Mo, Sn, W geochemical anomalies in sub-parts (A), (B), (C), (D).	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	(A) 19 (B) 30 (C) 1 (D) 29 (E) 93 (F) 304 (G) 38 Tot: 514	Same resources as in adjoining tract 04PA.
Generally rugged; brush- and timber-covered; relatively far from tidewater. 100% in USFS West Chichagof-Yakobi Wilderness.	Permissive geology; Ag, Cu, Pb, Zn, Au geochemical anomalies; NW-trending linear gravity high.	0 0 0 1 2	No	238	
Near tidewater; tree- and brush-covered. 10(?)% in proposed USFS Research Natural Area; 90(?)% in USFS Tongass National Forest.	N.A.	See estimate in column 5.	N.A.	215	
In part quite close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. (A):10% in USFS proposed Chichagof Wilderness; 90% in USFS Tongass National Forest; (B):100% in USFS proposed Chichagof Wilderness.	Permissive geology; magnetic low in sub-part (A); little recent prospecting.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Yes Yes	(A) 28 (B) 40 Tot: 68	Same resources as in adjoining tract 15MF.

Table 3-SI. Tongass National Forest mineral resource tract information for Sitka quadrangle. (See text for complete expla- and on Johnson and others, 1982; that for tracts 04SI and 06SI on D.A. Brew and R.A. Loney, unpub. data, 1989; D.A. Brew, unpub. data.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2-SI)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
08SI	Tenakee Inlet, S of head of	Tertiary(?) leucogabbros intrude Paleozoic clastic rocks; gabbros may be related to the magmatic sulfide-bearing gabbros in tract 01SI.	None	None	Synorogenic-synvolcanic Ni-Cu massive sulfide, 7a	Reconnaissance geologic mapping by USGS.
09SI	Neka Bay, W of	Paleozoic carbonate and clastic rocks are intruded and hornfelsed by Cretaceous granodiorite plutons; permissive skarn environment, but no known deposits.	None	None	a)Cu skarn, 18b b)Zn-Pb skarn, 18d	Reconnaissance geologic and geochemical mapping by USGS.
10SI	Seal Creek	Paleozoic carbonate rocks are intruded and hornfelsed by Cretaceous Qtz monzonite pluton; Mississippian section may contain evaporite deposits.	SI085-087	Gypsum deposits (SI086, 087) produced 500,000 T gypsum (Flint and Cobb, 1952).	a)Cu skarn, 18b b)Zn-Pb skarn, 18d c)marine evaporites	Some detailed geologic mapping but mostly reconnaissance geologic and geochemical mapping by USGS.
11SI	Tenakee-Sitkoh Bay	Silurian syenitic rock suite intrudes Paleozoic clastic and carbonate rocks; alkalic rocks may host Th- and REE-containing veins and disseminated or vein deposits of U and REE.	SI078	None	Felsic plutonic UREE, FP/UREE, (?) or Th-RE veins, FP/THRE	Reconnaissance geologic mapping by USGS; some company and USBM prospecting.
12SI	Kootznahoo Inlet	Non-marine sandstone, shale, conglomerate and coal of the Tertiary Kootznahoo Formation.	SI104; other small mines and prospects	Production: some small past production of coal for local and steam vessel use.	a)Coal deposits b) Sandstone U, 30c	Semi-detailed geologic mapping by USGS; some company prospecting; some geochemical sampling for U, Th.
13SI	Admiralty Island	Highly deformed and slightly metamorphosed Late Triassic mafic and intermediate volcanic rocks, fine-grained clastic rocks, and ultramafic masses host, in different places, significant massive sulfide, Ni-Cu magmatic segregation, and polymetallic vein deposits.	SI088-091, 093, 094, 097, 100-103, 105-112.	Pyrola prospect (SI090) is best known and is probably similar to Greens Creek deposit in Juneau quad to N.	a)Sierran massive sulfide, 28c b)Synorogenic-synvolcanic Ni-Cu, 7a	Reconnaissance and some detailed geologic and geochemical mapping by USGS; intense private prospecting locally in the past.
14SI	King Salmon Bay	Slightly metamorphosed Late Triassic(?) intermediate and mafic volcanic rocks are permissive environment for massive sulfide deposits.	SI092	None	a)Sierran massive sulfide, 28c b)Basaltic Cu, 23	Reconnaissance geologic mapping by USGS.

nation of headings. Information for tracts 01SI through 03SI and for tract 05SI based largely on Ford and others, 1989, that for tracts 07SI through 12SI on Ford and others, 1989, and on D.A. Brew, unpub. data, 1989; and for tract 13SI on

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
In part quite close to tidewater; somewhat rugged; steep brush- and timber-covered slopes; 100% in USFS proposed Chichagof Wilderness.	Permissive geology.	0 0 0 0 1	Yes	61	
Close to tidewater, locally heavy timber; steep in part. 50% in USFS proposed Chichagof Wilderness. 50% in USFS Tongass National Forest.	Permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	2	Same undiscovered resources as in adjoining tract 07JU.
Close to tidewater, locally heavy timber; steep in part. 100% in USFS Tongass National Forest.	Permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes No	93	Same undiscovered resources as in adjoining tract 08JU.
Close to tidewater, locally heavy timber; steep in part. 10(?)% in USFS proposed Kadashan Wilderness 90(?)% in USFS Tongass National Forest.	Known deposit; permissive geology.	0 0 0 0 1	Maybe	187	
Close to tidewater, locally heavy timber; low relief; 100% in USFS Admiralty Island Monument and Wilderness; 20% of the above is covered also by Native Village lands.	Known coal deposits; permissive geology for coal and for U-Th deposits; high U/Th ratio in most samples.	a) No estimate b) 0 0 0 0 1	N.A. Yes	67	
In part close to tidewater; locally heavy timber; steep in part; 100% in USFS Admiralty Island National Monument and Wilderness; 10(?)% of the above is covered by Alaska Native lands.	Significant known deposits; permissive geology; abundant and varied geochemical anomalies; relatively well prospected locally.	a) 0 0 0 1 3 b) 0 0 0 0 1	Yes Yes	1,546	Same undiscovered resources as in adjoining tract 09JU.
Close to tidewater; heavy timber. 100% in USFS Admiralty Island National Monument and Wilderness.	Permissive geology; known deposit; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes No	26	Same undiscovered resources as in adjoining tract 10JU.

Table 3-SK. Tongass National Forest mineral resource tract information for Skagway quadrangle, southeastern Alaska. (See others (1978, p.13); that for 03SK through 07SK on Brew and others (1978, p. A1-A11; that for tracts 08SK through

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 12)	5 Production and reserve information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information.
01SK	Fairweather Range	Altered zones and disseminated sulfides occur in Mesozoic and older(?) metamorphic rocks intruded by Jurassic, Cretaceous,and Tertiary granitic plutons.	None	None	a)Sierran massive sulfide, 28c b)Au-Qtz vein, 36c c)Porphyry Cu-Mo, 21a	Reconnaissance geologic and some geochemical mapping by USGS; essentially unprospected.
02SK	Yakutat Range	Thin Au-bearing Qtz veins occur in greenschist or lower grade flyschoid rocks; spatially and genetically related to Tertiary plutons.	None	None	Au-Qtz vein, 36a	Reconnaissance geologic and some geochemical mapping by USGS; little prospected.
03SK	Tarr Inlet	Complex clastic, volcanic, and carbonate secttion of Permian(?) and(or) Triassic(?) age is intruded and metamorphosed by Tertiary and Cretaceous granitic plutons and dikes; known porphyry Cu and massive sulfide deposits.	SK001,002,003	Reserves: USBM/ USGS inferred estimate at SK001: 160 million T with 0.2% Cu, 0.008 oz/T Au, 0.13 oz/T Ag, 0.01% W;	a)Porphyry Cu, 17 b)Sierran massive sulfide, 28c	Reconnaissance geologic mapping by USGS and USBM; geochemical mapping by USGS; extensive prospecting by USBM.
04SK	Rendu Inlet	High-grade W-Cu-Ag-Au-Zn skarn deposits occur in discontinous carbonate lenses in Silurian and(or) Devonian clastic rocks intruded by Cretaceous granitic rocks.	SK004	Reserves: USBM/ USGS inferred estimate at SK004: 4,300 T with 0.5% W, 5.0% Cu, 7 oz/T Ag, 0.15 oz/T Au.	a)W skarn, 14a b)Cu skarn, 18b c)Pb-Zn skarn, 18c	Reconnaissance geologic mapping by USGS and USBM; geochemical mapping by USGS; extensive prospecting by USBM.
05SK	Muir Inlet	Paleozoic clastic and carbonate rocks are intruded by Cretaceous and Tertiary granitic dikes; fracturing and alteration are widespread; Mo-Cu porphyry stockwock and disseminated mineralization known.	SK006,012	None	a)Porphyry Cu-Mo, 21a b)Porphyry Cu, skarn-related, 18a c)Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; some prospecting by USBM; extensive private prospecting of then-deglaciated areas in 1960's and 1970's.
06SK	Casement Glacier	Similar to 05SK, above, but less fracturing and fewer dikes.	None	None	a)Porphyry Cu-Mo, 21a b)Porphyry Cu, skarn-related, 18a c)Polymetallic vein, 22c	Similar to 05SK, above, but less prospecting.
07SK	Takhinsha Mountains	Paleozoic clastic and carbonate rocks intruded and metamorphosed by Cretaceous and Tertiary dikes and plutons.	SK007,008,010, 011.	None	Porphyry Cu-Mo, 21a	Reconnaissance geologic and geochemical mapping by USGS; also some by ADGGS.

text for complete explanation of headings. Information for tract (s) 01SK and 02SK base largely on MacKevett and 17SK on Baggs and others (1989),

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 0 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Mostly very remote, very rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	A few known occurrences in adjoining 01YA; permissive geology; some Mo, Ag, Au, Cu, Zn geochemical anomalies in 01YA.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	948	Same undiscovered resources as in tracts 01YA and 01MF.
Mostly very remote, quite rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	One known occurrence in adjoining 01YA; permissive geology; some Mo, Ag, Au, Cu, Zn, Ni, Ti, Cr, V geochemical anomalies in 01YA.	0 0 1 3 5	Yes	23	Same undiscovered resources as in tracts 02YA and 02MF
Close to tidewater, quite rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	USGS/USBM hypothetical resources: a) 50 million T with 0.4% Cu; b) 1.0 million T with 1.5% Cu and 2.0% Zn.	a) See estimate in column 9. b) See estimate in column 9.	Yes, but N.A.	90	
			Yes, but N.A.		
Moderately remote;rugged. 100% in USNPS Glacier Bay National Park.	Known deposit; permissive geology; float indicates more mineralization present; tract is too small for probabilistic estimate.	a) See estimate in column 9. b) See estimate in column 9. c) See estimate in column 9.	Yes, but N.A. Yes, but N.A. Yes, but N.A.	36	
In part close to tidewater; locally rugged, but generally moderate relief. 100% in USNPS Glacier Bay National Park.	a) USGS/USBM hypothetical resource: 100 million T with 0.15 to 0.20% Mo. b) and c): permissive geology; information level low.	a) See estimate in column 9. b) 0 0 0 0 1 c) 0 0 0 0 1	Yes, but N.A. Yes Yes	125	Same undiscovered resources as in tract 07MF.
In part close to tidewater; locally rugged, but generally moderate relief. 100% in USNPS Glacier Bay National Park.	Permissive geology; Mo stream sediment geochem anomalies; information level low.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	142	Same undiscovered resources as in tracts 02JU and 08MF.
Remote; moderately rugged; extensive glacier cover. 65% in USNPS Glacier Bay National Park; 35% in Alaska State land.	Known deposits; permissive geology; Ag, Au, Cu, Zn bedrock geochemical anomalies.	a) 0 0 0 0 1	Yes	799	

Table 3-SK. Tongass National Forest mineral resource tract information for Skagway quadrangle, southeastern Alaska. (See others (1978, p.13); that for 03SK through 07SK on Brew and others (1978, p. A1-A11; that for tracts 08SK through

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 12)	5 Production and reserve information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information.
08SK	Sullivan Mountain to Sullivan River	Skarn and stratiform mineralization occurs in Paleozoic metaclastic, metacarbonate, and metavolcanic rocks in simple W.-dipping structure.	SK016a,b	None	a)Cu skarn, 18b b)Zn-Pb skarn, 18d c)Besshi massive sulfide, 24b(?)	Reconnaissance geologic and geochemical mapping by USGS; also by USBM and ADGGS; moderate- to high-level of recent prospecting.
09SK	Mount Henry Clay	Paleozoic volcanic and fine-grained clastic rocks intruded by Tertiary granitic plutons; Ba-bearing massive sulfide known; also one locality with abundant large massive sulfide boulders.	SK017-025	Reserves: USBM inferred estimate for SK017: 750,000 T with 1.8 oz/T Ag, 1.7% Zn, 6.0% Brt.	a)Sierran massive sulfide, 28c b)Au-Qtz vein, 36a	Reconnaissance and detailed geologic and geochemical mapping by USGS, USBM, ADGGS; drilling and moderate to high level of recent prospecting.
10SK	Surgeon Mountain (A) and upper Tsirku River (B)	Paleozoic clastic, carbonate, and volcanic rocks intruded by Tertiary plutons; several small Cu-skarn deposits in Canada close to area (A); some stratiform disseminated and massive sulfides in area (B).	(A) None (B) None	None	a)Sierran massive sulfide, 28c b)Au-Qtz vein, 36a c)Cu-skarn, 18b	Reconnaissance and detailed geologic and geochemical mapping by ADGGS, USBM, USGS; moderate level of recent prospecting.
11SK	Porcupine (A), lower Tsirku River (B), and Takhin River (C)	Paleozoic fine-grained clastic, carbonate, and volcanic rocks are intruded by Cretaceous and Tertiary plutons.	(A)SK026-039, 051, 052; (B)SK009,040-045, 047, 048; (C)SK050	(A) Placer Au production in early 1900's. Reserves: USBM inferred figure exists for SK035, but is not yet available. Some small-scale current production; (B) and (C): no production and no reserves.	a Au-Qtz vein, 36a b)Sedimentary exhalative Pb-Zn, 31a c)Polymetallic vein, 22c d)Au-PGE stream placer, 39a	Reconnaissance geologic mapping by ADGGS and USBM; moderate to extensive prospecting by USBM and exploration companies.
12SK	Chilkat River and Chilkat Inlet, W, side	Sulfide-bearing Qtz veins, altered zones, some stratiform massive and disseminated sulfides in Paleozoic fine-grained clastic, carbonate and volcanic rocks, some of which were metamorphosed in Late Paleozoic, are intruded by Cretaceous and Tertiary plutons.	SK015,046,053-064	None	a)Sierran massive sulfide, 28c b)Au-Qtz vein, 36a c)Polymetallic vein, 22c	Reconnaissance geologic mapping by ADGGS and USBM; moderate to extensive prospecting by USBM and exploration companies.

text for complete explanation of headings. Information for tract (s) 01SK and 02SK base largely on MacKevett and 17SK on Baggs and others (1989),

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 0 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater; locally steep and rugged. 50% in USFS Tongass National Forest; 50% in Alaska State land.	Known deposits; permissive geology; As, Ni, Ag, Cu, Zn bedrock geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 1 1 2	Yes Yes Yes	89	Same undiscovered resources as in tract 04JU.
Close to major road and trails; generally steep; extensive glacier cover. 100% Alaska State land.	Known deposits; permissive geology; stream sediment and bedrock geochem anomalies; small tract that has been relatively intensely prospected.	a) 0 0 1 2 3 b) 0 0 0 1 2	Yes Yes	84	
Close to major road and trails; moderately steep; some glacier cover. 100% Alaska State land.	Nearby mines and prospects; permissive geology; area (A) has been well prospected.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 1 2	Yes Yes Yes	98	
Close to major road and trails; moderately steep; some glacier cover. 100% Alaska State land.	Known prospects and occurrences; permissive geology; bedrock and stream sediment geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Yes Yes	498	
Close to major road, trails, and tidewater; moderately steep; some glacier cover. 100% Alaska State land; includes Chilkat Lake homesite area.	Known prospects and occurrences; permissive geology; bedrock Ag, Ba, Co, Cu, Pb, Zn geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	423	

Table 3-SK. Tongass National Forest mineral resource tract information for Skagway quadrangle, southeastern Alaska. (See others (1978, p.13); that for 03SK through 07SK on Brew and others (1978, p. A1-A11; that for tracts 08SK through

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 12)	5 Production and reserve information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information.
13SK	Klukwan	Triassic(?) metabasalts are intruded by Cretaceous age Mag-rich ultramafic body; fan below consists of broken rock from that body.	SK066,067	Reserves: USBM inferred estimate for SK066: ' 3,500 million T with 16.8% Fe, 2.0% Ti; and 50 million T with 0.03 oz/T Au,0.1% Cu, 0.03 oz/T Pt, 0.03 oz/T Pd in lode; inferred 980 million T with 10.8% Fe, 2.0% Ti in fan at SK067.	Alaskan PGE, 9	Detailed mapping and sampling by USGS, USBM, and several mining companies.
14SK	Chilkat River (A) and Chilkat Inlet (B), E. side	Triassic(?) metabasalts are locally Mag- and sulfide-bearing.	(A)SK071 through 073 (B)SK078 through 081	(A) None (B) USBM indicated reserve: 700 T with 0.09 oz/T Au,0.17 oz/T Ag,0.8% Cu; USBM inferred figure exists, but is not yet available.	a)Cyprus massive sulfide, 24a b)Au-Qtz vein, 36a	Detailed geolo- geologic mapping by ADGGS, USBM, some by USGS; geochemical sampling and prospecting by USBM.
15SK	Haines	Triassic(?) metabasalts are intruded by Cretaceous age Mag-rich ultramafic body.	SK075 through 077	Reserves: USGS inferred estimate for SK077: "several million" T with <10% Mag, about 1% TiO2.	Alaskan PGE, 9	Some detailed geologic mapping by USGS, USGS, ADGGS, USGS; little recent prospecting.
16SK	Skagway River	Paleozoic and older(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons.	SK082,084 through 086	Reserves: USBM inferred estimate for SK084: 10,000 T with 0.04 oz/T Au, 3.4 % Pb,2.3% Zn.	a)W-skarn, 14a b)Cu-skarn, 18b c)Pb-Zn skarn, 18c d)Porphyry Cu-Mo, 21a	Some geologic mapping by ADGGS, USBM, also some by USGS; geochemical sampling and prospecting by USBM.
17SK	Meade Glacier	Paleozoic and older(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons.	None	None	a)W-skarn, 14a b)Cu-skarn, 18b c)Pb-Zn skarn, 18c	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.

text for complete explanation of headings. Information for tract (s) 01SK and 02SK base largely on MacKevett and 17SK on Baggs and others (1989),

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 0 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to major road; lode is in very steep terrain, fan is easily accessible. 5(?)% Klukwan Native Village land; 95(?)% Alaska State land.	Known deposits, permissive geology; small, well-explored tract.	No estimate	No	21	
Close to major road and tidewater; (A) is steep terrain. 100% Alaska State land, including a State Park.	Known deposits; permissive geology; some geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	80	
At and under the town of Haines, AK.	Known deposits; permissive geology; some geochemical anomalies; large gravity and aeromagnetic anomalies; small tract.	No estimate	No	26	
Close to railroad and major road; steep; some glacier cover. 50% Tongass National Forest; 50% Alaska State land. (parts of both in Trail of '98 USNPS National Historical Site)	Known deposits; permissive geology, but most metamorphic rocks belong to pre-Paleozoic(?) section that is typically unmineralized.	a) No estimate b) No estimate c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Yes Yes	407	
Remote; steep; extensive glacier cover. 100% Tongass National Forest.	Permissive geology; good exposures, but most metamorphic rocks belong to pre-Paleozoic(?) section that is typically unmineralized.	a) No estimate b) No estimate c) 0 0 0 0 1	Yes Yes Yes	83	Same undiscovered resources as in tract 01(A) AL.

Table 3-TR. Tongass National Forest mineral resource tract information for Taku River quadrangle. (See text for complete that for tract 04TR on Brew and others (1984a,b) and on D.A. Brew and A.B. Ford (unpub. data).)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table(s) 2-XX)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01TR	Eagle River-Juneau	Au-bearing Qtz veins in phyllite , slate, greenstone, greenschist, and metagabbro of Permian(?) through middle Cretaceous age that are variously production from several mines in tract 11(B)JU adjacent to NW.	TR006,007,008	100 oz Au produced from Enterprise (TR008). Reserves: USBM inferred estimates exist for TR007,008, but are not yet available.	a)Au-Qtz veins, 36a b)Sierran massive sulfide, 28c	Some prospecting in the past; reconnaissance and some detailed geologic and geochemical mapping by USGS; some detailed sampling by USBM.
02TR	Bacon Glacier (A) and Mount Ogden (B)	(A): minor occurrences of disseminated Mol in Tertiary granodiorite or granite; some Mol-bearing Qtz veins; (B): Late Tertiary rhyolite dike swarm associated with felsic plug intrudes metamorphosed Paleozoic and older(?) clastic, carbonate, and volcanic rocks.	(A): TR001,002; (B): TR004	None	a)Porphyry Mo, 21b b)Cu skarn, 18b c)Zn-Pb skam, 18d	Reconnaissance geologic mapping and geochemical sampling by USGS; tract is not well prospected in US, but is across the border in Canada.
03TR	Kluchman Mountain	Complexly deformed Paleozoic and older(?) clastic, volcanic, and minor carbonate rock section with scattered ultramafic masses is intruded by Tertiary granodiorite and granite; ultramafic masses may contain Chr.	TR003	None	a)Minor podiform chromite, 8a b)Polymetallic veins, 22c	Reconnaissance geologic mapping and geochemical sampling by USGS.
04TR	Snow Tower-Sawyer Glacier	Paleozoic and older(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons, creating an environment permissive for skarn deposits.	TR005,009	None	a)Cu skarn, 18b b)Zn-Pb skam, 18d c)Polymetallic veins, 22c	Reconnaissance geologic mapping and geochemical sampling by USGS; little prospected.

explanation of headings. Information for tracts 01TR through 03TR based on D.A. Brew and A.B. Ford (unpub. data):

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Close to tidewater; heavy timber; some mines and prospects close to roads. 100% in USFS Tongass National Forest.	Permissive geology; many large mines and significant prospects in tract 11(B)JU to NW.	a) 0 1 2 3 5 b) 0 0 1 2 3	Yes Yes	96	Same undiscovered resources as in adjoining tract 11(B)JU.
Remote; steep; very extensive glacier cover. 100% in USFS Tongass National Forest.	Known prospects; permissive geology; subtract (A) is small; subtract (B) is close to important prospect in Canada.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	225	
Steep; some glacier cover; close to major river valley. 100% in USFS Tongass National Forest except for some Alaska State land and private homesites along river.	Known prospect; permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	156	
Remote; steep; very extensive glacier cover. 50% USFS Tracy Arm-Fords Terror Wilderness; 50% in USFS Tongass National Forest.	Known prospects; permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	436	Same undiscovered resources as in adjoining tract 03SD.

Table 3-YA. Tongass National Forest mineral resource tract information for Yakutat quadrangle, southeastern Alaska.
and others, (1978), p. 13; and that for tract 04YA on Bruns (1988b).

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01YA	Fairweather Range	Altered zones and disseminated sulfides occur in Mesozoic and older(?) metamorphic rocks intruded by Jurassic, Cretaceous,and Tertiary granitic plutons.	YA009-011	None	a)Sierran massive sulfide, 28c b)Au-Qtz vein, 36c c)Porphyry Cu-Mo, 21a	Reconnaissance geologic and some geochemical mapping by USGS; essentially unprospected.
02YA	Yakutat Range	Thin Au-bearing Qtz veins occur in greenschist or lower grade flyschoid rocks; spatially and genetically related to Tertiary plutons.	YA008	None	Au-Qtz vein, 36a	Reconnaissance geologic and some geochemical mapping by USGS; little prospected.
03YA	Yakutat to Cape Spencer beach placers	Fe- and Ti-bearing beach and (locally) sream placers border Gulf of Alaska; includes both modem beaches and older upraised marine terrace placers; Fe- and Ti-bearing black sands are 1 to 3 m thick and are of limited lateral extent.	YA001-007, 012, 013	During early 1900's about 6 kg Au produced from small deposits; large, low-grade Fe, Ti resources present with estimated 20.8 kg/cubic m Fe, 12.2 kg/cubic m Ti; some higher grade zones present.	Shoreline placer Ti, 39c	Reconnaissance and some detailed sampling by USBM; low amount of prospecting; local aeromagnetic survey by USGS; auger-drill-hole sampling by USBM.
04YA	Yakutat Foreland petroleum	Oil and gas seeps and shows from Paleogene sedimentary source rocks and from Poul Creek Fm. as in Yakataga play 170 km to NW; little data available on possible traps, all of which are known or presumed to lie along the Dangerous River zone (Bruns, 1988b, fig. 2); reservoir rocks possible in all Cenozoic units.	Surface seeps and shows; wells and core holes YA014-021.	No production, but one well (YA014) had oil and gas shows.	N.A.	Play is moderately well explored by existing wells and core holes.

(See text for complete explanation of headings. Information for tracts 01YA through 03YA based largely on MacKevett

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks
Mostly very remote, very rugged, extensive glacier cover. 25% in USNPS Glacier Bay National Park; 15% in USFS Russell Fiord Wilderness; 60% in USFS Tongass National Forest.	A few known occurrences; permissive geology; some Mo,Ag,Au,Cu,Zn geochemical anomallies; very large tract.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	1,802	Joins 01SK and 01MF; same resources as in those tracts.
Mostly very remote, quite rugged, extensive glacier cover. 10% in USNPS Glacier Bay National Park; 50% in USFS Russell Fiord Wilderness; 5% in USNPS Glacier Bay National Preserve; 10% in proposed USFS Yakutat Forelands Wilderness; 25% in USFS Tongass National Forest.	One occurrence; permissive geology; Ni,Ti,Cr,V geochemical anomalies; very large tract.	0 0 1 3 5	Yes	2,578	Joins 02SK and 02MF; same resources as in those tracts.
Modern bare beaches are easy to explore and sample; dense vegetation impedes exploration of back beach deposits, which are poorly known. 20% in USNPS Glacier Bay National Park; 10% in USFS Russell Fiord Wilderness; 5% in USNPS Glacier Bay National Preserve; 45% in proposed USFS Yakutat Forelands Wilderness. 20% in USFS Tongass National Forest.	Several occurrences; permissive geology; moderate-size tract; not thoroughly prospected.	0 0 0 1 2	Yes	767	Joins 03MF; resources are in addition to those in that tract.
Modern beach areas readily accessible; back beach areas forested; in part close to existing roads.	Most potential source rocks are immature, potential reservoir sands have relatively low porosity, major structures have been tested; discovery of commercial hydrocarbon resources is unlikely.	N.A.	N.A.	N.A.	All of Yakutat Foreland NI of tract has thin Neogene sedimentary rocks over Mesozoic metaflyschoid rocks; tract overlaps tract 03YA in part.

Table 4-AL. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Atlin quadrangle, Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01AL	Lace River	Paleozoic and older(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons.	None	None	a) W-skarn, 14a b) Cu-skarn, 18b c) Pb-Zn skarn, 18c	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.
02AL	Chilkoot Range ultramafic bodies (A), (B), (C)	Alpine-type peridotite bodies associated with amphibolite and greenstone and intruded by Tertiary granitic bodies.	None	None	Podiform chromite, 8a(?)	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.
03AL	Chilkoot Range metabasalts	Low-grade metabasalt flows and tuffs of Triassic age associated with clastic and carbonate rocks.	None	None	Cyprus massive sulfide, 24a	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings,

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Remote; steep; extensive glacier cover. 100% USFS Tongass National Forest	Permissive geology; good exposures, but most metamorphic rocks belong to pre-Paleozoic(?) section that is typically unmineralized; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	AL 17 JU 15 Tot 32	Includes tracts 01(B)AL and 12JU.
Remote; steep; extensive glacier cover. 100% USFS Tongass National Forest	Permissive geology; good exposures; small tract.	0 0 0 0 1	Yes	18	
Remote; steep; extensive glacier cover. 100% USFS Tongass National Forest	Permissive geology; good exposures; minor secondary Cu minerals present locally; small tract.	0 0 0 0 1	Yes	21	

Table 4-BC. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Bradfield Canal headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 2)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01BC	Bradfield Canal Coast Mountains: Elbow Mountain (A), Mount Whipple (B); Craig River (C); North Bradfield River-Mount Lewis Cass (D)	Vein, skarn, and disseminated sulfide deposits occur in schist, gneiss, marble of original Paleozoic and Mesozoic(?) age.	(A): None (B): None (C): BC006 (D): BC005,009	Reserves: USBM has inferred estimate for BC005, but it is not yet available.	a)Polymetallic vein, 22c b)Zn-Pb skarn, 18c c)Fe skarn, 18d d)Porphyry Mo, 21b	Reconnaissance geologic and geochemical sampling by USGS.
02BC	Cone Mountain	Leucocratic Bt-bearing alkalic granite stock in NE part of tract; Qtz porphyritic rhyolite dikes in SW part.	BC004	None	a)Felsic plutonic U and REE, FP/UREE, or Felsic plutonic Th and REE, FP/THRE b)Polymetallic vein, 22c c)Porphyry Mo, 21b(?)	Reconnaissance geologic and geochemical sampling by USGS; moderate amount of private prospecting and some drilling.
04BC	Glacier Basin-Berg Basin	Deformed and metamorphosed Paleozoic and Mesozoic clastic and volcanic rocks are intruded by Late Cretaceous granodiorite and tonalite and by the latest Cretaceous earliest Tertiary great tonalite sill; vein deposits present.	BC002,003; PE038,041,042	None	a)Metamorphosed massive sulfide, RM/MS (model as Sierran massive sulfide, 28c) b)Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting in N part of tract, less to S.
05BC	Harding River	Schist, gneiss, and minor marble of original Paleozoic and(or) Mesozoic age bounded to NE by Early Tertiary plutons and on SW by earliest Tertiary great tonalite sill.	None	None	a)Polymetallic vein, 22c b)Zn-Pb skarn, 18c	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
06BC	Mount Stoeckl	Eocene porphyritic Qtz monzonite intrudes schist, gneiss, marble of original Paleozoic and Mesozoic(?) age.	BC010	None	Felsic plutonic U and REE, FP/UREE, or Felsic plutonic Th and REE, FP/THRE	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
07BC	Eulachon Creek	Schist, gneiss, and minor marble of original Paleozoic and(or) Mesozoic age.	BC008	None	a)Zn-Pb skarn, 18c b)Fe skarn, 18d	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
08BC	Gracey Creek Glacier	Schist, gneiss, and minor marble of original Paleozoic and(or) Mesozoic age.	BC011	None	Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS.

quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Remote; rugged; significant glacier and permanent snow cover. 07% in USFS Stikine-LeConte Wilderness; 82% USFS Tongass National Forest; 11% in USFS Misty Fiords Wilderness.	Known deposits; permissive geology; stream-sediment and bedrock geochemistry suggest presence of Cu, Pb, Zn, Ag, Mo, Au resources; close to active exploration in Jurassic plutons and volcanic rocks in nearby British Columbia.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 1 2 d) 0 0 0 0 1	Yes Yes Yes Yes	(A) 14 (B) 28 (C) 52 (D) 118 Tot. 212	Fe skarn resources in subtract (D) only.
Remote; rugged; some thick timber and brush locally. 100% USFS Tongass National Forest.	Permissive geology; aeroradioactivity anomaly; Pb, Y, Be, Nb, Sn, Mo, Zn, Ag, Cu geochemical anomalies; moderately well explored.	a) No estimate b) 0 0 0 0 1 c) 0 0 0 0 1	Maybe Yes Yes	219	
In part close to tidewater; in part remote; steep; very extensive glacier cover locally. 04% in proposed USFS Anan Creek Wilderness; 87% in USFS Tongass National Forest; 09% in USFS Stikine-LeConte Wilderness.	Known deposits; permissive geology; Zn, Cu, Mo, Ag, Au, Pb, Sn, stream-sediment anomalies; Zn, Cu, Pb, Mo, Au, Ag bedrock anomalies.	a) No estimate. b) 0 0 1 2 4	Yes Yes	BC 425 PE 74 Tot. 499	Includes tracts 19PE and 04BC.
In part close to tidewater; in part remote; steep; very extensive glacier cover locally. 100% in USFS Tongass National Forest.	Permissive geology; Mo, Ag, Cu, Pb, Zn bedrock geochemical anomalies.	a) 0 0 0 0 1 b) No estimate.	Yes Yes	142	
Remote; rugged; much glacier and permanent snow cover. 100% in USFS Misty Fiords Wilderness.	Permissive geology; U bedrock geochemical anomalies; relatively small tract.	No estimate.	Maybe	39	
Not far from tidewater; rugged; heavy timber and brush locally. 100% in USFS Misty Fiords Wilderness.	Known occurrence; permissive geology; Cu, ag, Au, Pb, Zn, Mo, Sn bedrock geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	76	
Remote; rugged; extensive glacier and permanent snow cover. 100% in USFS Misty Fiords Wilderness.	Permissive geology; Cu, Zn, Pb, Ag bedrock anomalies.	0 0 0 0 1	Yes	60	

Table 4-BC. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Bradfield Canal headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 2)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
10BC	Burroughs Bay	Qtz porphyry dikes associated with Mol-bearing K-spar porphyritic Bt granite and Qtz monzonite of Miocene age.	KC003	None	Porphyry Mo, 21b	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting.
12BC	Chickamin Glacier	Numerous sulfide deposits occur within 300 m above or below the contact of the Early Jurassic Texas Creek granodiorite and the metasedimentary and metavolcanic rocks of the Triassic age Hazelton Group(?).	BC013-050	Small production from BC026 through 047.	Production: some from BC026-047. Reserves: USBM inferred estimates for BC018, 022-024, 028, 032, 035, 040 047, but they are not yet available.	Reconnaissance geologic and geochemical mapping by USGS; also some detailed USGS mapping; very heavily prospected.
13BC	Texas Creek-Hyder	Qtz and sulfide veins and shear zones cut Early Jurassic Texas Creek granodiorite and Hazelton Group(?) metavolcanic rocks.	BC052-075; KC101-105	Production: some from BC033, 059, 062, and 075; significant from BC074. Reserves: USBM has inferred estimates for BC053, 056, 058-060, 063, 064, 066, 068, 071, 072, 074, 075, but they are not yet available.	a)Polymetallic vein, 22c b)Porphyry Cu-Mo, 21a c)Sierran massive sulfide, 23c	Reconnaissance geologic and geochemical mapping by USGS; also some detailed USGS mapping; very heavily prospected.

quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
In part close to tidewater; some parts steep and rugged; some thick brush and timber. 81% in USFS Misty Fiords Wilderness; 19% in USFS Tongass National Forest	Permissive geology; Mo, Cu, Pb, Zn bedrock and stream-sediment geochemical anomalies; relatively small tract.	0 0 0 0 1	Yes	BC 42 KC 20 Tot. 62	Includes tracts 02KC and 10BC.
Remote; rugged; extensive glacier and permanent snow cover; old trails give access from Hyder, AK. 62% in USFS Misty Fiords Wilderness; 38% in USFS Tongass National Forest.	Known deposits; permissive geology; Ag, Cu, Mo, Pb, Zn bedrock and stream-sediment anomalies; also Au stream-sediment anomalies; tract has been very heavily prospected.	a) 0 1 2 3 5 b) 0 0 0 1 2 c) 0 0 0 0 1	Yes Yes Yes	BC 190 KC 09 Tot. 199	Includes tracts 04KC and 12BC.
Close to road and trail system; locally rugged. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; Au, Ag, As, Mo, Sb, Co, Ni bedrock geochemical anomalies; tract has been heavily prospected.	a) 0 0 0 1 2 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	BC 44 KC 24 Tot. 68	Includes tracts 05KC and 13BC.

Table 4-CR. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Craig quadrangle, Ton-
Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 3)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01CR	Coronation Island	Small high-grade Pb-Ag replacement deposits in limestone; possibly related to nearby felsic pluton.	CR001	Production: > 100 T Ag-bearing ore produced early 1900's from CR001.	Polymetallic replacement, 19a	Reconnaissance geologic and geochemical mapping by USGS; extensive private drilling in 1970's.
02CR	Warren Island	Felsic pluton intrudes Descon Fm. graywacke and minor carbonate rocks; permissive skarn and porphyry environment.	None	None	a) Polymetallic vein, 22c b) Zn-Pb skarn, 18c c) Porphyry Cu, 17 d) Porphyry Mo, 16	Reconnaissance geologic and geochemical mapping by USGS.
03CR	Sweetwater Lake	Silurian turbidites and minor volcanic rocks of locally heterogeneous section that elsewhere contains volcanogenic massive sulfide deposits.	CR003	None	Besshi massive sulfide, 24b(?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
07CR	Lava Creek	Large felsic pluton intrudes Silurian and (or) Ordovician andesitic breccia with minor limestone; pluton may be alkalic and an environment permissive for Th, U, REE deposits may be present.	None	None	a)Felsic plutonic U and REE, FP/UREE(?) b)Felsic plutonic Th and REE veins, FP/THRE (?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
08CR	Union Bay	Alaskan-type concentrically zoned mafic-ultramafic plutonic body of mid-Cretaceous age intrudes flysch and volcanic rocks of the Gravina overlap assemblage.	CR165	Reserves: at CR165, one billion T of Ti-bearing 18 to 20% Fe ore. USBM may have revised inferred estimate, but it is not yet available.	Alaskan PGE, 9	Reconnaissance geologic and geochemical mapping by USGS; some semidetailed mapping by USGS and others; little prospecting for PGE metals.
09CR	Lower Cleveland Peninsula	Au-Qtz veins crosscut and parallel shear zones in low metamorphic grade Jura-Cretaceous pelitic and felsic(?) rocks.	CR166-172 KC004-014.	Production: uncertain, but several mines in Craig quad poduced 100's to 1,000's of T of Au ore from 1910 through 1930's; also a few 1,000 oz Au from KC004, 1898 to 1917. Reserves: USBM has inferred estimates for CR168 CR170, KC005, 007, and 008, but they are not yet available	a) Au-Qtz vein, 36c b) Simple Sb, 27c	Reconnaissance geologic and geochemical mapping by USGS; moderate to high level of prospecting.

gass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Close to tidewater; locally very steep and heavy timber. 100% in USFS Coronation Island Wilderness.	Known deposit; permissive geology; Pb, Sb geochemical anomalies.	0 0 0 1 2	Yes	73	
Close to tidewater; locally very steep and heavy timber. 100% in USFS Warren Island Wilderness.	Permissive geology; small tract.	a) No estimate b) No estimate c) No estimate d) No estimate	Yes Yes Yes Yes	44	No estimates because of insufficient data.
In part close to tidewater; moderate relief; heavy timber and brush; some logging roads. 09% in proposed USFS Sarkar Lakes Wilderness; 91% in USFS Tongass National Forest.	Known deposit; permissive geology; scattered low-level Zn stream-sediment anomalies.	0 0 0 0 1	Yes	CR 523 PE 126 Tot. 649	Includes tracts 09PE and 03CR.
Close to tidewater; local thick brush and timber; some logging roads. 100% in USFS Tongass Natonal Forest.	Permissive geology, scattered Nb, La anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1	Maybe Maybe	68	
Close to tidewater; local thick brush and timber. 100% in USFS Tongass National Forest.	Known deposit; permissive geology; Cr geochem anomalies.	0 0 0 0 1	No	61	
Close to tidewater; local thick brush and timber; limited outcrop. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; Au, Sb, Pb geochem anomalies.	a) 0 1 3 7 12 b) 0 0 0 0 1	Yes Yes	CR 101 KC 44 Tot. 145	Includes tracts 06KC and 09CR.

Table 4-CR. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Craig quadrangle, Ton-
Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 3)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
10CR	South central Prince of Wales Island	Scattered and varied deposits in broad expanse of Ordovician, Mississippian, and Devonian sedimentary and volcanic rocks.	CR004-006, 012, 030, 031, 049, 063, 095-099, 127; DE008	None	a) Kuroko massive sulfide, 28a b) Polymetallic vein, 22c c) Porphyry Cu, 17 d) Cu skarn, 18b	Reconnaissance geologic and geochemical mapping by USGS; some prospecting.
11CR	Kasaan Bay Salt Chuck	Complicated gabbroic pluton contains a magmatic Cu-PGE-Au deposit.	CR065,067,068	Production: at CR067, about 300,000 T 0.9% Cu, 0.02 oz/T Au, 0.1 oz/T Ag, 0.05 oz/T Pd. Reserves: USBM has an inferred estimate for CR067, but it is not yet available.	Undescribed magmatic Cu-Au-PGE	Detailed geologic and reconnaissance geochemical mapping by USGS; some by USBM; moderate amount of prospecting.
12CR	Kasaan Peninsula	Many Fe and Cu skarn deposits associated with Paleozoic felsic to intermediate plutons that intrude Lower Paleozoic calcareous metasedimentary rocks.	CR064, 066, 069-094	Production: major, from several mines 1900 to 1917 estimated to be about 274,400 T with 12.78 million lbs Cu, 57,800 oz Ag. Reserves: estimated 3.02 million T. Reserves: USBM has inferred estimates for CR077, 079, 083, 087, and CR088, but they are not yet available	a) Cu skarn, 18b b) Fe skarn, 18d	Detailed geologic and reconnaissance geochemical mapping by USGS and some by USBM; some industry activity.
13CR	Baker Island	Mo-bearing porphyry system and polymetallic veins probably associated with Mesozoic or Paleozoic pluton that intrudes Silurian and(or) Ordovician Descon Fm. metasedmentary rocks.	CR009-011	None	a) Porphyry Mo, 21b b) Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; some drilling on CR010.
14CR	San Juan Bautista Island	Sulfide occurrences related to small granitic pluton.	CR013,014	None	a) Porphyry Cu, 17 b) Polymetallic vein, 22c	Semidetailed geologic and geochemical mapping by USGS of shoreline; reconnaissance inland; drilling on one prospect in 1970's.

gass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8	9	10	11	12	13
Accessibility and related factors, including percent of tract in different land status(es)	Summary of undiscovered resource information	Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	Grade and tonnage model available?	Tract area, in square kilometers	Remarks and references to tracts in table 3.
In part close to tidewater; heavy timber, limited outcrop; part has logging roads. 20% in proposed USFS Outside Islands Wilderness; 10% in proposed USFS Karta River Wilderness; 40% in Alaska Native lands; 30% in USFS Tongass National Forest.	Known deposits; permissive geology; numerous Cu geochem anomalies; scattered Pb, Zn, Ba, Ag anomalies; very large tract.	a) 0 1 2 3 5 b) 0 3 6 8 10 c) 0 0 1 2 3 d) 0 1 2 4 6	Yes Yes Yes Yes	CR 1,606 DE 01 KC 01 Tot.1,608	Includes tracts 03DE, 10CR, and 11KC.
Close to tidewater and to State and logging roads; thick forest; limited exposure. 100% in USFS Tongass National Forest.	Known deposit; permissive geology; scattered Cu geochemical anomalies; very small tract.	No estimate	No	16	No estimate because tract is small.
Close to tidewater; some logging roads in W part; heavy timber; locally steep; limited outcrop. 65% in Alaska Native lands; 35% in USFS Tongass National Forest.	Known deposits; permissive geology; scattered Cu, Pb, Zn anomalies.	a) 0 1 2 3 5 b) 0 1 2 3 5	Yes Yes	196	
Close to tidewater; local thick brush and timber; locally steep. 100% in proposed USFS Outside Islands Wilderness.	Known deposits; permissive geology; scattered Mo, Ba, Cu anomalies.	a) 0 0 0 0 1 b) 0 0 0 1 2	Yes Yes	85	
Close to tidewater; local thick brush and timber; locally steep. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; scattered Pb, Zn, Cu anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 1 2	Yes Yes	21	

Table 4-CR. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Craig quadrangle, Ton-
Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 3)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
15CR	Port Saint Nicholas	Syenitic and(or) granitic plutons intrude Lower and Middle Paleozoic volcanic and sedimentary rocks.	CR015	None	a)Felsic plutonic U and REE, FP/UREE(?) b)Felsic plutonic Th and REE veins, FP/THRE (?) c)Porphyry Mo, 21b	Reconnaissance and some semi-detailed geologic and geochemical mapping by USGS.
16CR	Black Lake (A)-Lake Saint Nicholas (B)	Lower Paleozoic andesitic breccia and some Middle Paleozic carbonate rocks intruded by Cretaceous granitic pluton with possible Mo mineralization.	(A)CR018-020; (B)CR025	None	Porphyry Mo, 21b	Reconnaissance and some semi-detailed geologic and geochemical mapping by USGS; drilling on one prospect in 1970's.
17CR	Pin Peak	Lower Paleozoic andesitic breccia and some Middle Paleozic carbonate rocks intruded by Cretaceous granitic pluton with possible Mo mineralization; polymetallic(?) veins also.	CR016,017,021-024	None	a) Porphyry Mo, 21b b) Polymetallic veins, 22c	Reconnaissance and some semi-detailed geologic and geochemical mapping by USGS.
18CR	Maybeso Creek	Ordovician shale and graywacke contain numerous polymetallic(?) veins.	CR026-029, 032-048	Production: Several thousand oz Au 1900 to 1940's.	a) Porphyry Mo, 21b b) Polymetallic veins, 22c	Reconnaissance and some semi-detailed geologic and geochemical mapping by USGS; intermittent re-examination by industry.
19CR	Suemez Island	Mo-bearing porphyry system and polymetallic veins probably associated with Mesozoic or Paleozoic pluton that intrudes Silurian and(or) Ordovician Descon Fm. metasedimentary rocks; possible REE-bearing system on E part of island.	None	None	a) Porphyry Mo, 21b b) Polymetallic vein, 22c c) Felsic plutonic U and REE, FP/UREE(?) d) Felsic plutonic Th and REE veins, FP/THRE(?)	Reconnaissance geologic and geochemical mapping by USGS.

gass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Close to tidewater in part; locally steep; close to State roads; also logging roads. 100% in Alaska Native lands.	Known deposit; permissive geology; Nb, Be, Y, La stream-sediment anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Maybe Maybe Yes	157	
Close to tidewater in part; locally steep; close to State roads; also logging roads. 50% in Alaska Native lands; 15% in proposed USFS Karta River Wilderness; 35% in USFS Tongass National Forest.	Known occurrences; permissive geology; Mo geochem anomalies; moderate size tract.	0 0 0 0 1	Yes	233	
Close to tidewater in part; locally steep; close to State roads; also logging roads. 25% in Alaska Native lands; 50% in proposed USFS Karta River Wilderness; 25% in USFS Tongass National Forest.	Known occurrences; permissive geology; Mo geochem anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	60	
Close to tidewater in part; locally steep; close to State roads; also logging roads. 15% in Alaska Native lands; 50% in proposed USFS Karta River Wilderness; 35% in USFS Tongass National Forest.	Known deposits; permissive geology; widespread Zn, Pb, Mo, Cu geochem anomalies; small tract.	a) 0 0 0 0 1 b) 0 1 3 6 8	Yes Yes	90	
Close to tidewater; locally steep; some heavy timber. 100% in USFS Tongass National Forest.	Permissive geology; Nb, La stream-sediment geochemical anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Maybe Maybe	141	

Table 4-CR. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Craig quadrangle, Ton- Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 3)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
20CR	Trocadero Bay-Cholmondeley Sound	Small, structurally conformable Cu-, Pb-, Zn-bearing sulfide lenses occur in low-grade metamorphic rocks of the Proterozoic (?) to Cambrian Wales Group.	CR050-058, 100, 102-105, 117, 122, 123, 125, 126, 128-131, 140, 143, 144	Reserves: USBM has inferred estimates for CR102 and 126 (Brt), but they are not yet available.	Kuroko massive sulfide, 28a	Reconnaissance geologic and geochemical mapping by USGS; some prospecting.
21CR	Copper Mountain	Paleozoic carbonate rocks adjacent to Cretaceous granodiorite plutons contain numerous Cu and Fe skarn deposits.	CR101,106-121 121	Production: 1902 to 1922 from several mines totaled 10 million lbs Cu, 280,000 oz Ag, 7,000 oz Au. Reserves: at CR112, 65,000 T with 45% Fe, 0.75% Cu. USBM has revised inferred estimate for CR112, but it is not yet available	a) Cu skarn, 18b b) Fe skarn, 18d	Detailed and reconnaissance geologic and geochemical mapping by USGS; some prospecting.
22CR	Dora Bay	Syenite pluton in Proterozoic(?) and(or) Cambrian Wales Group metasedimentary and metavolcanic rocks has associated REE geochem and radioactivity anomalies.	CR132	None	a) Felsic plutonic U and REE, FP/UREE(?) b) Felsic plutonic Th and REE veins, FP/THRE (?)	Detailed and reconnaissance geologic and geochemical mapping by USGS; extensive prospecting.
23CR	Dolomi	Proterozoic(?) and(or) Cambrian Wales Group marble contains Au-Qtz and(or) polymetallic veins.	CR133-137, 139-142, 153-163	Production: in 1900 to 1930's, mainly from Valpariso (CR153) of 1,000 to 5,000 oz Au.	a) Polymetallic vein, 22c b) Au-Qtz, 36a	Detailed and reconnaissance geologic and geochemical mapping by USGS; some prospecting.
24CR	Northern Dall Island	Paleozoic sedimentary and volcanic rocks intruded by granitic plutons.	CR059-062	None, except marble production.	a) Polymetallic vein, 22c b) Zn-Pb skarn, 18c c) Porphyry Mo, 21b	Reconnaissance geologic and geochemical mapping by USGS.
25CR	Southeast Sukkwan Island	Lower Paleozoic sedimentary rocks are intruded by syenite pluton of Pennsylvanian age	CR124	None	a) Felsic plutonic U and REE, FP/UREE(?) b) Felsic plutonic Th and REE veins, FP/THRE (?)	Reconnaissance geologic and geochemical mapping by USGS.

gass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Close to tidewater in part; locally steep; close to State roads; also logging roads; low relief; heavily wooded. 38% in Alaska Native lands; 23% in proposed USFS Nutkwa Wilderness; 05% in proposed USFS Kegan Lake Wilderness; 33.5% in USFS Tongass National Forest; 00.5% in USFS South Prince of Wales Wilderness.	Known deposits; permissive geology; scattered Ba, Zn, Pb, Cu geochemical anomalies; large tract.	0 1 2 3 5	Yes	CR 796 DE 37 Tot. 833	Includes tracts 04DE and 20CR.
Close to tidewater in part; locally steep; heavily wooded. 40% in Alaska Native lands; 10% in proposed USFS Nutkwa Wilderness; 50% in USFS Tongass National Forest.	Known deposits; permissive geology; Ba, Zn, Pb, Cu geochemical anomalies; small to moderate size tract.	a) 0 0 0 1 2 b) 0 0 0 1 2	Yes Yes	116	
Close to tidewater in part; locally very steep; heavily wooded. 30% in Alaska Native lands; 70% in USFS Tongass National Forest.	Known occurrence; permissive geology; REE geochem anomalies; radioactivity anomalies; small tract.	a) 0 0 0 1 2 b) 0 0 0 1 2	Maybe	31	
Close to tidewater in part; low to moderate relief; some logging roads. 27% in Alaska Native lands; 73% in USFS Tongass National Forest.	Known deposits; permissive geology; Mo, Zn, Pb, Cu geochemical anomalies; small to moderate size tract.	a) 0 0 1 2 4 b) 0 0 0 1 2	Yes Yes	CR 83 KC 09 Tot. 92	Includes tracts 12KC and 23CR.
Close to tidewater in part; locally very steep; heavily wooded. 45% in Alaska Native lands; 55% in USFS Tongass National Forest.	Permissive geology; Mo, Zn, Pb, Sb, Ba stream sediment anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	CR 226 DE 50 Tot. 276	Includes tracts 02DE and 24CR.
Close to tidewater in part; wooded; moderate relief. 35% in Alaska Native lands; 65% in USFS Tongass National Forest.	Permissive geology; Nb, Be, Y stream sediment anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1	Maybe Maybe	23	

Table 4-CR. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Craig quadrangle, Ton-
Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 3)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
26CR	Moira Sound	Cretaceous granitic plutons intrude Proterozoic(?) and Cambrian Wales Group metasedimentary and metavolcanic rocks, giving permissive porphyry and vein environment.	None	None	a) Porphyry Mo, 21b b) Polymetallic vein, 22c c) Zn-Pb skarn, 18c	Reconnaissance geologic and geochemical mapping by USGS; some industry prospecting and drilling.
27CR	Niblack	Felsic volcanic lenses in the Ordovician Descon Fm. contain Cu- and Zn-bearing massive sulfide deposits.	CR145-152	Production: at CR149, at least 1.4 million lbs Cu, 1,100 oz Au, 15,000 oz Ag from 1902 to 1909.	Kuroko massive sulfide, 28a	Reconnaissance geologic and geochemical mapping by USGS; intense industry prospecting and drilling.

gass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Close to tidewater in part; locally steep; locally heavily wooded. 20% in proposed USFS Nutkwa Wilderness; 39% in proposed USFS Kegan Lake Wilderness; 41% in USFS Tongass National Forest.	Permissive geology; Mo stream-sediment anomalies; moderate-size tract.	a) 0 0 0 1 2 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	CR 214 DE 52 PR 06 KC 03 Tot. 275	Includes tracts 07DE, 01PA, 26CR, and 13KC.
Close to tidewater in part; locally steep; locally heavily wooded. 40% in proposed USFS Kegan Lake Wilderness; 60% in USFS Tongass National Forest.	Known deposits; permissive geology; Ba, Zn, Pb, Cu geochemical anomalies; small tract.	0 0 1 2 3	Yes	78	

Table 4-DE. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Dixon Entrance headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 4)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01DE	Forrester Island	Granodiorite of uncertain (Cretaceous or Silurian-Ordovician) age contains porphyry Mo deposit.	DE001,002	None	Porphyry Mo, 21b	Reconnaissance geologic and geochemical mapping by USGS.
05DE	Kassa Inlet	Small Paleozoic plutons in mostly Proterozoic(?) to Cambrian Wales Group rocks may be permissive for U-Th deposits.	None	None	a)Felsic plutonic-related U and REE, FP/UREE(?) b)Felsic plutonic-related Th and REE veins, FP/THRE(?)	Reconnaissance and some detailed geologic and geochemical mapping by USGS and by ADGGS; some prospecting.
06DE	Bokan Mountain	Veins, dikes, and pegmatites related to Jurassic peralkaline granite at Bokan Mtn. contain U and Th minerals.	DE028,030-040	Production: at DE039, about 110,000 T with about 1.3% U3O8 from 1955 to 1975. Reserves: USBM has inferred estimate, but it is not yet available.	a)Felsic plutonic-related U and REE, FP/UREE(?) b)Felsic plutonic-related Th and REE veins, FP/THRE(?)	Detailed geologic and some geochemical mapping by USGS; also some sampling by USBM; intensely prospected.
08DE	Southern Dall and Long Islands	Polymetallic veins with up to several % sulfides cut metasedimentary rocks of the Proterozoic(?) and Lower Paleozoic Wales Group; minor granitic intrusives.	DE003-007	None	a) Kuroko massive sulfide, 28a b) Polymetallic vein, 22c	Reconnaissance and some detailed geologic and geochemical mapping by USGS; some prospecting.
09DE	Barrier Islands	Lower Paleozoic Descon Fm. metasedimentary and metavolcanic rocks contain scattered massive sulfide occurrences.	DE009-015, 017	None	Kuroko massive sulfide, 28a	Reconnaissance and some detailed geologic and geochemical mapping by USGS; some recent prospecting.
10DE	Southeasternmost Pnnce of Wales Island	Complicated geology with granitic rocks of different ages in Lower Paleozoic metasedimentary and metavolcanic rocks.	DE018-031; PR001,002	None	a) Polymetallic vein, 22c b) Porphyry Mo, 21b c)Felsic plutonic-related U and REE, FP/UREE(?) d)Felsic plutonic-related Th and REE veins, FP/THRE(?) e)Carbonatites, 10	Reconnaissance and some detailed geologic and geochemical mapping by USGS; some recent prospecting.

quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
All close to tidewater, most of which is open ocean. 100% in USFWS Forrester Island Wildlife Refuge.	Known deposit; permissive geology; small tract.	0 0 0 0 1	Yes	11	
Mostly close to tidewater; moderate relief. 50% in USFS South Prince of Wales Wilderness; 50% in proposed USFS Nutkwa Wilderness.	Permissive geology; anomalous Nb and Y stream-sediment samples.	a) 0 0 0 0 1 b) 0 0 0 0 1	No Maybe	26	
In part wooded and steep; road from tidewater into tract. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; small tract.	a) 0 0 0 0 1 b) 0 0 1 2 5	No Maybe	33	
Close to tidewater in part; locally steep; locally heavily wooded. 40% in Alaska Native lands; 60% in USFS Tongass National Forest.	Known deposits; permissive geology; large tract.	a) 0 0 0 0 1 b) 0 1 2 4 8	Yes Yes	436	
Close to tidewater; low relief; heavily forested in part. 90% in USFS Southern Prince of Wales Wilderness; 10% in USFS Tongass National Forest.	Known deposits; permissive geology; moderate-size tract.	0 0 2 4 6	Yes	117	
Close to tidewater; much is steep and heavily wooded. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; moderate-size tract.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 1 2 d) 0 0 0 1 2 e) 0 0 0 0 1	Yes Yes Maybe Maybe Yes	DE 131 PR 15 Tot. 146	Includes tracts 02PR and 10DE.

Table 4-JU. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Juneau quadrangle, Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 5)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01JU	White Glacier	Complex clastic, carbonate, and volcanic section of Permian age is intruded and metamorphosed by Tertiary and Cretaceous granitic plutons; stratiform massive sulfide deposits present.	JU012,013	None	Sierran massive sulfide, 28c	Reconnaissance geologic mapping by USGS and USBM; geochemical mapping by USGS; some prospecting by USBM.
02JU	Casement Glacier	Paleozoic clastic and carbonate rocks are intruded by Cretaceous and Tertiary granitic dikes; fracturing and alteration are quite local; Mo-Cu porphyry stockwock and disseminated mineralization known in W part of tract.	JU001,002,003	None	a) Porphyry Cu-Mo, 21a b) Porphyry Cu, skarn-related, 18a c) Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; some prospecting by USBM; extensive private prospecting of then-deglaciated areas in 1960's and 1970's.
03JU	Berg Creek	Slightly metamorphosed Paleozoic volcanic and carbonate rocks; minor Cu mineralization in volcanics.	JU004, 005, 009, 010	None	Basaltic Cu, 23	Reconnaissance geologic and geochemical mapping by USGS; probably essentially unprospected.
04JU	Sullivan Mountain to Sullivan River	Skarn and stratiform mineralization occurs in Paleozoic metaclastic, metacarbonate, and metavolcanic rocks in simple W.-dipping structure.	JU006-008; SK016a,b	None	a)Cu skarn, 18b b)Zn-Pb skam, 18d c)Besshi massive sulfide, 24b(?)	Reconnaissance geologic and geochemical mapping by USGS; also by USBM; moderate to high-level of recent prospectting.
05JU	Excursion River	Silurian graywacke and argillite with some carbonate beds are intruded by scattered granitic plugs and stocks with possibly associated veins.	JU018, 022-24	None	Polymetallic veins, 22c	Reconnaissance geologic and geochemical mapping by USGS; some prospecting by USBM and private industry.
06JU	Nun Mountain	Silurian graywacke and argillite with some carbonate beds are intruded by a large Cretaceous granodiorite pluton; permissive skarn environment, but no known deposits.	None	None	a)Cu skarn, 18b b)Zn-Pb skam, 18d	Reconnaissance geologic and geochemical mapping by USGS; minor prospecting by USBM and private industry.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8	9	10	11	12	13
Accessibility and related factors, including percent of tract in different land status(es)	Summary of undiscovered resource information	Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	Grade and tonnage model available?	Tract area, in square kilometers	Remarks and references to tracts in table 3.
In part close to tidewater; steep terrain in part; some glacier cover; brush and timber at lower elevations. 100% in USNPS Glacier Bay National Park	Known deposits; permissive geology; Cu, Mo, Pb, Co, Cr, Ni, Hg stream sediment anomalies; relatively small and well-known tract.	0 0 0 1 2	Yes	63	
In part close to tidewater; locally rugged, but generally moderate relief. 89% in USNPS Glacier Bay National Park. 11% in USFS Tongass National Forest.	Permissive geology; Mo stream sediment geochem anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	JU 330 MF 104 SK 142 Tot 576	Includes tracts 08MF and 06SK.
Remote; steep; some glacier cover. 85% in USNPS Glacier Bay National Park; 15% in USFS Tongass National Forest.	Known deposit; permissive geology.	0 0 0 0 1	Yes	132	
In part close to tidewater; locally steep and rugged. 11% in USFS Endicott River Wilderness; 76% in USFS Tongass National Forest; 13% in Alaska State land.	Known deposits; permissive geology; As, Ni, Ag, Cu, Zn bedrock geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 1 1 2	Yes Yes Yes	JU 246 SK 89 Tot 335	Includes tract 08SK.
In part remote; some parts very steep and rugged; some glacier cover; timber at lower elevations. 70% in USNPS Glacier Bay National Park; 25% in USFS Tongass National Forest. 5% in Sealaska Native lands.	Known deposits; permissive geology; Ag, Be, Co, Hg, Ni, Pb, Zn, Au stream-sediment geochem anomalies.	0 0 0 1 2	Yes	430	
In part close to tidewater; W part steep and rugged; some glacier cover; timber at lower elevations. 10% in USNPS Glacier Bay National Park; 90% in USFS Tongass National Forest.	Permissive geology; aeromagnetic anomaly associated with pluton.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	246	

Table 4-JU. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Juneau quadrangle, Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 5)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
07JU	Neka Bay, W of	Paleozoic carbonate and clastic rocks are intruded and hornfelsed by Cretaceous granodiorite plutons; permissive skarn environment, but no known deposits.	None	None	a)Cu skarn, 18b b)Zn-Pb skarn, 18d	Reconnaissance geologic and geochemical mapping by USGS.
11JU	Kensington-Jualin (A) and Eagle River-Juneau (B)	At (A): Au-bearing Qtz veins in shear zones in middle Cretaceous Qtz monzonite pluton and in adjacent hornfelsed Late Triassic(?) basalt; at (B): Au-bearing Qtz veins in phyllite, slate, greenstone, greenschist, and metagabbro of Permian(?) through middle Cretaceous age that are variously deformed and metamorphosed; also in highly altered Qtz monzonite sills of middle or Late Cretaceous age; significant production from several mines.	(A): JU047-055, 057-059; (B): JU060-134, TR006,007,008	(A): Significant production in past from deposits JU047, 049, 050, 051, 055, 058; Kensington (JU051) and Jualin (JU058) now being reopened. Reserves: JU051 has reserve of 20 million T with 0.14 oz/T; JU058 reported to have 1.19 million T with 0.236 oz/T Au. (B)Very large production in past from deposits JU072(Eagle River), JU101(Alaska-Juneau), JU125 (Treadwell Group); Alaska-Juneau now being evaluated for reopening. Reserves: JU101 has 100 million T with 0.047 oz/T Au; 100 oz Au produced from Enterprise (TR008).	a)Au-Qtz veins, 36a b)Sierran massive sulfide, 28c	Intense prospecting in the past; reconnaissance and some detailed geologic and geochemical mapping by USGS; some detailed sampling by USBM.
13JU	Juneau Icefield	Paleozoic and younger(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons; carbonates are permissive skarn environments, but no deposits known.	None	None	a) Cu-skarn, 18b b) Pb-Zn skarn, 18c	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Close to tidewater, locally heavy timber; steep in part. 83% in USFS Tongass National Forest; 17% in proposed USFS Chichagof Wilderness.	Permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	JU 48 SI 2 Tot 50	Includes tract 09SI.
Close to tidewater; heavy timber; some mines and prospects close to roads. 3% in USFS proposed Berners Bay Wilderness; 30%(?) in Tongass National Forest; Remainder in Sealaska Native lands, in Alaska State Park, in City and Borough of Juneau, in Alaska State lands, and privately owned.	Permissive geology; many large mines and significant prospects; large tract, but relatively well explored.	a) 0 1 2 3 5 b) 0 0 1 2 3	Yes Yes	JU 801 TR 96 Tot 897	Includes tract 01TR.
Remote; steep; very extensive glacier cover. 100% in Tongass National Forest.	Permissive geology; good exposures, except for extensive glaciers; some metamorphic rocks may belong to pre-Paleozoic(?) section that is typically unmineralized, but most are probably Paleozoic and Mesozoic.	a) 0 0 0 1 2 b) 0 0 0 1 2	Yes Yes	506	

Table 4-KC. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Ketchikan headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 6)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
03KC	Chickamin River	Schist, gneiss, and minor marble of original Paleozoic and(or) Mesozoic age.	KC084-087	None	a)Zn-Pb skarn, 18c b)Polymetallic vein, 22c c)Cu skarn, 18b d)Metamorphosed massive sulfide, RM/MS	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
07KC	Chickamin-Rudyerd	Gneiss, schist, and minor marble of original Paleozoic and(or) Mesozoic age.	KC088, 090-093	None	a)Polymetallic vein, 22c b)Cu skarn, 18b c)Metamorphosed massive sulfide, RM/MS	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
08KC	Southern Revillagigedo Island	Argillite, phyllite, some greenschist, Ms schist, marble intruded by now-metamorphosed aplite and granodiorite and by unmetamorphosed granodiorite and gabbro.	KC015-017, 022-037, 096, 097	Production: 400 to 500 T Pb-Zn-Ag ore produced from KC022 in 1947. Reserves: estimated at KC022, about 2,500 T with 6 to 7% Pb, 28% Zn; at KC025 100,000 T ore with 7.5% Zn, 1.0% Cu, and 100,000 T at lower grade. Also, USBM has inferred estimates KC017, 022, 023, 025, 027, 032, and 033, but they are not yet available.	a)Au-Qtz vein, 36c b)Polymetallic vein, 22c c)Sierran massive sulfide, 28c d)Metamorphosed massive sulfide, RM/MS	Reconnaissance geologic and geochemical mapping by USGS; some recent prospecting.
09KC	Alava Bay	Ti-bearing Mag occurs in Cretaceous(?) zoned ultramafic body that intrudes Paleozoic country rocks.	KC038	None	Alaskan PGE, 9	Reconnaissance geologic and geochemical mapping by USGS; some recent prospecting.
10KC	Boca de Quadra-Quartz Hill	Gneiss, schist, minor marble of original Paleozoic and(or) Mesozoic age and pegmatite and gneissic Qtz diorite intruded by altered epizonal Miocene granite plutons and Qtz porphyry dikes.	KC095	No production; Reserves: estim- for KC095 is 1.5 billion T with 0.136% Mo. Also, USBM has an inferred estimate, but it is not yet available.	a)Porphyry Mo, 21b b)Polymetallic vein, 22c c)Cu skarn, 18b	Reconnaissance and some detailed geologic and geochemical mapping by USGS; local intense prospecting.

quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
In part distant from tidewater; rugged; large valleys; heavy timber and brush locally. 100% in USFS Misty Fiords Wilderness.	Known deposit; permissive geology; nonspecific geochemical anomalies reported.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Yes No	KC 130 BC 18 Tot. 148	Includes tracts 11BC and 03KC.
In part close to tidewater, but mostly remote; rugged; heavy timber and brush. 100% in USFS Misty Fiords Wilderness.	Known deposits; permissive geology; nonspecific geochemical anomalies reported; large tract.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) No estimate	Yes Yes No	764	
Much is close to tidewater, but some is remote; locally rugged; heavy timber and brush; some logging roads. 30% in USFS Misty Fiords Wilderness; 10% in proposed USFS Naha River Wilderness; 40% in USFS Tongass National Forest; 20% in Alaska Native lands.	Known deposits; permissive geology; Zn geochemical anomalies; large tract.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) 0 0 0 0 1 d) No estimate	Yes Yes Yes No	1,237	
Close to tidewater; heavy timber and brush locally. 100% in USFS Misty Fiords Wilderness.	Known deposit; permissive geology; aeromagnetic anomaly.	No estimate	No	11	
In part close to tidewater; generally rugged; local heavy timber and brush. 40% in USFS Misty Fiords Wilderness. 60% in non-Wilderness part of USFS Misty Fiords National Monument.	Known world-class porphyry Mo deposit; permissive geology; Be, Mo, Nb stream sediment anomalies; most of tract is heavily prospected; large tract.	a) 0 0 0 1 3 b) 0 0 0 1 2 c) 0 0 0 1 2	Yes Yes Yes	627	

Table 4-KC. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Ketchikan headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 6)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
14KC	Southwestern Gravina Island (A)-Eastern Annette Island (B)	Upper Triassic Puppets Fm. metarhyolite and metadacite flows and tuff host massive, disseminated, and vein sulfide deposits.	(A): KC042, 043, 047-062, 064, 067-070; (B): KC076-081, 083	Production: at KC056, small test shipment in early 1900's. Reserves: USBM has inferred estimates for KC055 and 056, but they are not yet available.	a) Sierran massive sulfide, 28c b) Polymetallic vein, 22c	Reconnaissance and some detailed geologic, geochemical, and geophysical mapping by USGS; intense past and recent prospecting.
15KC	Yellow Hill	Ti-bearing Mag occurs in Cretaceous(?) zoned ultramafic body that intrudes Paleozoic country rocks.	KC074,075	None	Alaskan PGE, 9	Reconnaissance and some detailed geologic, geochemical, and geophysical mapping by USGS; some past and recent prospecting.
16KC	Tongass Narrows	Phyllite, schist, greenschist intruded by now-metamorphosed diorite and by Tertiary leucogabbro host Au-Qtz veins vicinity of the Tongass Narrows fault.	KC018-021, 039-041, 044-046, 063, 066, 071, 072	Production: several 1,000 oz Au produced from tract before 1917. Reserves: USBM has inferred estimates for KC018-020, 039, 040, 044-046.	a) Au-Qtz vein, 36a b) Polymetallic vein, 22c	Reconnaissance and some detailed geologic, geochemical, and geophysical mapping by USGS; some prospecting.
18KC	Boca de Quadra-Sitlan Island	Paleozic and Mesozoic metasedimentary and some metavolcanic rocks intruded by Cretaceous granodiorite plutons and Cretaceous or Tertiary trondjhemite sills; metavolcanic rocks are permissive massive sulfide environments.	None	None	a) Sierran massive sulfide, 28c b) Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; little past or recent prospecting.
19KC	Marten Arm	Gneiss, schist, minor marble intruded by pegmatite, gneissic Qtz diorite and granodiorite; schist derived from metavolcanic rocks are permissive massive sulfide environments.	KC098-100	None	Metamorphosed massive sulfide, RM/MS	Reconnaissance geologic and geochemical mapping by USGS; little past or recent prospecting.

quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Close to tidewater in part; locally steep; locally heavily wooded. 57% in USFS Tongass National Forest; 43% in Metlakatla Indian Reservation.	Known deposits; permissive geology; nonspecific geochemical anomalies reported; moderate-size tract.	a) 0 0 1 2 4 b) 0 0 0 1 2 c) 0 0 0 0 1	Yes Yes Yes	(A) 130 (B) 53 Tot. 183	
Close to roads; low relief; little timber and brush; poor outcrops. 100% in Metlakatla Indian Reservation.	Known deposit; permissive geology; aeromagnetic anomaly.	No estimate	No	21	
Close to tidewater and, in part, to roads; heavy timber and brush; moderate level of past prospecting, little recent. 40% in Ketchikan City and private lands; 30% in Alaska Native lands; 10% in Metlakatla Indian Reservation; 20% in USFS Tongass National Forest.	Known deposits; permissive geology; nonspecific geochemical anomalies reported; moderate-size tract.	a) 0 0 1 2 4 b) 0 0 0 0 1	Yes Yes	224	
Close to tidewater in part; moderately rugged; heavy timber. 100% in USFS Misty Fiords Wilderness.	Permissive geology, an extension of tract 08KC to NW, but without all the deposit types expected in that tract.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	KC 172 PR 120 Tot. 292	Includes tracts 04PR and 18KC.
Close to tidewater in part; moderately rugged; heavy timber. 100% in USFS Misty Fiords Wilderness.	Known deposits; permissive geology; relatively small tract.	No estimate	No	56	

Table 4-MF. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Mount Fair-
of headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 7)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
04MF	Mount Fairweather	Layered cumulus-type Tertiary gabbro body with some mineralization (known from float) is similar to that in tract 09MF; intrudes metamorphosed Mesozoic flyschoid and volcanic rocks.	None	None	Synorogenic-synvolcanic Ni-Cu(?), 7a	Reconnaissance geologic and some geochemical mapping by USGS; essentially unprospected.
05MF	Tarr Inlet	Complex clastic, volcanic, and carbonate secttion of Permian(?) and(or) Triassic(?) age is intruded and metamorphosed by Tertiary and Cretaceous granitic plutons and dikes; known porphyry Cu and massive sulfide deposits.	MF023-025, 027, 029-031; SK001-003	Reserves: USBM/USGS estimate at MF027: 270,000 T with 2.7% Cu, 5.2% Zn, 0.03 oz/T Au, 1.0 oz/T Ag; and 530,000 T with 0.4% Cu, 0.3% Zn, 0.006 oz/T Au, 0.35 oz/T Ag.	a) Porphyry Cu, 17 b) Sierran massive sulfide, 28c	Reconnaissance geologic mapping by USGS and USBM; geochemical mapping by USGS; extensive prospecting by USBM.
06MF	Reid Inlet	Narrow discontinuous sulfide-bearing Qtz veins in altered Cretaceous granitic rocks and hornfelsed Paleozoic clastic rocks.	MF032-042, 067	About 7,150 oz Au produced during 1940's, mostly from Leroy and Rainbow mines (MF033, 034); no USBM/USGS estimate of reserves.	Au-Qtz vein, 36a	Reconnaissance geologic and geochemical mapping by USGS; much early surface prospecting.
07MF	Muir Inlet	Paleozoic clastic and carbonate rocks are intruded by Cretaceous and Tertiary granitic dikes; fracturing and alteration are widespread; Mo-Cu porphyry stockwock and disseminated mineralization known.	MF074, 076-080 SK006, 012	Reserves: USBM/USGS estimate for MF079: indicated: 8.2 million T with 0.06% Mo, 0.02% Cu; and 137 million T with 0.04% Mo, 0.02% Cu; also inferred: 9.1 million T with 0.06% Mo, 0.02% Cu.	a) Porphyry Cu-Mo, 21a b) Porphyry Cu, skarn-related, 18a c) Polymetallic vein, 22c d) Polymetallic replacement, 19a	Reconnaissance geologic and geochemical mapping by USGS; some prospecting by USBM; extensive private prospecting of then-deglaciated areas in 1960's and 1970's.
09MF	Crillon-La Perouse	Layered cumulus-type Tertiary gabbro body intrudes metamorphosed Mesozoic flyschoid and volcanic rocks; known magmatic segregation Ni-Cu deposit in peridotite at base.	MF005-007, 012-015	Reserves: USBM/USGS estimate for MF079: indicated: 90 million T with 0.53% Ni, 0.33% Cu, unspecified amount of PGE; inferred: 90 million T with 0.53% Ni, 0.33% Cu, unspecified amount of PGE.	Synorogenic-synvolcanic Ni-Cu(?), 7a	Reconnaissance geologic and some geochemical mapping by USGS; little prospected.

weather quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Very, very remote, very rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	USGS/USBM speculative resource estimate: 96 million T with 0.53% Ni, 0.33% Cu; this estimate based on many float samples containing Cu, Ni, Cr, Pt; large Cu-stained zones; large aeromagnetic anomaly; Co, Cr, Cu, Ni bedrock geochemical anomalies not far to W.	See estimate in column 9.	Yes, but N.A.	81	
Close to tidewater, quite rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	USGS/USBM hypothetical resource estimate: a) 50 million T with 0.4% Cu b) 1.0 million T with 1.5% Cu and 2.0% Zn	a) See estimate in column 9. b) See estimate in column 9.	Yes, but N.A. Yes, but N.A.	SK 90 MF 219 Tot 309	Includes 05MF and 03SK.
Close to tidewater, locally rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park.	USGS/USBM hypothetical resource estimate is about 14,000 oz Au; based on numerous Au-lode showings, possible placer prospects(?); Au, Cu stream-sediment geochemical anomalies.	See estimate in column 9	Yes, but N.A.	74	
In part close to tidewater; locally rugged, but generally moderate relief. 100% in USNPS Glacier Bay National Park.	USGS/USBM hypothetical resource estimate for (a) and (b): 100 million T with 0.15 to 0.20% Mo.	a)See estimate in column 9. b)See estimate in column 9. c) 0 0 0 0 1 d) 0 0 0 0 1	Yes, but N.A. Yes, but N.A. Yes Yes	MF 243 SK 125 Tot 368	Includes 05SK and 07MF.
Essentially remote, very rugged, extensive glacier cover. 100% in USNPS Glacier Bay National Park, but patented claims cover part of deposit.	USBM/USGS hypothetical resource estimate: 90 million T with 0.53% Ni, 0.33% Cu, unspecified amount of PGE; this is based on numerous showings of Cu, Ti, Fe mineralization in N and W parts of tract.	See estimate in column 9.	Yes, but N.A.	290	

Table 4-MF. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Mount Fair- of headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 7)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
10MF	Cape Spencer North	Biotite schist and gneiss derived from Mesozic flyschoid and volcanic rocks are intruded by Tertiary and Tertiary and(or) Cretaceous granitic and layered gabbroic stocks, the latter with mineralization.	MF018, 020 (both related to gabbro stocks)	None	a) Polymetallic vein, 22c b) Synorogenic-synvolcanic Ni-Cu(?), 7a	Reconnaissance geologic and some geochemical mapping by USGS; little prospected.
11MF	Dundas River	Paleozoic carbonate, clastic and minor volcanic rocks intruded by voluminous Tertiary and Cretaceous granitic rocks; skarn deposits near intrusions.	MF050b, 052-055, 057-061	Reserves: USBM/USGS estimate for MF054: indicated resource: 27,000 T with 1.0% Cu, 0.1 oz/T Au, 2.0 oz/T Ag.	a) Cu skarn, 18b b) Polymetallic vein, 22c c) Porphyry Cu-Mo, 21a	Reconnaissance geologic and some geochemical mapping by USGS; little recent prospecting.

weather quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 100% in USNPS Glacier Bay National Park.	Known deposits, permissive geology, Be, Cr, Co, Cu, Ni, Zn, Hg, Pb geochemical anomalies.	a) 0 0 1 2 3 b) 0 0 0 0 1	Yes Yes	437	
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 85% in USNPS Glacier Bay National Park. 15% in proposed USFS Pleasant-Lemesurier Islands Wilderness.	Known deposits; permissive geology; Cu, Zn, Pb, Sn, W geochemical anomalies.	a) 0 0 1 2 3 b) 0 0 1 2 3 c) 0 0 0 0 1	Yes Yes Yes	413	

Table 4-PA. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Port Alexander headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 9)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
04PA	Central Baranof (A), Red Bluff Bay (B)	In (A): elongate lenses of serpentinite occur as tectonic slivers in phyllite and slate and contain minor Chr pods and disseminations; at (B): magmatic segregations of Chr in serpentinized dunite of uncertain origin.	(A) PA006-013; (B) PA016	Reserves: at PA016, 8 separate deposits contain a total of 30,000 T with 18 to 40% Cr2O3.	Minor podiform chromite, 8a(?)	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; at (B) detailed geologic mapping and sampling by USGS.
05PA	Security Bay	Dominantly middle Paleozoic graywacke, conglomerate, and some carbonate rocks; significant faults.	None	None	Polymetallic veins, 22c(?)	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; little exploration.
06PA	Saginaw Bay-Cornwallis Peninsula	Dominantly middle Paleozoic graywacke, conglomerate, and some carbonate rocks in SW one-third of tract; mixed volcanic, carbonate, and clastic Mesozoic rocks to NE; Brt masses and veins in N part of tract.	PA018-027	None	a)Sierran massive sulfide, 28c b)SE Missouri Pb-Zn, 32a(?)	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; local intense exploration.
08PA	Southwest Kuiu	Cretaceous granodiorite plutons and dikes intrude middle Paleozoic graywacke, carbonate, and minor conglomerate; some large altered zones.	None	None	a) Porphyry Cu-Mo, 21a b) Polymetallic veins, 22c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; little exploration.

quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
(A) is rugged and remote; (B) is close to tidewater with brush cover. 56% in USFS South Baranof Wilderness; 44% in USFS Tongass National Forest.	Known deposits; permissive geology; both (A) and (B) are small tracts.	0 0 1 2 3	Yes	(A) 28 (B) 4 Tot. 32	
Timber- and brush-covered; some logging roads. 100% in USFS Tongass National Forest.	Permissive geology; Mo, Ba stream-sediment anomalies; Cu, Pb, Zn, Mo, Cr, Ni, Co bedrock anomalies ; centered on aeromagnetic low between two highs; prominent linears and faults.	0 0 0 1 2	Yes	239	
Timber- and brush-covered; some logging roads. 84% in USFS Tongass National Forest; 15%(?) in Alaska Native lands; 01% in proposed USFS Rocky Pass Wilderness.	Permissive geology; Pb, Ba, Zn, Nb stream-sediment anomalies; Cu, Zn, Pb, La, Nb, Mo, Cr, Ni, bedrock anomalies; large, deep aeromagnetic high; prominent faults.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	PA 145 PE 08 Tot 153	Includes tracts 02PE and 06PA.
Timber- and brush-covered; locally steep; in part close to tidewater. 100% in proposed USFS South Kuiu Wilderness.	Permissive geology; Mo, W, Zn stream-sediment anomalies in N part of tract; Y, Nb to S; weak Mo, Zn, Cu, Co bedrock anomalies in N part of tract; As, Ag, Au, Pb, Cu in SW part; Ag, As, Sb, Zn,Cu, Pb in SE part.	a) 0 0 0 0 1 b) 0 0 0 1 2	Yes Yes	PA 263 PE 14 Tot 277	Includes tracts 04PE and 08PA.

Table 4-PE. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Petersburg headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 8)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01PE	Kake-Gunnuck and Sitkum Creeks	Deformed and slightly metamorphosed Mesozoic and Paleozoic clastic and volcanic rocks are permissive environment for massive sulfide deposits.	None	None	a) Sedimentary exhalative, 31a; b) Besshi massive sulfide, 24b(?)	Reconnaissance geologic mapping and geochemical sampling by USGS.
03PE	Port Camden	Tertiary intermediate and mafic volcanic cover Early Tertiary sandstone and conglomerate with possible U-Th resources.	PE002,003	None	Sandstone U, 30c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; little exploration.
05PE	Southwest Kupreanof	Middle Tertiary felsic and intermediate volcanic rocks; possible eruptive center; close association with granitic rocks of tract 06PE; some areas of intense alteration; probably mostly underlain by Tertiary sandstone and conglomerate of the Kootznahoo Formation (see tract 03PE).	PE004,030	None	a)Epithermal vein, 25b b)Polymetallic vein, 22c c)Sandstone U, 30c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; moderate level of prospecting, including drilling.
06PE	Tunehean Creek-Castle River (A), Southeast Zarembo (B), Central Etolin (C), Niblack and Deer Islands (D)	Middle Tertiary alkalic and subalkalic granitic rocks intrude Cretaceous and Mesozic turbidites, other metasedimentary and metavolcanic rocks, Cretaceous granitic rocks, and Tertiary sedimentary and volcanic rocks; closely associated with Tertiary volcanic rocks of tract 05PE to the NW, but more deeply eroded to the SE.	None	None	a)Felsic plutonic U and REE, FP/UREE(?) b)Felsic plutonic Th and REE veins, FP/THRE (?)	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS; moderate level of prospecting locally.
07PE	Kosciusko-Northern Prince of Wales	Contact metamorphosed hornfels and marble of original Paleozoic age in aureole of early Late Cretaceous granodiorite pluton are permissive skarn environment.	PE005(marble),006-012	Reserves: at PE007, 10,000 to 20,000 T with 1.5% MoS_2.	a)Porphyry Cu-Mo, 21a b)Cu skarn, 18b c)Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting locally.

quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of

8	9	10	11	12	13
Accessibility and related factors, including percent of tract in different land status(es)	Summary of undiscovered resource information	Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	Grade and tonnage model available?	Tract area, in square kilometers	Remarks and references to tracts in table 3.
Close to tidewater and logging roads; some heavy timber. 100%(?) in Alaska Native lands.	Permissive geology; Cu, Zn bedrock geochemical anomalies in N and W part of tract; in central and E part Cu, Pb, Ni, Cr, Mo bedrock and Co, Ni stream-sediment geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	PE 75 SD 25 Tot 100	Includes tracts 08SD and 01PE.
Timber- and brush-covered; some logging roads; 62% in proposed USFS Rocky Pass Wilderness; 13% in proposed USFS West Duncan Canal Wilderness; 21% in USFS Tongass National Forest, some of which is proposed Research Natural Area; 04% in USFS Tebenkof Bay Wilderness.	Permissive geology; U bedrock anomalies.	0 0 0 0 1	Yes	PE 744 PA 93 Tot 837	Includes tracts 07PA and 03PE.
Most is close to tidewater; local heavy brush and timber; 30% in proposed USFS West Duncan Canal Wilderness. 70% in USFS Tongass National Forest.	Permissive geology; aeromagnetic low in SW part of tract; Cu, Pb, Mo, Sn, W, La, Y, Nb, Be stream-sediment anomalies; Zn, Cu, Pb, As, Ag, Nb, Be, La, Mo, Y, Sn bedrock anomalies.	a) 0 0 0 1 2 b) 0 0 0 1 2 c) 0 0 0 0 1	Yes Yes Yes	640	U resources (c) are included with those estimated for tract 03PE.
Most subtracts close to tidewater; some locally rugged and steep; most have heavy brush and timber; some logging roads in (B) and (C); 04% in proposed USFS West Duncan Canal Wilderness; 20% in proposed USFS South Etolin Wilderness; 76% in USFS Tongass National Forest.	Permissive geology; strong aeromagnetic anomalies; local aeroradioactivity anomalies; La, Nb, Y, Pb stream-sediment anomalies; Be, Nb, Y, Sn, Cu, Mo, La, Co, Cr bedrock anomalies.	a) 0 0 0 0 1 a) 0 0 0 0 1	No Maybe	(A) 28 (B) 80 (C) 213 (D) 9 Tot 330	
In part close to tidewater; locally steep; heavy brush and timber; some logging roads; 55% in proposed USFS Calder/Holbrook Wilderness; 45% in USFS Tongass National Forest.	Known deposits; permissive geology; minor W, Mo stream-sediment anomalies; Mo, Cu, Bi bedrock anomalies.	a) 0 0 0 0 1 b) 0 0 0 1 2 c) 0 0 1 2 3	Yes Yes Yes	287	

Table 4-PE. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Petersburg headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 8)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
08PE	Salmon Bay	Silurian turbidites and volcanic rocks are intruded by carbonatite and felsic dikes.	PE013-015	None	a)Carbonatite, 10(?) b)Felsic plutonic U and REE, FP/UREE(?) c)Felsic plutonic Th and REE, FP/THREE(?)	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting.
10PE	Blashke Islands (A) and Kane Peak(B)	Alaskan-type zoned mafic-ultramafic bodies of mid-Cretaceous age intrude Silurian turbidites and minor volcanic rocks at (A) and Cretaceous turbidites at (B).	(A)PE016 (B)PE032	Reserves: a large tonnage with 1 to 2% sulfides.	Alaskan-type PGE, 9	Reconnaissance geologic and geochemical mapping by USGS; moderate level of prospecting.
11PE	Coffman Cove	Silurian turbidites and minor volcanic rocks are intruded by mid-Cretaceous granodiorite.	None	None	Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
12PE	Duncan Canal-Zarembo Island	Deformed and slightly metamorphosed Mesozoic and Paleozoic clastic and volcanic rocks in Duncan Canal fault zone; large blocks of Devonian carbonate suggest that the major unit present before youngest faulting was a melange; bedded barite and massive sulfide deposits present.	PE018-022, 027, 029, 031	Production: at PE022, 0.75 million T Brt mined 1965-1980. Reserves: USBM has inferred estimates for several prospects, but they are not yet available.	a)Sierran massive sulfide, 28c b)Bedded barite, 31b	Reconnaissance geologic mapping and geochemical sampling by USGS; locally heavily prospected.
13PE	Kupreanof Mountain	Low-grade Mesozoic metavolcanic and minor metasedimentary rocks in the Duncan Canal fault zone; enigmatic deposit present.	PE017	None	a)Cyprus massive sulfide, 24a(?), and/or b)Cu skarn, 18b(?)	Reconnaissance geologic mapping and geochemical sampling by USGS; locally heavily prospected and drilled at PE017.
14PE	Woewodski Island	Triassic and other Mesozoic low-grade metavolcanic and metasedimentary rocks in the Duncan Canal fault zone intruded by a Cretaceous granodiorite pluton; Au mines present.	PE023-026	Production: at PE025, >100 oz Au. Reserves: none reported at this time.	a)Au-Qtz vein, 36a b)Sierran massive sulfide, 28c(?)	Reconnaissance geologic mapping and geochemical sampling by USGS; locally heavily prospected and drilled at several places.

quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Close to tidewater; heavy brush and timber; 100% in USFS Tongass National Forest.	Known deposits; permissive geology; scattered Mo, La, Nb stream-sediment anomalies; Mo, Zn, Pb, Au, Ag, Cu, Be, La, Nb, Ba bedrock anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes No Maybe	16	
Both subtracts close to tidewater; no relief at (A), moderate to steep at (B); locally thick brush and timber. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; strong, steep-sided aeromagnetic anomalies; at (A) Ni, Cr, Co stream-sediment anomalies; Ni, Cr, Cu, Co, Pb bedrock anomalies; at (B) Co, Ni, Cu stream-sediment anomalies; Ni, Cr, Cu, Co, Pb, Zn, Mo bedrock anomalies.	0 0 0 0 1	No	(A) 10 (B)PE 22 SD 02 Tot 34	Includes tracts 10SD and 10PE.
Close to tidewater; moderate relief; thick timber and brush; some logging roads. 100% in USFS Tongass National Forest.	Permissive geology; Cr, Ni, Cu stream-sediment anomalies; Cu, Pb, Zn, Cr, Ni, Co bedrock anomalies in N part; small tract.	No estimate.	Yes	CR 08 PE 07 Tot 15	Includes tracts 04CR and 11PE.
Close to tidewater; some heavy timber and brush. 05% in Petersburg Creek-Duncan Salt Chuck Wilderness; 20% in proposed USFS West Duncan Canal Wilderness; 75% in USFS Tongass National Forest.	Known deposits; permissive geology; scattered W, Mo, Cu, Ba, Pb stream-sediment anomalies; strong Ba, Zn, Pb, Cu, some Mo, Cr, Co bedrock anomalies.	a) 0 1 2 3 4 b) 0 0 0 1 2	Yes Yes	PE 671 SD 05 Tot 676	Includes tracts 09SD and 12PE.
Close to tidewater; some heavy timber and brush. 10% in Petersburg Creek-Duncan Salt Chuck Wilderness; 90% in USFS Tongass National Forest.	Known enigmatic deposit; permissive geology; Zn, Pb, Cu, Co, Ag bedrock anomalies; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	28	
Close to tidewater; some heavy timber and brush. 75% in proposed USFS West Duncan Canal Wilderness; 25% in USFS Tongass National Forest.	Known deposits; permissive geology; small, sharp-sided aeromagnetic anomaly may be from a concealed pluton; Au stream-sediment anomalies; Au, Ag, Cu, Pb, Zn, Co, Cr, Ni, Mo bedrock anomalies; small, well-explored tract.	a) 0 0 1 2 3 b) 0 0 0 0 1	Yes Yes	30	

Table 4-PE. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Petersburg headings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 8)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
15PE	Outer Etolin	Mesozoic turbidites, other metasedimentary and metavolcanic rocks, and Cretaceous granitic rocks are intruded by Middle Tertiary alkalic and subalkalic granitic rocks, producing permissive vein and skarn environments; intrusive rocks elsewhere (in tract 05PE) have close relation to volcanic rocks.	None	None	a)Polymetallic vein, 22c b)W vein, 15a(?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
16PE	Canoe Passage	Fault cuts Cretaceous turbidites intruded by Late Cretaceous tonalite and Middle Tertiary granite.	None	None	Polymetallic vein, 22c	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
17PE	Sukoi Islets(A), Northeast Mitkof (B)	Cretaceous turbidites and minor volcanic rocks are intruded by locally layered mid-Cretaceous Hbl gabbro and hornblendite bodies that are Mag-bearing.	None	None	Alaskan PGE, 9(?)	Reconnaissance geologic and geochemical mapping by USGS; low level of prospecting.
20PE	Groundhog Basin	Amphibolite and upper greenschist grade metapelitic, metacarbonate, and metavolcanic rocks of original Mesozoic and Paleozoic age near the great tonalite sill are intruded by evolved Late Tertiary Sn-bearing granite and related rhyolite sill more or less along the Coast Range megalineament; stratiform Sn-base metal replacement deposits present.	PE039,040	Reserves: at PE039, "several hundred thousand T with 8.0% Zn, 1.5% Pb, 1.5 oz/T Ag, in massive sulfide deposits and "several hundred thousand T" with 2.5% Zn, 1.0% Pb in disseminated deposits; at PE040, "many hundred thousand T" with 1.6% Zn, 0.1% Pb in disseminated deposits and "several million T with 0.14% Zn, 0.09% Pb in Qtz-Fl vein deposits. with 0.14% Zn, 0.09% Pb in Qtz-Fl vein deposits. Also: USBM has inferred estimates for the prospects, but they are not yet available.	a)Replacement Sn, 14c b)Metamorphosed massive sulfide, RM/MS (model as Sierran massive sulfide, 28c) c)Au-Qtz vein, 36a	Reconnaissance geologic and geochemical mapping by USGS; older detailed USGS mapping; moderate to high level of prospecting, including deep drilling.

quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
In part close to tidewater; some parts steep and rugged; some thick brush and timber; some logging roads. 41% in proposed USFS South Etolin Wilderness; 59% in USFS Tongass National Forest.	Permissive geology; Cr, Ni, Mo, W, Pb, Nb stream-sediment anomalies; Cu, Pb, Au, Mo, Zn, Cr, Ni bedrock anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	PE 316 BC 25 CR 70 KC 50 Tot. 461	Includes tracts 09BC, 01KC, 05CR, and 15PE.
Close to tidewater; local thick brush and timber. 100% in proposed USFS South Etolin Wilderness.	Permissive geology; Cu, Mo, Ni bedrock anomalies; very small tract.	No estimate.	Yes	PE 16 CR 4 Tot. 20	Includes tracts 06CR and 16PE.
At or close to tidewater; thick timber and brush. 100% in USFS Tongass National Forest.	Permissive geology; Cu, Co, Ni, Cr bedrock anomalies; very small tract.	No estimate.	No	12	
Relatively remote; steep; extensive snow and glacier cover. 100% in USFS Tongass National Forest.	Known deposits; permissive geology; strong Sn, Mo, W stream-sediment anomalies; Sn, Cu, Pb, Zn, Mo, Ni, Cr, Co bedrock anomalies; small tract.	a) 0 0 1 2 3 b) No estimate c) No estimate	Yes No Yes	PE 36 BC 07 Tot 43	Includes tracts 03BC and 20PE.

Table 4-PR. Tongass National Forest mineral resource tract information for tracts entirely or principally in the prince Rupert ings. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 10)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
03PR	Duke Island	Ti-bearing Mag occurs in Cretaceous(?) zoned ultramafic body that intrudes Paleozoic country rocks.	PR003-019	None	Alaskan PGE, 9	Reconnaissance and some detailed geologic, geochemical, and geophysical mapping by USGS and others; some intense prospecting.

quadrangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of head-

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Close to tidewater; low relief; limited outcrop. 100% in USFS Tongass National Forest.	Known deposit in quad to S; permissive geology; aeromagnetic anomaly; non-specific geochem anomalies reported.	No estimate	No	PR 162 KC 03 Tot. 165	Includes tracts 17KC and 03PR.

Table 4-SD. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Sumdum quadrangle. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 13)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
02SD	Snettisham	Au-bearing Qtz veins occur in and close to Cretaceous Mag-rich pyroxenite and diorite.	SD003-005	Production: at least 2,000 oz Au mined in early 1900's Reserves: Mag-rich estimate is about 500,000 T with 18.9% Fe, 2.6% Ti, 0.7% V; USBM has revised inferred estimates, but they are not yet available.	a)Au-Qtz vein, 36a b)Alaskan PGE, 9	Reconnaissance geologic and geochemical mapping by USGS; detailed sampling by USBM; extensive private drilling.
04SD	Tracy Arm-Stikine River	Deformed and metamorphosed Paleozoic and Mesozoic clastic and volcanic rocks are intruded by latest Cretaceous-earliest Tertiary great tonalite sill; known sulfide deposits are in metamorphic rocks close to the sill and have been metamorphosed; they are inferred to have been Sierran-type massive sulfide deposits.	SD006,008,009-011, 015-017, 021, 025, 036, PE034	Production: at SD036, 50 oz Au in early 1900's. Reserves: at SD009-7,300 T with 0.23 oz/T Au, 0.31 oz/T Ag, 0.7% Cu; SD011-187,000 T with 3.42% Zn,1.42% Cu, 0.43 oz/T Ag, 0.008 oz/T Au; SD016, 017-26.7 million T with 0.57% Cu, 0.37% Zn, 0.3 oz/T Ag; USBM has revised inferred estimates, but they are not yet available.	a)Metamorphosed massive sulfide, RM/MS (model as Sierran massive sulfide, 28c) b)Au-Qtz vein, 36a	Reconnaissance geologic mapping and geochemical sampling by USGS in N half of tract, less in S half; extensive drilling at SD009, 011, 016, 017.
05SD	Endicott Peninsula	Au-Qtz and polymetallic vein and possible metamorphosed Sierran-type massive sulfide deposits occur in highly deformed and variably metamorphosed Paleozoic and Mesozoic clastic, volcanic, and carbonate rocks that are intruded by Late Cretaceous granodiorite and tonalite plutons.	SD019, 022-024, 026-035, 037-040	Production: SD022 produced 24,000 oz Au and 24,000 oz Ag in early 1900's; several Au-Qtz veins in Windham Bay area each produced a few 1,000 oz Au at about the same time, average Au content about 0.25 oz/T. Reserves: USBM has inferred estimates for some localities, but they are not yet available.	a)Sierran massive sulfide, 28c b)Au-Qtz veins, 36a	Reconnaissance geologic mapping and geochemical sampling by USGS; intensely prospected in early 1900's.
06SD	Dawes Glacier-Buddington Range	Tertiary granodiorite crops out over a large area; several known occurrences of Cu minerals in thin veinlets.	SD042,043,045,046	None	a)Porphyry Cu, 17 b)Polymetallic veins, 22c	Reconnaissance geologic mapping and geochemical sampling by USGS.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
In part close to tidewater; locally heavy timber; steep in part. 100% in USFS Tongass National Forest	Significant known deposits; permissive geology; small tract; quite well prospected.	a) 0 0 0 0 1 b) No estimate; see column 5.	Yes No	23	
In part close to tidewater; in part remote; steep; very extensive glacier cover. 38% in USFS Tracy Arm-Fords Terror Wilderness; 06% in proposed USFS Port Houghton-Sanborn Canal Wilderness; 18% in USFS Stikine-LeConte Wilderness; 38% in USFS Tongass National Forest.	Significant known deposits; permissive geology; large tract; significant geochemical anomalies; strong and steep aeromagnetic gradient; quite well prospected locally.	a) 0 0 1 2 4 b) 0 0 0 0 1	Yes Yes	SD 705 PE 407 Tot 1,112	Includes tracts 18PE and 04SD.
In part close to tidewater; in part heavily bush- and timber-covered. 80% in proposed USFS Chuck River Wilderness; 20% in USFS Tongass National Forest.	Significant known deposits; permissive geology; large tract; significant geochemical anomalies; quite well prospected locally.	a) 0 0 0 1 2 b) 0 0 0 0 1	Yes Yes	537	
Remote; very rugged; much glacier cover. 05% in USFS Tracy Arm-Fords Terror Wilderness; 95% in USFS Tongass National Forest.	Permissive geology; some occurrences and geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 1 2	Yes Yes	320	

Table 4-SD. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Sumdum quadrangle, Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 13)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
07SD	Turn Mountain	Cretaceous Mag-bearing gabbro intrudes Paleozoic and Mesozoic clastic and volcanic rocks; gabbro interpreted to be the outer envelope of an Alaskan-type PGE-bearing body.	None	None	Alaskan PGE, 9	Reconnaissance geologic mapping and geochemical sampling by USGS.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Close to tidewater and logging roads; some heavy timber. 100% in Alaska Native lands.	Permissive geology; Co, Cr, Cu, Mo, Pb, Zn geochemical anomalies; strong aeromagnetic anomaly; small tract.	0 0 0 0 1	No	58	

Table 4-SI. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Sitka quadrangle, Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 11)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01SI	Yakobi-Mirror Harbor	Cretaceous graywacke and Triassic(?) and Cretaceous greenstone are intruded by Tertiary gabbroic rocks that locally contain magmatic sulfide concentrations.	SI001, 002, 016-020, 021	Reserves: at Bohemia Basin (SI002): estimated reserve of 20.1 million T with 0.31% Ni, 0.18% Cu, 0.04% Co; at Mirror Harbor, one deposit contains 8,000 T with 1.57% Ni, 0.88% Cu; another has several million T with 0.2% Ni, 0.1% Cu. USBM has revised inferred estimates for SI018, 019, but they are not yet available.	Synorogenic-synvolcanic Ni-Cu massive sulfide, 7a	Detailed geologic and geochemical mapping by USGS; also geochemical sampling by USBM; intense local prospecting and drilling by private companies.
02SI	Yakobi-Chichagof	Cretaceous graywacke and Triassic(?) and Cretaceous greenstone are intruded by Tertiary granitic and (to N) gabbroic rocks; local swarms of Au-Qtz veins parallel the large linear shear zones; E side of tract includes greenstone, carbonate, and detrital clastic rocks in part older than main part of tract.	SI006, 021, 023-050, 052, 054, 061-068; PA001-005	Production: from Hirst-Chichagof (SI030), about 87,980 oz Au, 20,000 oz Ag; that from Chichagof (SI036), about 700,000 oz Au, 200,000 oz Ag. Reserves: in Chichagof Mining district: Chichagoff mine-indicated: 80,000 T with 0.025 oz/T Au, 0.08 oz/T Ag; inferred: 463,000 T with 0.3 oz/T Au, 0.09 oz/T Ag; Chichagoff tailings, indicated: 456,000 T with 0.11 oz/T Au, 0.03 oz/T Ag; other inferred: 13,500 T with 0.11 oz/T Au, 0.04 oz/T Ag, 300,000 T with 0.04 oz/T Au, 0.012 oz/T Ag; Hirst-Chichagof mine-inferred: 80,000 T with 1.0 oz/T Au, 0.25 oz/T Ag, 70,000 T with 0.25 oz/T Au, 0.06 oz/T Ag;	a) Au-Qtz veins, 36a b) Basaltic Cu, 23 c) Cyprus massive sulfide, 24a	Semidetailed geologic and geochemical mapping by USGS; also geochemical sampling by USBM; intense local prospecting and drilling by private companies.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 50% in USFS West Chichagof-Yakobi Wilderness; 50% in USFS Tongass National Forest.	Known deposits; permissive geology; NW-trending gravity high to W; Ag, As, Au, Co, Cr, Cu, Ni, W, Zn geochem anomalies.	0 0 0 1 2	Yes	SI 105 MF 12 Tot 117	Includes tracts 13MF and 01SI.
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 50%(?) in USFS West Chichagof-Yakobi Wilderness; 40%(?) in USFS Tongass National Forest; 10%(?) in Alaska State land, City and Borough of Sitka Land, and in private holdings.	Known deposits; permissive geology; NW-trending gravity high to W; (a) Ag, As, Au, Cu, Mo, Pb, W, Zn geochemical anomalies associated with Cretaceous graywacke; (b and c) Ag, Cu, Pb, Zn geochemical anomalies associated with Triassic(?) and Cretaceous greenstone.	a) 0 0 1 2 3 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	SI 680 MF 17 PA 139 Tot 836	Includes tracts 12MF, 02SI, and 02PA.

Table 4-SI. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Sitka quadrangle. Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 11)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
02SI	Yakobi-Chichagof			tailings-inferred: 70,000 T with 0.14 oz/T Au, 0.03 oz/T Ag; dump-inferred: 70,000 T with 0.04 oz/T Au, 0.01 oz/T Ag.		
03SI	Lisianski Inlet	Cretaceous and older greenstone, clastic, and minor carbonate rocks intruded by locally foliated, generally sheared and altered Jurassic and Cretaceous granitic rocks that contain Au-Qtz veins.	SI003-005, 007-012, 015; MF020, 021	Production: Apex-El Nido (SI005) greater than 17,000 oz Au, 2,400 oz Ag. Reserves: USBM has inferred estimate for SI005, but it is not yet available.	Au-Qtz veins, 36a	Semidetailed geologic and geochemical mapping by USGS; also geochemical sampling by USBM.
04SI	Lake Elfindahl(A), Rust Mountain(B), Granite Islands (C), Deep Bay(D), Kruzof Island(E), Takatz Bay(F), and Trap Bay(G), Crawfish Inlet-Gut Bay(H), Redfish Bay(I)	Leucocratic Tertiary and Cretaceous(?) (at G) granodiorites intrude a variety of Cretaceous, older Mesozoic, and Paleozoic rocks; granodiorites are permissive environments for vein and porphyry deposits.	(A) None (B) None (C) None (D) None (E) None (F) SI076 (G) SI082,083 (H) PA014,015 (I) PA018	None	a) Porphyry Cu-Mo, 21a b) Polymetallic veins, 22c	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS.
05SI	Mount Fritz-Lake Suloia	Upper Triassic(?) basalt flows and breccia are permissive environment for massive sulfide deposits.	SI013, 014, 051, 053, 055, 056	None	Basaltic Cu, 23	Reconnaissance and some semidetailed geologic and geochemical mapping by USGS.
06SI	Mount Edgecumbe	Holocene volcanic field with residual magmatic system.	SI069	603 X 10 power 18 J (Smith and Shaw, 1979)	Geothermal	Semi-detailed geologic mapping by USGS.
07SI	Tam Mountain (A), Moore Mountains(B)	Paleozoic carbonate layers in clastic rock section are hornfelsed by Cretaceous plutons, producing permissive skarn deposit environments.	None	None	a) Zn-Pb skarn, 18c b) Cu skarn, 18b c) Polymetallic replacement, 19a d) Polymetallic veins, 22c	Reconnaissance geologic mapping by USGS.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
In part close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 68% in USFS West Chichagof-Yakobi Wilderness; 32% in USFS Tongass National Forest.	Known deposits, permissive geology; NW-trending gravity high to W; along major fault/shear zone; Ag, As, Au, Ba, Cu, Mo, Pb, W, Zn geochem anomalies.	0 0 0 1 2	Yes	SI 292 MF 50 Tot 342	Includes tracts 14MF and 03SI.
In part close to tidewater; generally rugged; steep brush- and timber-covered slopes; some subparts largely water-covered; some glacier cover. 06% in USFS West Chichagof-Yakobi Wilderness; 47% in USFS Tongass National Forest; 01% in proposed USFS Trap Bay Wilderness; 46% in USFS South Baranof Wilderness.	Permissive geology; Ag, As, Au, Cu, Mo, Sn, W geochemical anomalies in sub-parts (A), (B), (C), (D).	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	(A) 19 (B) 30 (C) 01 (D) 29 (E) 93 (F)SI 304 PA 31 (G) 38 (H) 775 (I) 39 Tot 1,351	Includes all of tract 04SI: (F) includes tract 03(A)PA (H) and (I) are the same as 03(B)PA and 03(C)PA, respectively.
Generally rugged; brush- and timber-covered; relatively far from tidewater. 100% in USFS West Chichagof-Yakobi Wilderness.	Permissive geology; Ag, Cu, Pb, Zn, Au geochemical anomalies; NW-trending linear gravity high.	0 0 0 1 2	No	238	
Near tidewater; tree- and brush-covered. 10(?)% in proposed USFS Research Natural Area; 90%(?) in USFS Tongass National Forest.	N.A.	See estimate in column 5.	N.A.	SI 215 PA 3 Tot 218	Includes tracts 06SI and 01PA.
In part quite close to tidewater; somewhat rugged; steep brush- and timber-covered slopes. 56% in proposed USFS Chichagof Wilderness; 44% in USFS Tongass National Forest.	Permissive geology; magnetic low in sub-part (A); little recent prospecting.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Yes Yes	(A)SI 28 MF 09 (B) 40 Tot 77	Includes tracts 07SI and 15MF.

Table 4-SI. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Sitka quadrangle, Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 11)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
08SI	Tenakee Inlet, S of head of	Tertiary(?) leucogabbros intrude Paleozoic clastic rocks; gabbros may be related to the magmatic sulfide-bearing gabbros in tract 01SI.	None	None	Synorogenic-synvolcanic Ni-Cu massive sulfide, 7a	Reconnaissance geologic mapping by USGS.
10SI	Seal Creek	Paleozoic carbonate rocks are intruded and hornfelsed by Cretaceous Qtz monzonite pluton; Mississippian section may contain evaporite deposits.	SI085-087	Gypsum deposits (SI086, 087) produced 500,000 T gypsum (Flint and Cobb, 1952).	a)Cu skarn, 18b b)Zn-Pb skarn, 18d c)marine evaporites	Some detailed geologic mapping but mostly reconnaissance geologic and geochemical mapping by USGS.
11SI	Tenakee-Sitkoh Bay	Silurian syenitic rock suite intrudes Paleozoic clastic and carbonate rocks; alkalic rocks may host Th- and REE-containing veins and disseminated or vein deposits of U and REE.	SI078	None	Felsic plutonic UREE, FP/UREE,(?), or Th-RE veins, FP/THRE	Reconnaissance geologic mapping by USGS; some company and USBM prospecting.
12SI	Kootznahoo Inlet	Non-marine sandstone, shale, conglomerate and coal of the Tertiary Kootznahoo Formation.	SI104; other small mines and prospects	Some small past production of coal for local and steam vessel use.	a)Coal deposits b) Sandstone U, 30c	Semi-detailed geologic mapping by USGS; some company prospecting;some geochemical sampling for U, Th.
13SI	Admiralty Island	Highly deformed and slightly metamorphosed Late Triassic mafic and intermediate volcanic rocks, fine-grained clastic rocks, and ultramafic masses host, in different places, significant massive sulfide, Ni-Cu magmatic segregation, and polymetallic vein deposits.	SI088-091, 093, 094, 097, 100-103, 105-112. through 112; JU028-045.	Pyrola prospect (SI090) is best known in SI quad; Production: significant in from polymetallic vein deposits JU032, 034, 037; and from synorogenic-syn-volcanic Ni-Cu deposit JU033. Reserves: JU033 contains reserves of about 560,000 T with 0.35% Cu, 0.34% Ni, 0.15% Co. Deposit JU044 has just started production. Reserves: JU044 contains reserves of 3.5 million T with 3.9% Pb, 9.7% Zn, 23.8 oz/T Ag,0.18 oz/T Au.	a)Sierran massive sulfide, 28c b)Synorogenic-synvolcanic Ni-Cu, 7a	Reconnaissance and some detailed geologic and geochemical mapping by USGS; intense private prospecting locally in the past.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
In part quite close to tidewater; somewhat rugged; steep brush- and timber-covered slopes; 100% in USFS proposed Chichagof Wilderness.	Permissive geology.	0 0 0 0 1	Yes	61	
Close to tidewater, locally heavy timber; steep in part. 100% in USFS Tongass National Forest.	Permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes No	SI 93 JU 30 Tot 123	Includes tracts 10SI and 08JU.
Close to tidewater, locally heavy timber; steep in part. 10(?)% in USFS proposed Kadashan Wilderness 90% in USFS Tongass National Forest.	Known deposit; permissive geology.	0 0 0 0 1	Maybe	187	
Close to tidewater, locally heavy timber; low relief; 80%(?) in USFS Admiralty Island Monument and Wilderness; 20% of the above is covered also by Native Village lands.	Known coal deposits; permissive geology for coal and for U-Th deposits; high U/Th ratio in most samples.	a) No estimate b) 0 0 0 0 1	N.A. Yes	67	
In part close to tidewater; locally heavy timber; steep in part; 74%(?) in USFS Admiralty Island National Monument and Wilderness; 08(?)% in Alaska Native lands; 16% in USFS Tongass National Forest; 02% in proposed USFS Young Bay Wilderness.	Significant known deposits; permissive geology; abundant and varied geochemical anomalies; relatively well prospected locally.	a) 0 0 0 1 3 b) 0 0 0 0 1	Yes Yes	SI 1,546 JU 409 SD 12 Tot 1967	Includes tracts 13SI, 09JU and 01SD.

Table 4-SI. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Sitka quadrangle, Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 11)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
14SI	King Salmon Bay	Slightly metamorphosed Late Triassic(?) intermediate and mafic volcanic rocks are permissive environment for massive sulfide deposits.	SI092	None	a)Sierran massive sulfide, 28c b)Basaltic Cu, 23	Reconnaissance geologic mapping by USGS.

x

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8	9	10	11	12	13
Accessibility and related factors, including percent of tract in different land status(es)	Summary of undiscovered resource information	Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	Grade and tonnage model available?	Tract area, in square kilometers	Remarks and references to tracts in table 3.
Close to tidewater; heavy timber. 100% in USFS Admiralty Island National Monument and Wilderness.	Permissive geology; known deposit; small tract.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes No	SI 26 JU 04 Tot 30	Includes tracts 14SI and 10JU.

Table 4-SK. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Skagway quadrangle Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 12)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
04SK	Rendu Inlet	High-grade W-Cu-Ag-Au-Zn skarn deposits occur in discontinous carbonate lenses in Silurian and(or) Devonian clastic rocks intruded by Cretaceous granitic rocks.	SK004	Reserves: USBM/ USGS inferred estimate at SK004: 4,300 T with 0.5% W, 5.0% Cu, 7 oz/T Ag, 0.15 oz/T Au.	a)W skarn, 14a b)Cu skarn, 18b c)Pb-Zn skarn, 18c	Reconnaissance geologic mapping by USGS and USBM; geochemical mapping by USGS; extensive prospecting by USBM.
07SK	Takhinsha Mountains	Paleozoic clastic and carbonate rocks intruded and metamorphosed by Cretaceous and Tertiary dikes and plutons.	SK007,008,010,011	None	Porphyry Cu-Mo, 21a	Reconnaissance geologic and geochemical mapping by USGS; also some by ADGGS.
09SK	Mount Henry Clay	Paleozoic volcanic and fine-grained clastic rocks intruded by Tertiary granitic plutons; Ba-bearing massive sulfide known; also one locality with abundant large massive sulfide boulders.	SK017-025	Reserves: USBM inferred estimate for SK017: 750,000 T with 1.8 oz/T Ag, 1.7% Zn, 6.0% Brt.	a)Sierran massive sulfide, 28c b)Au-Qtz vein, 36a	Reconnaissance and detailed geologic and geochemical mapping by USGS, USBM, ADGGS; drilling and moderate to high level of recent prospecting.
10SK	Surgeon Mountain (A) and upper Tsirku River (B)	Paleozoic clastic, carbonate, and volcanic rocks intruded by Tertiary plutons; several small Cu-skarn deposits in Canada close to area (A); some stratiform disseminated and massive sulfides in area (B).	(A) None (B) None	None	a)Sierran massive sulfide, 28c b)Au-Qtz vein, 36a c)Cu-skarn, 18b	Reconnaissance and detailed geologic and geochemical mapping by ADGGS, USBM, USGS; moderate level of recent prospecting.
11SK	Porcupine (A), lower Tsirku River (B), and Takhin River (C)	Paleozoic fine-grained clastic, carbonate, and volcanic rocks are intruded by Cretaceous and Tertiary plutons.	(A)SK026-039, 051, 052; (B)SK009,040-045, 047, 048; (C)SK050	(A) Placer Au production in early 1900's. Reserves: USBM inferred figure exists for SK035, but is not yet available. Some small-scale current production; (B) and (C): no production and no reserves.	a Au-Qtz vein, 36a b)Sedimentary exhalative Pb-Zn, 31a c)Polymetallic vein, 22c d)Au-PGE stream placer, 39a	Reconnaissance geologic mapping by ADGGS and USBM; moderate to extensive prospecting by USBM and exploration companies.
12SK	Chilkat River and Chilkat Inlet, W. side	Sulfide-bearing Qtz veins, altered zones, some stratiform massive and disseminated sulfides in Paleozoic fine-grained clastic, carbonate and volcanic rocks, some of which were metamorphosed in Late Paleozoic, are intruded by Cretaceous and Tertiary plutons.	SK015,046,053-064	None	a)Sierran massive sulfide, 28c b)Au-Qtz vein, 36a c)Polymetallic vein, 22c	Reconnaissance geologic mapping by ADGGS and USBM; moderate to extensive prospecting by USBM and exploration companies.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Moderately remote;rugged. 100% in USNPS Glacier Bay National Park.	Known deposit; permissive geology; float indicates more mineralization present; tract is too small for probabilistic estimate.	a) None b) None c) None	Yes, but N.A. Yes, but N.A. Yes, but N.A.	36	
Remote; moderately rugged; extensive glacier cover. 65% in USNPS Glacier Bay National Park; 35% Alaska State land.	Known deposits; permissive geology; Ag, Au, Cu, Zn bedrock geochem anomalies.	a) 0 0 0 0 1	Yes	799	
Close to major road and trails; generally steep; extensive glacier cover. 100% Alaska State land.	Known deposits; permissive geology; stream sediment and bedrock geochem anomalies; small tract that has been relatively intensely prospected.	a) 0 0 1 2 3 b) 0 0 0 1 2	Yes Yes	84	
Close to major road and trails; moderately steep; some glacier cover. 100% Alaska State land.	Nearby mines and prospects; permissive geology; area (A) has been well prospected.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 1 2	Yes Yes Yes	98	
Close to major road and trails; moderately steep; some glacier cover. 100% Alaska State land.	Known prospects and occurrences; permissive geology; bedrock and stream sediment geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Yes Yes	498	
Close to major road, trails, and tidewater; moderately steep; some glacier cover. 100% Alaska State land; includes Chilkat Lake homesite area	Known prospects and occurrences; permissive geology; bedrock Ag, Ba, Co, Cu, Pb, Zn geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	423	

Table 4-SK. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Skagway quadrangle
Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 12)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
13SK	Klukwan	Triassic(?) metabasalts are intruded by Mag-rich ultramafic body; fan below consists of broken rock from that body.	SK066,067	Reserves: USBM inferred estimate for SK066: 3,500 million T with 16.8% Fe, 2.0% Ti; and 50 million T with 0.03 oz/T Au,0.1% Cu, 0.03 oz/T Pt, 0.03 oz/T Pd in lode; inferred 980 million T with 10.8% Fe, 2.0% Ti in fan at SK067.	Alaskan PGE, 9	Detailed mapping and sampling by USGS, USBM, and several mining companies.
14SK	Chilkat River (A) and Chilkat Inlet (B), E. side	Triassic(?) metabasalts are locally Mag- and sulfide-bearing.	(A)SK071-073 (B)SK078-081	(A) None (B)USBM discovered indicated resources: 700 T with 0.09 oz/T Au,0.17 oz/T Ag,0.8% Cu.	a)Cyprus massive sulfide, 24a b)Au-Qtz vein, 36a	Detailed geologeologic mapping by ADGGS, USBM, some by USGS; geochemical sampling and prospecting by USBM.
15SK	Haines	Triassic(?) metabasalts are intruded by Mag-rich ultramafic body.	SK075-077	Reserves: USGS inferred estimate for SK077: "several million" T with <10% Mag, about 1% TiO2.	Alaskan PGE, 9	Some detailed geologic mapping by USGS, USGS, ADGGS, USGS; little recent prospecting.
16SK	Skagway River	Paleozoic and older(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons.	SK082,084-086	Reserves: USBM inferred estimate for SK084: 10,000 T with 0.04 oz/T Au, 3.4 % Pb, 2.3% Zn.	a)W-skarn, 14a b)Cu-skarn, 18b c)Pb-Zn skarn, 18c d)Porphyry Cu-Mo, 21a	Some geologic mapping by ADGGS, USBM, also some by USGS; geochemical sampling and prospecting by USBM.
17SK	Meade Glacier	Paleozoic and older(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons.	None	None	a)W-skarn, 14a b)Cu-skarn, 18b c)Pb-Zn skarn, 18c	Reconnaissance geologic mapping and geochemical sampling by USGS; essentially unprospected.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Close to major road; lode is in very steep terrain, fan is easily accessible. 5(?)% Klukwan Native Village land; 95(?)% Alaska State land.	Known deposits, permissive geology; small, well-explored tract.	No estimate	No	21	
Close to major road and tidewater; (A) is steep terrain. 100% Alaska State land, including a State Park.	Known deposits; permissive geology; some geochemical anomalies.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	80	
At and under the town of Haines, AK.	Known deposits; permissive geology; some geochemical anomalies; large gravity and aeromagnetic anomalies; small tract.	No estimate	No	26	
Close to railroad and major road; steep; some glacier cover. 50% USFS Tongass National Forest; 50% Alaska State land; (parts of both in Trail of '98 USNPS National Historical Site).	Known deposits; permissive geology, but most metamorphic rocks belong to pre-Paleozoic(?) section that is typically unmineralized.	a) No estimate b) No estimate c) 0 0 0 0 1 d) 0 0 0 0 1	Yes Yes Yes Yes	407	
Remote; steep; extensive glacier cover. 100% USFS Tongass National Forest.	Permissive geology; good exposures, but most metamorphic rocks belong to pre-Paleozoic(?) section that is typically unmineralized.	a) No estimate b) No estimate c) 0 0 0 0 1	Yes Yes Yes	SK 83 AL 52 Tot 135	Includes tracts 17SK and 01(A)AL.

Table 4-TR. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Taku River quad headings. Information for tracts taken form sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 14)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
02TR	Bacon Glacier(A) and Mount Ogden(B)	(A): minor occurrences of disseminated Mol in Tertiary granodiorite or granite; some Mol-bearing Qtz veins; (B): Late Tertiary rhyolite dike swarm associated with felsic plug intrudes metamorphosed Paleozoic and older(?) clastic, carbonate, and volcanic rocks.	(A): TR001,002; (B): TR004	None	a)Porphyry Mo, 21b b)Cu skarn, 18b c)Zn-Pb skarn, 18d	Reconnaissance geologic mapping and geochemical sampling by USGS; tract is not well pected in US, but is across the border in Canada.
03TR	Kluchman Mountain	Complexly deformed Paleozoic and older(?) clastic, volcanic, and minor carbonate rock section with scattered ultramafic masses is intruded by Tertiary granodiorite and granite; ultramafic masses may contain Chr.	TR003	None	a)Minor podiform chromite, 8a b)Polymetallic veins, 22c	Reconnaissance geologic mapping and geochemical sampling by USGS.
04TR	Snow Tower-Sawyer Glacier	Paleozoic and older(?) clastic, carbonate, and volcanic rocks intruded and metamorphosed by Tertiary plutons, creating an environment permissive for skarn deposits.	TR005,009	None	a)Cu skarn, 18b b)Zn-Pb skarn, 18d c)Polymetallic veins, 22c	Reconnaissance geologic mapping and geochemical sampling by USGS; little prospected.

rangle, Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Remote; steep; very extensive glacier cover. 100% in USFS Tongass National Forest.	Known prospects; permissive geology; subtract (A) is small; subtract (B) is close to important prospect in Canada.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	225	
Steep; some glacier cover; close to major river valley. 100% in USFS Tongass National Forest except for some Alaska State land and private homesites along river.	Known prospect; permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1	Yes Yes	156	
Remote; steep; very extensive glacier cover. 59% in USFS Tracy Arm-Fords Terror Wilderness; 41% in USFS Tongass National Forest.	Known prospects; permissive geology.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	TR 436 SD 100 Tot 536	Includes tract 03SD.

Table 4-YA. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Yakutat quadrangle Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 15)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
01YA	Fairweather Range	Altered zones and disseminated sulfides occur in Mesozoic and older(?) metamorphic rocks intruded by Jurassic, Cretaceous,and Tertiary granitic plutons.	YA009-011	None	a)Sierran massive sulfide, 28c b)Au-Qtz vein, 36c c)Porphyry Cu-Mo, 21a	Reconnaissance geologic and some geochemical mapping by USGS; essentially unprospected.
02YA	Yakutat Range	Thin Au-bearing Qtz veins occur in greenschist or lower grade flyschoid rocks; spatially and genetically related to Tertiary plutons.	YA008	None	Au-Qtz vein, 36a	Reconnaissance geologic and some geochemical mapping by USGS; little prospected.
03YA	Yakutat to Cape Spencer beach placers	Fe- and Ti-bearing beach and (locally) stream placers border Gulf of Alaska; includes both modem beaches and older upraised marine terrace placers; Fe- and Ti-bearing black sands are 1 to 3 m thick and are of limited lateral extent.	YA001-007, 012, 013; MF002,011, 019	In YA quad during early 1900's about 6 kg Au produced from small deposits; large, low-grade Fe, Ti resources present with estimated 20.8 kg/cubic m Fe, 12.2 kg/cubic m; some higher grade zones present; in MF quad, approximately 4,000 oz Au produced from sands between 1890 and 1917 by small-scale mining operations; resources calculated by USBM for 12 blocks covering a total area of 2.6 square km; two areas within the blocks contain resources with higher grades than present overall; those discovered inferred resources are: 4.6 million m3 with 1.0% Ilm, minor Au, for 1977 value of $1.11/m3;	Shoreline placer Ti, 39c	In YA quad reconnaissance and some detailed sampling by USBM; low amount of prospecting; local aeromagnetic survey by USGS; auger-drill-hole sampling by USBM; in MF quad reconnaissance and some detailed sampling by USBM; moderate amount of prospecting.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Mostly very remote, very rugged, extensive glacier cover. 54% in USNPS Glacier Bay National Park; 09% in USFS Russell Fiord Wilderness; 37% in USFS Tongass National Forest.	A few known occurrences; permissive geology; some Mo, Ag, Au, Cu, Zn geochemical anomalies; very large tract.	a) 0 0 0 0 1 b) 0 0 0 0 1 c) 0 0 0 0 1	Yes Yes Yes	YA 1,802 SK 948 MF 170 Tot 2,920	Includes 01YA, 01MF, 01YA.
Mostly very remote, quite rugged, extensive glacier cover. 18% in USNPS Glacier Bay National Park; 46% in USFS Russell Fiord Wilderness; 05% in USNPS Glacier Bay National Preserve; 09% in proposed USFS Yakutat Forelands Wilderness; 22% in USFS Tongass National Forest.	One occurrence; permissive geology; Mo, Ag, Au, Cu, Zn, Ni, Ti, Cr, V geochemical anomalies; very large tract.	0 0 1 3 5	Yes	YA 2,578 SK 23 MF 214 Tot 2,815	Includes 02YA, 02SK, 02YA.
Modern bare beaches are easy to explore and sample; dense vegetation impedes exploration of back beach deposits, which are poorly known. 31% in USNPS Glacier Bay National Park; 09% in USFS Russell Fiord Wilderness; 04% in USNPS Glacier Bay National Preserve; 39% in proposed USFS Yakutat Forelands Wilderness. 17% in USFS Tongass National Forest.	In YA quad: several occurrences; permissive geology; moderate-size tract; not thoroughly prospected; in MF quad: undiscovered hypothetical resource: 70 million m3 with 1.0% Ilm, minor Au.	See estimate in column 9 for MF quad; for YA quad: 0 0 0 1 2	Yes	YA 767 MF 127 Tot 894	Includes 03YA and 03MF.

Table 4-YA. Tongass National Forest mineral resource tract information for tracts entirely or principally in the Yakutat quadrangle
Information for tracts taken from sources given in table 3.)

1 Map No.	2 Name	3 Description, including geologic units and controls of deposits	4 Mines, prospects, and occurrences (numbers are from table 2; locations are given on plate 15)	5 Production and other resource information	6 Mineral deposit types expected (see table 1 and Cox and Singer, 1986)	7 Status of geologic, geochemical, and geophysical information
03YA	continued			this includes (a) 153,000 m3 with 3.4% Ilm at one locality with 1977 value of $3.83/m3 and (b) 102,000 m3 with 4.2% Ilm with 1977 value of $5.22/m3.		
04YA	Yakutat Foreland petroleum	Oil and gas seeps and shows from Paleogene sedimentary source rocks and from Poul Creek Fm. as in Yakataga play 170 km to NW; little data available on possible traps, all of which are known or presumed to lie along the Dangerous River zone (Bruns, 1988b, fig. 2); reservoir rocks possible in all Cenozoic units.	Surface seeps and shows; wells and core holes YA014-021.	No production, but one well (YA014) had oil and gas shows.	N.A.	Play is moderately well explored by existing wells and core holes.

Tongass National Forest and adjacent areas, southeastern Alaska. (See text for complete explanation of headings.

8 Accessibility and related factors, including percent of tract in different land status(es)	9 Summary of undiscovered resource information	10 Estimated number of undiscovered deposits (% chance that there are the number given or more deposits) 95 90 50 10 05	11 Grade and tonnage model available?	12 Tract area, in square kilometers	13 Remarks and references to tracts in table 3.
Modern beach areas readily accessible; back beach areas forested; in part close to existing roads.	Most potential source rocks are immature, potential reservoir sands have relatively low porosity, major structures have been tested; discovery of commercial hydrocarbon resources is unlikely.	N.A.	N.A.	N.A.	All of Yakutat Foreland NE of tract has thin Neogene sedimentary rocks over Mesozoic metaflyschoid rocks; tract overlaps tract 03YA in part.

Table 5-AL. Undiscovered mineral-resource endowment of mineral-resource tracts in the Atlin quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as snown	9 Tract tonnage totals in millions
01AL	Lace River	14a, W skarn	3.31E+05	W	2.50E+03	0.7500		0.99
		18b, Cu skarn	3.48E+05	Cu	5.36E+03	1.5394		
		do		Au	7.72E-02	2.22E-05	0.22 g/ton	
		do		Ag	7.27E-01	2.09E-04	2.09 g/ton	
		18c, Pb-Zn skarn	3.15E+05					
				Cu	1.35E+03	0.4289		
				Au	2.56E-01	8.12E-05	0.81 g/ton	
				Zn	1.82E+04	5.7873		
				Ag	1.79E+01	0.0057	56.86 g/ton	
				Pb	9.56E+03	3.0349		
03AL	Chilkoot Range metabasalts	24a, Cyprus massive sulfide	4.08E+05					0.41
				Cu	6.88E+03	1.6855		
				Au	3.81E-01	9.33E-05	0.93 g/ton	
				Zn	1.77E+03	0.4333		
				Ag	4.26E+00	0.0010	10.45 g/ton	
				Pb	4.19E+01	0.0103		

Table 5-BC. Undiscovered mineral-resource endowment of mineral-resource tracts in the Bradfield Canal quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
01BC	Bradfield Canal Coast Mountains	Polymetallic veins, 22c	6.74E+03	Cu	4.88E+00	0.0723		35.24
				Au	1.69E-02	0.0003	2.51 g/ton	
				Zn	3.53E+02	5.2404		
				Ag	6.05E+00	0.0898	897.63 g/ton	
				Pb	5.44E+02	8.0712		
		Zn-Pb skarn 18c	2.94E+05	Cu	1.34E+03	0.4554		
				Au	2.04E-01	0.0001	0.69 g/ton	
				Zn	1.70E+04	5.7687		
				Ag	1.92E+01	0.0066	65.52 g/ton	
				Pb	8.52E+03	2.8993		
		Fe skarn, 18d	3.49E+07	Fe	1.74E+07	49.742		
		Porphyry Mo, 21b	1.67E+07	Mo	1.29E+04	0.0774		16.71
02BC	Cone Mountain	Polymetallic veins, 22c	9.50E+03	Cu	8.11E+00	0.0854		18.24
				Au	2.60E-02	0.0003	2.73 g/ton	
				Zn	4.98E+02	5.2442		
				Ag	9.73E+00	0.1024	1.02 kg/ton	
				Pb	6.56E+02	6.9053		
		Porphyry Mo, 21b	1.82E+07	Mo	1.45E+04	0.0796		
04BC	Glacier Basin-Berg Basin	Polymetallic veins, 22c	1.28E+05	Cu	1.07E+02	0.0832		0.13
				Au	2.73E-01	0.0002	2.13 g/ton	
				Zn	6.50E+03	5.0766		
				Ag	1.11E+02	0.0864	864.06 g/ton	
				Pb	9.03E+03	7.0555		
05BC	Harding River	Polymetallic veins, 22c	7.52E+03	Cu	3.10E+00	0.0412		0.38
				Au	1.49E-02	0.0002	1.98 g/ton	
				Zn	3.92E+02	5.2128		
				Ag	6.05E+00	0.0805	804.79 g/ton	
				Pb	5.51E+02	7.3298		
		Zn-Pb skarn, 18c	3.74E+05	Cu	1.85E+03	0.4939		
				Au	2.96E-01	0.0001	0.79 g/ton	
				Zn	2.35E+04	6.2701		
				Ag	2.19E+01	0.0058	58.45 g/ton	
				Pb	1.09E+04	2.9037		
07BC	Eulachon Creek	Fe skarn, 18d	7.09E+06	Fe	3.71E+06	52.369		7.09
08BC	Gracey Creek Glacier	Polymetallic veins, 22c	9.41E+03	Cu	9.15E+00	0.0972		0.01
				Au	2.89E-02	0.0003	3.07 g/ton	
				Zn	5.74E+02	6.1010		
				Ag	6.02E+00	0.0640	639.96 g/ton	
				Pb	6.37E+02	6.7726		

Table 5-BC. Undiscovered mineral-resource endowment of mineral-resource tracts in the Bradfield Canal quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
10BC	Burroughs Bay	Porphyry Cu-Mo, 21a	7.25E+07	Cu	3.66E+05	0.5054		72.49
				Mo	9.86E+03	0.0136		
				Au	1.63E+00	2.24E-06	0.02 g/ton	
				Ag	1.15E+02	0.0002	1.58 g/ton	
12BC	Chickamin Glacier	Polymetallic veins, 22c	2.36E+05	Cu	1.89E+02	0.0800		80.55
				Au	4.92E-01	0.0002	2.09 g/ton	
				Zn	1.15E+04	4.8771		
				Ag	2.25E+02	0.0955	954.66 g/ton	
				Pb	1.71E+04	7.2542		
		Porphyry Mo	8.03E+07	Mo	6.08E+04	0.0757		
		Sierran massive sulfide 28a	4.75E+04	Cu	7.83E+02	0.0165		
				Au	7.75E-02	1.63E-06	0.02 g/ton	
				Zn	1.71E+03	0.0361		
				Ag	4.94E+00	0.0001	1.04 g/ton	
				Pb	3.96E+02	0.0083		
13BC	Texas Creek-Hyder	Polymetallic veins, 22c	4.46E+04	Cu	4.19E+01	0.0939		83.68
				Au	9.54E-02	0.0002	2.14 g/ton	
				Zn	2.11E+03	4.7220		
				Ag	4.34E+01	0.0974	973.54 g/ton	
				Pb	3.21E+03	7.1928		
		Porphyry Cu-Mo, 21a	8.36E+07	Cu	4.16E+05	0.4970		
				Mo	1.19E+04	0.0143		
				Au	1.45E+00	1.73E-06	0.02 g/ton	
				Ag	1.20E+02	0.0001	1.43 g/ton	
		Sierran massive sulfide 28a	6.79E+04	Cu	1.10E+03	1.6156		
				Au	1.64E-01	0.0002	2.41 g/ton	
				Zn	2.34E+03	3.4389		
				Ag	9.76E+00	0.0144	143.71 g/ton	
				Pb	7.09E+02	1.0440		

Table 5-CR. Undiscovered mineral-resource endowment of mineral-resource tracts in the Craig quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
01CR	Coronation Island	Polymetallic replacement 19a	2.19E+06	Cu	4.84E+03	0.2212		2.19
				Au	1.49E+00	0.0001	0.68 g/ton	
				Zn	1.31E+05	5.9817		
				Ag	4.77E+02	0.0218	217.99 g/ton	
				Pb	1.33E+05	6.0822		
03CR	Sweetwater Lake	Besshi massive sulfide, 24b	1.89E+05	Cu	2.54E+03	1.3434		0.19
				Au	6.94E-02	3.67E-05	0.37 g/ton	
				Zn	2.01E+03	1.0651		
				Ag	3.47E+00	0.0018	18.34 g/ton	
07CR	Lava Creek	Felsic plutonic Th-REE	8.51E+05	Th	4.02E+03	0.4722		0.85
				REE	3.21E+03	0.3772		
				U	6.62E+01	0.0078		
09CR	Lower Cleveland Peninsula	Au-Qtz vein, 36a	4.59E+06	Au	2.89E+01	0.0006	6.30 g/ton	4.59
				Ag	5.76E+00	0.0001	1.26 g/ton	
		Simple Sb, 27d	2.49E+02	Sb	6.20E+01	24.8636		
10CR	South central Prince of Wales Island	Kuroko massive sulfide, 28a	1.49E+05	Cu	2.48E+04	16.6644		12.02
				Au	3.32E+00	0.0022	22.31 g/ton	
				Zn	5.70E+04	38.2550		
				Ag	1.81E+02	0.1216	1.22 kg/ton	
				Pb	1.25E+04	8.3826		
		Polymetallic veins, 22c	6.23E+05	Cu	6.02E+02	0.0965		
				Au	1.50E+00	0.0002	2.41 g/ton	
				Zn	3.13E+04	5.0161		
				Ag	5.57E+02	0.0894	894.06 g/ton	
				Pb	4.63E+04	7.4254		
		Cu skarn, 18b	9.91E+06	Cu	1.33E+05	1.3370		
				Au	2.25E+00	2.27E-05	0.23 g/ton	
				Ag	1.87E+01	0.0002	1.89 g/ton	
12CR	Kasaan Peninsula	Cu skarn, 18b	8.61E+06	Cu	1.14E+05	1.3287		8.61
				Au	1.94E+00	2.25E-05	0.22 g/ton	
				Ag	1.63E+01	0.0002	1.89 g/ton	
		Fe skarn, 18d	1.83E+08	Fe	8.94E+07	48.9321		182.63
13CR	Baker Island	Porphyry Cu-Mo, 21a	6.95E+07	Cu	3.87E+05	0.5568		69.49
				Mo	9.05E+03	0.0130		
				Au	1.30E+00	1.87E-06	0.02 g/ton	
				Ag	1.05E+02	0.0002	1.51 g/ton	
		Polymetallic vein, 22c	3.95E+04	Cu	5.90E+01	0.1493		
				Au	1.24E-01	0.0003	3.13 g/ton	
				Zn	2.09E+03	5.3013		
				Ag	3.35E+01	0.0848	848.35 g/ton	
				Pb	2.80E+03	7.0962		

Table 5-CR. Undiscovered mineral-resource endowment of mineral-resource tracts in the Craig quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
14CR	San Juan Bautista Island	Polymetallic veins, 22c	3.81E+04	Cu	3.48E+01	0.0914		0.04
				Au	8.05E-02	0.0002	2.11 g/ton	
				Zn	1.93E+03	5.0630		
				Ag	2.94E+01	0.0772	771.92 g/ton	
				Pb	2.70E+03	7.0761		
15CR	Port Saint Nicholas	Felsic plutonic Th-REE	1.06E+06	Th	5.30E+03	0.4996		15.23
				REE	4.29E+03	0.4051		
				U	7.22E+01	0.0068		
		Porphyry Mo, 21b	1.42E+07	Mo	1.02E+04	0.0722		
16CR	Black Lake - Lake Saint Nicholas	Porphyry Mo, 21b	1.59E+07	Mo	1.24E+04	0.0776		15.92
17CR	Pin Peak	Porphyry Mo, 21b	1.66E+07	Mo	1.29E+04	0.0773		16.64
		Polymetallic veins, 22c	7.57E+03	Cu	2.59E+01	0.3419		
				Au	3.46E-02	0.0005	4.57 g/ton	
				Zn	4.40E+02	5.8137		
				Ag	7.52E+00	0.0993	993.13 g/ton	
				Pb	7.45E+02	9.8428		
18CR	Maybeso Creek	Porphyry Mo, 21b	1.54E+07	Mo	1.16E+04	0.0754		15.78
		Polymetallic veins, 22c	3.73E+05	Cu	3.72E+02	0.0997		
				Au	9.01E-01	0.0002	2.41 g/ton	
				Zn	1.93E+04	5.1635		
				Ag	3.34E+02	0.0894	894.37 g/ton	
				Pb	2.70E+04	7.2440		
19CR	Suemez Island	Porphyry Mo, 21b	1.56E+07	Mo	1.30E+04	0.0832		16.60
		Polymetallic veins, 22c	8.18E+03	Cu	1.07E+01	0.1313		
				Au	2.83E-02	0.0003	3.46 g/ton	
				Zn	4.36E+02	5.3289		
				Ag	5.37E+00	0.0657	656.85 g/ton	
				Pb	4.65E+02	5.6883		
		Felsic plutonic Th-REE	9.75E+05	Th	4.52E+03	0.4636		
				REE	4.16E+03	0.4266		
				U	9.69E+01	0.0099		

Table 5-CR. Undiscovered mineral-resource endowment of mineral-resource tracts in the Craig quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
20CR	Trocadero Bay-Cholmondeley Sound	Kurolo massive sulfide, 28a	1.41E+06	Cu	2.39E+04	1.6922		1.41
				Au	3.11E+00	0.0002	2.20 g/ton	
				Zn	5.37E+04	3.8071		
				Ag	1.68E+02	0.0119	119.29 g/ton	
				Pb	1.20E+04	0.8511		
21CR	Copper Mountain	Cu-skarn, 18b	1.65E+06	Cu	2.26E+04	1.3721		38.98
				Au	3.76E-01	2.28E-05	0.23 g/ton	
				Ag	2.77E+00	0.0002	1.68 g/ton	
		Fe skarn, 18d	3.73E+07	Fe	1.90E+07	50.7635		
22CR	Dora Bay	Felsic plutonic Th-REE	5.18E+06	Th	2.53E+04	0.4888		5.18
				REE	2.14E+04	0.4137		
				U	4.37E+02	0.0084		
23CR	Dolomi	Polymetallic veins, 22c	1.34E+05	Cu	1.54E+02	0.1146		0.49
				Au	3.40E-01	0.0003	2.54 g/ton	
				Zn	7.16E+03	5.3403		
				Ag	1.21E+02	0.0901	900.75 g/ton	
				Pb	9.97E+03	7.4418		
		Au-Qtz, 36a	3.57E+05	Au	2.72E+00	0.0008	7.61 g/ton	
				Ag	4.01E-01	0.0001	1.12 g/ton	
24CR	Northern Dall Island	Polymetallic veins, 22c	8.99E+03	Cu	1.72E+01	0.1912		16.44
				Au	3.07E-02	0.0003	3.42 g/ton	
				Zn	4.81E+02	5.3548		
				Ag	8.15E+00	0.0907	906.67 g/ton	
				Pb	7.66E+02	8.5217		
		Zn-Pb skarn, 18c	3.52E+05	Cu	1.46E+03	0.4151		
				Au	2.74E-01	0.0001	0.78 g/ton	
				Zn	1.97E+04	5.5881		
				Ag	1.79E+01	0.0051	50.74 g/ton	
				Pb	1.03E+04	2.9318		
		Porphyry Mo, 21b	1.61E+07	Mo	1.30E+04	0.0806		
25CR	Southeast Sukkwan Island	Felsic plutonic Th-REE	9.48E+05	Th	4.90E+03	0.5171		0.95
				REE	4.62E+03	0.4874		
				U	8.03E+01	0.0085		
26CR	Moira Sound	Porphyry Mo, 21b	7.90E+07	Mo	6.12E+04	0.0774		79.28

Table 5-CR. Undiscovered mineral-resource endowment of mineral-resource tracts in the Craig quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
26CR	continued	Polymetallic veins, 22c	8.71E+03	Cu	5.55E+00	0.0638		
				Au	1.31E-02	0.0002	1.51 g/ton	
				Zn	4.01E+02	4.6005		
				Ag	8.93E+00	0.1026	1.03 kg/ton	
				Pb	6.24E+02	7.1619		
		Zn-Pb skarn, 18c	2.34E+05	Cu	9.30E+02	0.3974		
				Au	1.53E-01	0.0001	0.66 g/ton	
				Zn	1.37E+04	5.8590		
				Ag	1.85E+01	0.0079	79.02 g/ton	
				Pb	7.74E+03	3.3056		
27CR	Niblack	Kuroko massive sulfide, 28a	7.55E+05	Cu	1.27E+04	1.6781		0.76
				Au	1.63E+00	0.0002	2.16 g/ton	
				Zn	2.84E+04	3.7612		
				Ag	9.07E+01	0.0120	120.07 g/ton	
				Pb	6.34E+03	0.8396		

Table 5-DE. Undiscovered mineral-resource endowment of mineral-resource tracts in the Dixon Entrance quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
01DE	Forrester Island	Porphyry Mo, 21b	1.67E+07	Mo	1.28E+04	0.0765		16.67
05DE	Kassa Inlet	Felsic plutonic Th-REE	1.07E+06	Th	4.96E+03	0.4636		1.07
				REE	4.16E+03	0.3888		
				U	1.10E+02	0.0103		
06DE	Bokan Mountain	Felsic plutonic Th-REE	1.61E+07	Th	7.82E+04	0.4857		16.13
				REE	6.62E+04	0.4113		
				U	1.26E+03	0.0078		
08DE	Southern Dall & Long Islands	Kuroko massive sulfide, 28a	5.63E+04	Cu	8.80E+02	1.5634		0.33
				Au	1.28E-01	0.0002	2.28 g/ton	
				Zn	2.36E+03	4.1918		
				Ag	6.57E+00	0.0117	116.66 g/ton	
				Pb	4.23E+02	0.7519		
		Polymetallic veins, 22c	2.75E+05	Cu	2.71E+02	0.0985		
				Au	6.35E-01	0.0002	2.31 g/ton	
				Zn	1.42E+04	5.1491		
				Ag	2.40E+02	0.0874	874.18 g/ton	
				Pb	1.97E+04	7.1455		
09DE	Barrier Islands	Kuroko massive sulfide, 28a	1.46E+06	Cu	2.46E+04	1.6822		1.46
				Au	3.24E+00	0.0002	2.22 g/ton	
				Zn	5.45E+04	3.7349		
				Ag	1.75E+02	0.0120	120.14 g/ton	
				Pb	1.25E+04	0.8568		
10DE	Southeastern-most Prince of Wales Island	Polymetallic veins, 22c	7.13E+03	Cu	3.11E+00	0.0436		20.67
				Au	1.07E-02	0.0001	1.49 g/ton	
				Zn	3.24E+02	4.5456		
				Ag	7.72E+00	0.1083	1.08 kg/ton	
				Pb	7.09E+02	9.9411		
		Porpnyry Mo, 21b	1.57E+07	Mo	1.20E+04	0.0766		
		Felsic plutonic Th-REE	5.01E+06	Th	2.47E+04	0.4924		
				REE	2.09E+04	0.4164		
				U	3.57E+02	0.0071		

Table 5-JU. Undiscovered mineral-resource endowment of mineral-resource tracts in the Juneau quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
01JU	White Glacier	Sierran massive sulfide, 28a	2.64E+05	Cu	4.64E+03	1.7565		0.26
				Au	5.63E-01	0.0002	2.13 g/ton	
				Zn	9.49E+03	3.5956		
				Ag	2.88E+01	0.0109	109.13 g/ton	
				Pb	2.01E+03	0.7620		
02JU	Casement Glacier	Porphyry Cu-Mo, 21a	8.30E+07	Cu	4.25E+05	0.5116		83.00
				Mo	1.16E+04	0.0140		
				Au	1.47E+00	1.77E-06	0.02 g/ton	
				Ag	1.19E+02	0.0001	1.43 g/ton	
		Polymetallic veins, 22c	8.86E+03	Cu	1.06E+01	0.1194		
				Au	1.65E-02	0.0002	1.87 g/ton	
				Zn	4.23E+02	4.7686		
				Ag	1.10E+01	0.1237	1.24 kg/ton	
				Pb	8.01E+02	9.0372		
04JU	Sullivan Island to Sullivan River	Cu skarn, 18b	2.83E+05	Cu	3.70E+03	1.3071		2.64
				Au	9.33E-02	3.30E-05	0.33 g/ton	
				Ag	6.84E-01	0.0002	2.42 g/ton	
		Zn-Pb skarn, 18c	2.98E+05	Cu	1.39E+03	0.4674		
				Au	2.06E-01	0.0001	0.69 g/ton	
				Zn	1.93E+04	6.4866		
				Ag	1.39E+01	0.0047	46.63 g/ton	
				Pb	9.29E+03	3.1181		
		Besshi massive sulfide, 24b	2.06E+06	Cu	3.43E+04	1.6655		
				Au	7.59E-01	3.68E-05	0.37 g/ton	
				Zn	1.08E+04	0.5248		
				Ag	3.71E+01	0.0018	18.00 g/ton	
05JU	Excursion River	Polymetallic veins, 22c	4.03E+04	Cu	6.09E+01	0.1512		0.04
				Au	1.05E-01	0.0003	2.62 g/ton	
				Zn	2.03E+03	5.0248		
				Ag	3.63E+01	0.0902	901.74 g/ton	
				Pb	2.85E+03	7.0794		
06JU	Nun Mountain	Cu skarn, 18b	3.23E+05	Cu	4.36E+03	1.3498		0.66
				Au	9.44E-02	2.92E-05	0.29 g/ton	
				Ag	5.71E-01	0.0002	1.77 g/ton	
		Zn-Pb skarn, 18c	3.41E+05	Cu	1.55E+03	0.4534		
				Au	3.48E-01	0.0001	1.02 g/ton	
				Zn	2.10E+04	6.1466		
				Ag	1.97E+01	0.0058	57.68 g/ton	
				Pb	9.27E+03	2.7173		
07JU	Neka Bay, W of	Cu skarn, 18b	3.37E+05	Cu	3.97E+03	1.1789		0.62
				Au	4.51E-02	1.34E-05	0.13 g/ton	
				Ag	5.32E-01	0.0002	1.58 g/ton	

Table 5-JU. Undiscovered mineral-resource endowment of mineral-resource tracts in the Juneau quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
07JU	continued	Zn-Pb skarn, 18c	2.86E+05	Cu	1.33E+03	0.4664		
				Au	1.77E-01	0.0001	0.62 g/ton	
				Zn	1.67E+04	5.8427		
				Ag	1.42E+01	0.0050	49.72 g/ton	
				Pb	8.58E+03	2.9997		
11JU	Kensington-Jualin & Eagle River-Juneau	Au-Qtz veins, 36a	2.85E+06	Au	1.71E+01	0.0006	5.99 g/ton	3.62
				Ag	3.88E+00	0.0001	1.36 g/ton	
		Sierran massive sulfide, 28a	7.68E+05	Cu	1.27E+04	1.6563		
				Au	1.71E+00	0.0002	2.23 g/ton	
				Zn	2.86E+04	3.7201		
				Ag	9.51E+01	0.0124	123.88 g/ton	
				Pb	6.72E+03	0.8745		
13JU	Juneau Ice-field	Cu skarn, 18b	1.57E+06	Cu	2.00E+04	1.2726		3.07
				Au	3.32E-01	2.11E-05	0.21 g/ton	
				Ag	2.96E+00	0.0002	1.89 g/ton	
		Zn-Pb skarn, 18c	1.50E+06	Cu	6.81E+03	0.4539		
				Au	1.15E+00	0.0001	0.77 g/ton	
				Zn	8.96E+04	5.9707		
				Ag	8.76E+01	0.0058	58.37 g/ton	
				Pb	4.59E+04	3.0593		

Table 5-KC. Undiscovered mineral-resource endowment of mineral-resource tracts in the Ketchikan quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
03KC	Chickamin River	Zn-Pb skarn, 18c	2.85E+05	Cu	1.26E+03	0.4428		0.67
				Au	1.81E-01	0.0001	0.64 g/ton	
				Zn	1.68E+04	5.8842		
				Ag	1.54E+01	0.0054	53.93 g/ton	
				Pb	8.50E+03	2.9821		
		Polymetallic veins, 22c	4.45E+04	Cu	5.57E+01	0.1251		
				Au	9.77E-02	0.0002	2.19 g/ton	
				Zn	2.28E+03	5.1213		
				Ag	4.00E+01	0.0898	897.75 g/ton	
				Pb	2.98E+03	6.6921		
		Cu skarn, 18b	3.43E+05	Cu	4.95E+03	1.4420		
				Au	8.05E-02	2.35E-05	0.23 g/ton	
				Ag	5.70E-01	0.0002	1.66 g/ton	
07KC	Chickamin-Rudyerd	Polymetallic veins, 22c	7.74E+03	Cu	1.37E+01	0.1771		1.48
				Au	2.35E-02	0.0003	3.03 g/ton	
				Zn	3.86E+02	4.9819		
				Ag	8.50E+00	0.1098	1.10 kg/ton	
				Pb	7.29E+02	9.4173		
		Cu skarn, 18b	1.47E+06	Cu	1.91E+04	1.3020		
				Au	2.58E-01	1.76E-05	0.18 g/ton	
				Ag	3.20E+00	0.0002	2.17 g/ton	
08KC	Southern Revillagigedo Island	Au-Qtz veins, 36a	5.08E+04	Au	4.08E-01	0.0008	8.03 g/ton	0.15
				Ag	4.06E-02	0.0001	0.80 g/ton	
		Polymetallic veins, 22c	4.33E+04	Cu	4.71E+01	0.1087		
				Au	1.08E-01	0.0003	2.50 g/ton	
				Zn	2.22E+03	5.1224		
				Ag	4.24E+01	0.0978	978.06 g/ton	
				Pb	2.99E+03	6.9122		
		Sierran massive sulfide, 28a	5.48E+04	Cu	8.62E+02	1.5732		
				Au	1.02E-01	0.0002	1.85 g/ton	
				Zn	1.66E+03	3.0219		
				Ag	5.49E+00	0.0100	100.15 g/ton	
				Pb	4.03E+02	0.7345		
10KC	Boca de Quadra-Quartz Hill	Porphyry Mo, 21b	9.56E+07	Mo	7.31E+04	0.0765		97.17
		Polymetallic veins, 22c	3.97E+04	Cu	4.05E+01	0.1020		
				Au	9.21E-02	0.0002	2.32 g/ton	
				Zn	2.00E+03	5.0353		
				Ag	3.23E+01	0.0813	813.35 g/ton	
				Pb	2.89E+03	7.2695		

Table 5-KC. Undiscovered mineral-resource endowment of mineral-resource tracts in the Ketchikan quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
		Cu skarn, 18b	1.54E+06	Cu	2.15E+04	1.3929		
				Au	2.71E-01	1.76E-05	0.18 g/ton	
				Ag	3.67E+00	0.0002	2.38 g/ton	
14KC	Southwestern Gravina Island-Eastern Annette Island	Sierran massive sulfide, 28a	7.97E+05	Cu	1.38E+04	1.7340		0.84
				Au	1.76E+00	0.0002	2.21 g/ton	
				Zn	2.99E+04	3.7528		
				Ag	9.30E+01	0.0117	116.68 g/ton	
				Pb	6.38E+03	0.8008		
		Polymetallic veins, 22c	4.23E+04	Cu	2.72E+01	0.0643		
				Au	8.66E-02	0.0002	2.05 g/ton	
				Zn	2.31E+03	5.4634		
				Ag	3.52E+01	0.0832	831.91 g/ton	
				Pb	2.95E+03	6.9622		
16KC	Tongass Narrows	Au-Qtz veins, 36a	1.55E+06	Au	9.13E+00	0.0006	5.89 g/ton	1.56
				Ag	1.82E+00	0.0001	1.18 g/ton	
		Polymetallic veins, 22c	7.81E+03	Cu	8.34E+00	0.1067		
				Au	1.93E-02	0.0002	2.48 g/ton	
				Zn	3.52E+02	4.5032		
				Ag	8.92E+00	0.1142	1.14 kg/ton	
				Pb	5.30E+02	6.7798		
18KC	Boca de Quadra-Sitlan Island	Sierran massive sulfide, 28a	4.93E+04	Cu	9.32E+02	1.8899		0.06
				Au	9.10E-02	0.0002	1.85 g/ton	
				Zn	2.00E+03	4.0629		
				Ag	5.54E+00	0.0112	112.41 g/ton	
				Pb	4.19E+02	0.8495		
		Polymetallic veins, 22c	9.11E+03	Cu	3.61E+00	0.0396		
				Au	1.48E-02	0.0002	1.63 g/ton	
				Zn	4.06E+02	4.4544		
				Ag	9.46E+00	0.1038	1.04 kg/ton	
				Pb	7.12E+02	7.8162		

Table 5-MF. Undiscovered mineral-resource endowment of mineral-resource tracts in the Mount Fairweather quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
07MF	Muir Inlet	Polymetallic veins, 22c	8.76E+03	Cu	2.23E+01	0.2550		0.43
				Au	2.87E-02	0.0003	3.28 g/ton	
				Zn	4.65E+02	5.3112		
				Ag	6.39E+00	0.0730	729.93 g/ton	
				Pb	6.12E+02	6.9811		
		Polymetallic replacement, 19a	4.25E+05	Cu	1.14E+03	0.2679		
				Au	2.66E-01	0.0001	0.63 g/ton	
				Zn	2.52E+04	5.9318		
				Ag	8.10E+01	0.0191	190.64 g/ton	
				Pb	2.02E+04	4.7555		
10MF	Cape Spencer North	Polymetallic veins, 22c	4.73E+04	Cu	6.30E+01	0.1332		0.47
				Au	1.20E-01	0.0003	2.54 g/ton	
				Zn	2.24E+03	4.7376		
				Ag	4.20E+01	0.0888	888.50 g/ton	
				Pb	3.36E+03	7.1063		
		Synorogenic-synvolcanic Ni-Cu, 7a	4.24E+05	Cu	2.96E+03	0.6976		
				Au	6.96E-04	1.64E-07	1.64 mg/ton	
				Ni	3.35E+03	0.7908		
				Pt	1.39E-04	3.27E-08	0.33 mg/ton	
				Co	1.89E+01	0.0045		
				Pd	4.52E-04	1.07E-07	1.07 mg/ton	
11MF	Dundas River	Cu skarn, 18b	4.47E+06	Cu	5.96E+04	1.3328		80.71
				Au	8.38E-01	1.88E-05	0.19 g/ton	
				Ag	8.83E+00	0.0002	1.97 g/ton	
		Polymetallic veins, 22c	8.92E+03	Cu	3.52E+00	0.0395		
				Au	8.74E-03	0.0001	0.98 g/ton	
				Zn	4.07E+02	4.5573		
				Ag	1.13E+01	0.1265	1.27 kg/ton	
				Pb	7.57E+02	8.4823		
		Porphyry Cu-Mo, 21a	7.62E+07	Cu	3.85E+05	0.5055		
				Mo	9.79E+03	0.0128		
				Au	1.20E+00	1.58E-06	0.02 g/ton	
				Ag	1.15E+02	0.0002	1.51 g/ton	

Table 5-PA. Undiscovered mineral-resource endowment of mineral-resource tracts in the Port Alexander quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
05PA	Security Bay	Polymetallic veins, 22c	4.39E+04	Cu	3.11E+01	0.0708		0.04
				Au	8.88E-02	0.0002	2.02 g/ton	
				Zn	2.39E+03	5.4419		
				Ag	3.52E+01	0.0803	802.80 g/ton	
				Pb	2.96E+03	6.7456		
06PA	Saginaw Bay-Cornwalis Peninsula	Sierran massive sulfide, 28a	5.47E+04	Cu	9.10E+02	1.6633		14.95
				Au	1.14E-01	0.0002	2.09 g/ton	
				Zn	2.11E+03	3.8530		
				Ag	6.82E+00	0.0125	124.68 g/ton	
				Pb	4.99E+02	0.9115		
		SE Missouri Pb-Zn, 32a	1.49E+07	Zn	4.89E+05	3.2813		
				Ag	2.39E+02	0.0016	16.01 g/ton	
				Pb	2.27E+05	1.5216		
08PA	Southwest Kuiu	Porphyry Cu-Mo, 21a	7.58E+07	Cu	3.88E+05	0.5116		75.82
				Mo	1.08E+04	0.0143		
				Au	1.43E+00	1.89E-06	0.02 g/ton	
				Ag	1.23E+02	0.0002	1.62 g/ton	
		Polymetallic veins, 22c	4.16E+04	Cu	4.92E+01	0.1183		
				Au	9.06E-02	0.0002	2.18 g/ton	
				Zn	2.02E+03	4.8519		
				Ag	4.71E+01	0.1131	1.13 kg/ton	
				Pb	3.84E+03	9.2300		

Table 5-PE. Undiscovered mineral-resource endowment of mineral-resource tracts in the Petersburg quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
01PE	Kake-Gunnuck and Sitkum Creeks	Sedimentary exhalative, 31a	3.39E+06	Zn	2.71E+05	7.9873		3.62
				Ag	2.39E+02	0.0071	70.59 g/ton	
				Pb	1.53E+05	4.5003		
		Besshi massive sulfide, 24b	2.29E+05	Cu	3.88E+03	1.6922		
				Au	1.08E-01	4.73E-05	0.47 g/ton	
				Zn	1.18E+03	0.5134		
				Ag	5.91E+00	0.0026	25.79 g/ton	
05PE	Southwest Kupreanof	Comstock epithermal veins, 25b	1.52E+06	Au	8.63E+00	0.0006	5.68 g/ton	1.57
				Ag	5.56E+02	0.0366	366.01 g/ton	
		Polymetallic veins, 22c	4.41E+04	Cu	5.32E+01	0.1207		
				Au	1.16E-01	0.0003	2.62 g/ton	
				Zn	2.00E+03	4.5424		
				Ag	4.14E+01	0.0939	939.39 g/ton	
				Pb	3.45E+03	7.8311		
06PE	Tunehean Creek-Castle River, southeast Zarembo, central Etolin, Niblack and Deer Island	Felsic Plutonic Th-REE,	1.05E+06	Th	5.33E+03	0.5080		1.05
				REE	4.54E+03	0.4328		
				U	8.59E+01	0.0082	81.83 g/ton	
07PE	Kosciusko-Northern Prince of Wales	Porphyry Cu-Mo, 21a	8.18E+07	Cu	4.32E+05	0.5280		84.49
				Mo	1.04E+04	0.0128		
				Au	1.41E+00	1.73E-06	0.02 g/ton	
				Ag	1.26E+02	0.0002	1.54 g/ton	
		Cu skarn, 18b	1.54E+06	Cu	2.23E+04	1.4463		
				Au	4.35E-01	2.82E-05	0.28 g/ton	
				Ag	3.54E+00	0.0002	2.30 g/ton	
		Polymetallic veins, 22c	1.12E+05	Cu	1.28E+02	0.1141		
				Au	2.85E-01	0.0003	2.54 g/ton	
				Zn	6.01E+03	5.3631		
				Ag	9.09E+01	0.0812	811.66 g/ton	
				Pb	8.11E+03	7.2393		
08PE	Salmon Bay	Felsic Plutonic Th-REE,	1.08E+06	Th	5.16E+03	0.4778		1.08
				REE	4.58E+03	0.4242		
				U	1.14E+02	0.0105	105.39 g/ton	
12PE	Duncan Canal-Zarembo Island	Sierran massive sulfide, 28a	1.39E+06	Cu	2.30E+04	1.6571		1.39
				Au	3.04E+00	0.0002	2.19 g/ton	
				Zn	5.14E+04	3.6988		
				Ag	1.68E+02	0.0121	120.87 g/ton	
				Pb	1.16E+04	0.8378		

Table 5-PE. Undiscovered mineral-resource endowment of mineral-resource tracts in the Petersburg quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
13PE	Kupreanof Mountain	Cyprus massive sulfide, 24a	3.17E+05	Cu	5.51E+03	1.7388		0.60
				Au	2.53E-01	0.0001	0.80 g/ton	
				Zn	1.11E+03	0.3512		
				Ag	2.82E+00	0.0009	8.90 g/ton	
				Pb	1.45E+01	0.0046		
		Cu skarn, 18b	2.78E+05	Cu	4.05E+03	1.4572		
				Au	6.29E-02	2.26E-05	0.23 g/ton	
				Ag	7.59E-01	0.0003	2.73 g/ton	
14PE	Woewodski Island	Au-Qtz veins, 36a	1.17E+06	Au	7.74E+00	0.0007	6.62 g/ton	1.22
				Ag	1.32E+00	0.0001	1.13 g/ton	
		Sierran massive sulfide, 28a	5.50E+04	Cu	9.28E+02	1.6871		
				Au	1.34E-01	0.0002	2.44 g/ton	
				Zn	2.20E+03	3.9962		
				Ag	7.49E+00	0.0136	136.20 g/ton	
				Pb	5.09E+02	0.9252		
15PE	Outer Etolin	Polymetallic veins, 22c	6.85E+03	Cu	9.61E+00	0 1403		0.01
				Au	1.96E-02	0.0003	2.86 g/ton	
				Zn	4.23E+02	6.1752		
				Ag	6.44E+00	0.0940	939.58 g/ton	
				Pb	4.77E+02	6.9683		
20PE	Groundhog Basin	Replacement Sn, 14c	1.90E+07	Sn	1.81E+05	0.9543		18.96

Table 5-SD. Undiscovered mineral-resource endowment of mineral-resource tracts in the Sumdum quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
02SD	Snettisham	Au-Qtz veins, 36a	7.40E+04	Au	5.43E-01	0.0007	7.33 g/ton	0.07
				Ag	9.88E-02	0.0001	1.33 g/ton	
04SD	Tracy Arm-Stikine River	Sierran massive sulfide, 28a	8.48E+05	Cu	1.43E+04	1.6833		0.94
				Au	1.88E+00	0.0002	2.22 g/ton	
				Zn	3.21E+04	3.7858		
				Ag	1.03E+02	0.0121	121.08 g/ton	
				Pb	7.18E+03	0.8465		
		Au-Qtz veins, 36a	8.91E+04	Au	6.17E-01	0.0007	6.92 g/ton	
				Ag	1.19E-01	0.0001	1.33 g/ton	
05SD	Endicott Peninsula	Sierran massive sulfide, 28a	2.65E+05	Cu	4.38E+03	1.6546		0.33
				Au	5.89E-01	0.0002	2.22 g/ton	
				Zn	1.00E+04	3.7722		
				Ag	3.26E+01	0.0123	123.13 g/ton	
				Pb	2.13E+03	0.8037		
		Au-Qtz veins, 36a	6.34E+04	Au	4.96E-01	0.0008	7.83 g/ton	
				Ag	5.72E-02	0.0001	0.90 g/ton	
06SD	Dawes Glacier-Buddington Range	Polymetallic veins, 22c	4.22E+04	Cu	2.98E+01	0.0706		0.04
				Au	8.83E-02	0.0002	2.09 g/ton	
				Zn	2.21E+03	5.2308		
				Ag	3.93E+01	0.0931	931.49 g/ton	
				Pb	3.08E+03	7.2927		

Table 5-SI. Undiscovered mineral-resource endowment of mineral-resource tracts in the Sitka quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
01SI	Yakobi-Mirror Harbor	Synorogenic-synvolcanic Ni-Cu massive sulfide, 7a	2.03E+06	Cu	1.50E+04	0.7395		2.03
				Au	6.38E-03	3.14E-07	3.14 mg/ton	
				Ni	1.61E+04	0.7907		
				Pt	9.52E-04	4.69E-08	0.47 mg/ton	
				Co	6.95E+01	0.0034		
				Pd	3.48E-03	1.71E-07	1.71 mg/ton	
02SI	Yakobi-Chichagof	Au-Qtz veins, 36a	1.27E+06	Au	7.93E+00	0.0006	6.25 g/ton	1.59
				Ag	1.43E+00	0.0001	1.13 g/ton	
		Cyprus massive sulfide, 24a	3.24E+05	Cu	5.97E+03	1.8437		
				Au	3.33E-01	0.0001	1.03 g/ton	
				Zn	1.40E+03	0.4336		
				Ag	3.24E+00	0.0010	10.01 g/ton	
				Pb	2.33E+01	0.0072		
03SI	Lisianski Inlet	Au-Qtz veins, 36a	4.52E+05	Au	3.05E+00	0.0007	6.74 g/ton	0.45
				Ag	4.70E-01	0.0001	1.04 g/ton	
04SI	Lake Elfindah, Rust mountain, Granite Islands, Deep Bay, Krusof Island, Takatz Bay, and Trap Bay, Crawfish Inlet-Gut Bay, Redfish Bay	Porphyry Cu-Mo, 21a	7.89E+07	Cu	4.13E+05	0.5234		78.92
				Mo	1.10E+04	0.0140		
				Au	1.38E+00	1.76E-06	0.02 g/ton	
				Ag	1.17E+02	0.0001	1.48 g/ton	
		Polymetallic veins, 22c	9.43E+03	Cu	4.01E+00	0.0425		
				Au	1.60E-02	0.0002	1.69 g/ton	
				Zn	4.92E+02	5.2209		
				Ag	8.72E+00	0.0924	924.33 g/ton	
				Pb	5.40E+02	5.7308		
07SI	Tam Mountain, Moore Mountains	Zn-Pb skarn, 18c	3.57E+05	Cu	1.85E+03	0.5186		1.19
				Au	4.29E-01	0.0001	1.20 g/ton	
				Zn	2.10E+04	5.8754		
				Ag	1.91E+01	0.0054	53.62 g/ton	
				Pb	8.77E+03	2.4572		
		Cu skarn, 18b	3.24E+05	Cu	4.03E+03	1.2451		
				Au	1.07E-01	3.31E-05	0.33 g/ton	
				Ag	6.62E-01	0.0002	2.04 g/ton	
		Polymetallic replacement, 19a	4.98E+05	Cu	1.05E+03	0.2117		
				Au	4.95E-01	0.0001	0.99 g/ton	
				Zn	3.20E+04	6.4255		
				Ag	8.63E+01	0.0173	173.35 g/ton	
				Pb	2.50E+04	5.0118		
		Polymetallic veins, 22c	8.70E+03	Cu	9.88E+00	0.1136		
				Au	2.29E-02	0.0003	2.63 g/ton	
				Zn	4.36E+02	5.0107		
				Ag	6.11E+00	0.0702	702.14 g/ton	
				Pb	5.53E+02	6.3611		

Table 5-SI. Undiscovered mineral-resource endowment of mineral-resource tracts in the Sitka quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
08SI	Tenakee Inlet, S of head of	Synorogenic-synvolcanic Ni-Cu massive sulfide, 7a	4.48E+05	Cu	3.22E+03	0.7193		0.45
				Au	1.65E-03	3.69E-07	3.69 mg/ton	
				Ni	3.56E+03	0.7951		
				Pt	2.64E-04	5.89E-08	0.59 mg/ton	
				Co	1.74E+01	0.0039		
				Pd	8.22E-04	1.84E-07	1.84 mg/ton	
10SI	Seal Creek	Cu skarn, 18b	3.29E+05	Cu	4.04E+03	1.2283		0.68
				Au	7.05E-02	2.14E-05	0.21 g/ton	
				Ag	5.16E-01	0.0002	1.57 g/ton	
		Zn-Pb skarn, 18c	3.54E+05	Cu	1.67E+03	0.4725		
				Au	3.17E-01	0.0001	0.89 g/ton	
				Zn	2.02E+04	5.6966		
				Ag	2.23E+01	0.0063	63.12 g/ton	
				Pb	9.85E+03	2.7837		
11SI	Tenakee-Sitkoh Bay	Felsic plutonic Th-REE	1.02E+06	Th	4.95E+03	0.4850		1.02
				REE	4.27E+03	0.4182		
				U	9.32E+01	0.0091	91.37 g/ton	
13SI	Admiralty Island	Sierran massive sulfide, 28a	3.09E+05	Cu	5.23E+03	1.6920		0.72
				Au	6.85E-01	0.0002	2.22 g/ton	
				Zn	1.25E+04	4.0492		
				Ag	3.99E+01	0.0129	129.16 g/ton	
				Pb	2.63E+03	0.8504		
		Synorogenic-synvolcanic Ni-Cu massive sulfide, 7a	4.15E+05	Cu	2.89E+03	0.6967		
				Au	1.32E-03	3.17E-07	3.17 mg/ton	
				Ni	3.49E+03	0.8410		
				Pt	2.26E-04	5.44E-08	0.54 mg/ton	
				Co	1.56E+01	0.0038		
				Pd	6.55E-04	1.58E-07	1.58 mg/ton	
14SI	King Salmon Bay	Sierran massive sulfide, 28a	5.02E+04	Cu	9.56E+02	1.9035		0.05
				Au	1.17E-01	0.0002	2.33 g/ton	
				Zn	1.90E+03	3.7920		
				Ag	6.36E+00	0.0127	126.65 g/ton	
				Pb	4.22E+02	0.8408		

Table 5-SK. Undiscovered mineral-resource endowment of mineral-resource tracts in the Skagway quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
07SK	Takhinsha Mountains	Porphyry Cu-Mo, 21a	5.80E+07	Cu	2.77E+05	0.4771		57.99
				Mo	8.84E+03	0.0152		
				Au	1.17E+00	2.02E-06	0.02 g/ton	
				Ag	9.72E+01	0.0002	1.68 g/ton	
09SK	Mount Henry Clay	Sierran massive sulfide, 28a	7.85E+05	Cu	1.33E+04	1.6963		1.21
				Au	1.70E+00	0.0002	2.17 g/ton	
				Zn	3.00E+04	3.8185		
				Ag	9.48E+01	0.0121	120.79 g/ton	
				Pb	6.44E+03	0.8206		
		Au-Qtz veins, 36a	4.25E+05	Au	2.73E+00	0.0006	6.43 g/ton	
				Ag	4.21E-01	0.0001	0.99 g/ton	
10SK	Surgeon Mountains and upper Tsirku River	Sierran massive sulfide, 28a	5.43E+04	Cu	8.65E+02	1.5925		1.63
				Au	1.22E-01	0.0002	2.25 g/ton	
				Zn	2.36E+03	4.3541		
				Ag	7.04E+00	0.0130	129.69 g/ton	
				Pb	5.21E+02	0.9596		
		Au-Qtz veins, 36a	4.73E+04	Au	3.70E-01	0.0008	7.82 g/ton	
				Ag	4.64E-02	0.0001	0.98 g/ton	
		Cu skarn, 18b	1.53E+06	Cu	2.18E+04	1.4264		
				Au	3.87E-01	2.53E-05	0.25 g/ton	
				Ag	2.89E+00	0.0002	1.89 g/ton	
11SK	Porcupine, lower Tsirku River, and Takhin River	Au-Qtz veins, 36a	1.60E+05	Au	7.23E-01	0.0005	4.52 g/ton	4.29
				Ag	2.18E-01	0.0001	1.36 g/ton	
		Sedimentary exhalative Pb-Zn, 31a	4.10E+06	Zn	3.02E+05	7.3600		
				Ag	2.74E+02	0.0067	66.72 g/ton	
				Pb	2.01E+05	4.9098		
		Polymetallic veins, 22c	7.01E+03	Cu	1.35E+01	0.1921		
				Au	2.58E-02	0.0004	3.68 g/ton	
				Zn	3.18E+02	4.5311		
				Ag	4.66E+00	0.0665	664.58 g/ton	
				Pb	3.95E+02	5.6362		
		Au-PGE stream placer, 39a	1.75E+04	Au	1.07E-02	0.0001		
12SK	Chilkat River and Chilkat Inlet, W. side	Sierran massive sulfide, 28a	5.66E+04	Cu	8.88E+02	1.5692		0.18
				Au	1.11E-01	0.0002	1.96 g/ton	
				Zn	2.07E+03	3.6574		
				Ag	6.03E+00	0.0107	106.54 g/ton	
				Pb	4.82E+02	0.8521		
		Au-Qtz veins, 36a	1.14E+05	Au	8.51E-01	0.0007	7.47 g/ton	
				Ag	8.50E-02	0.0001	0.75 g/ton	

Table 5-SK. Undiscovered mineral-resource endowment of mineral-resource tracts in the Skagway quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
12SK	continued	Polymetallic veins, 22c	1.02E+04	Cu	7.89E+00	0.0774		
				Au	2.72E-02	0.0003	2.67 g/ton	
				Zn	5.43E+02	5.3204		
				Ag	8.85E+00	0.0868	867.55 g/ton	
				Pb	7.84E+02	7.6861		
14SK	Chilkat River and Chilkat Inlet, E. side	Cyprus massive sulfide, 24a	3.89E+05	Cu	7.23E+03	1.8589		0.46
				Au	3.18E-01	0.0001	0.82 g/ton	
				Zn	2.08E+03	0.5359		
				Ag	3.95E+00	0.0010	10.16 g/ton	
				Pb	4.89E+01	0.0126		
		Au-Qtz veins, 36a	7.41E+04	Au	5.32E-01	0.0007	7.17 g/ton	
				Ag	9.49E-02	0.0001	1.28 g/ton	
16SK	Skagway River	Zn-Pb skarn, 18c	3.51E+05	Cu	1.57E+03	0.4471		71.54
				Au	2.95E-01	0.0001	0.84 g/ton	
				Zn	1.88E+04	5.3464		
				Ag	2.49E+01	0.0071	70.92 g/ton	
				Pb	1.12E+04	3.1806		
		Porphyry Cu-Mo, 21a	7.12E+07	Cu	3.77E+05	0.5295		
				Mo	9.69E+03	0.0136		
				Au	1.23E+00	1.73E-06	0.02 g/ton	
				Ag	1.23E+02	0.0002	1.72 g/ton	
17SK	Meade Glacier	Zn-Pb skarn, 18c	3.09E+05	Cu	1.31E+03	0.4228		0.31
				Au	1.87E-01	0.0001	0.61 g/ton	
				Zn	1.89E+04	6.1249		
				Ag	1.76E+01	0.0057	57.01 g/ton	
				Pb	9.70E+03	3.1386		

Table 5-TR. Undiscovered mineral-resource endowment of mineral-resource tracts in the Taku River quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
02TR	Bacon Glacier and Mount Ogden	Porphyry Mo, 21b	1.53E+07	Mo	1.15E+04	0.0750		15.82
		Cu skarn,18b	2.51E+05	Cu	3.28E+03	1.3079		
				Au	6.47E-02	2.58E-05	0.26 g/ton	
				Ag	5.59E-01	0.0002	2.23 g/ton	
		Zn-Pb skarn, 18c	2.83E+05	Cu	8.39E+02	0.2963		
				Au	1.10E-01	3.90E-05	0.39 g/ton	
				Zn	1.71E+04	6.0343		
				Ag	1.20E+01	0.0042	42.47 g/ton	
				Pb	8.31E+03	2.9358		
03TR	Kluchman Mountain	Polymetallic veins, 22c	9.96E+03	Cu	1.17E+01	0.1174		0.01
				Au	3.39E-02	0.0003	3.40 g/ton	
				Zn	5.01E+02	5.0337		
				Ag	9.17E+00	0.0920	920.47 g/ton	
				Pb	6.51E+02	6.5348		
04TR	Snow Tower-Sawyer Glacier	Cu skarn,18b	2.55E+05	Cu	3.16E+03	1.2391		0.51
				Au	5.12E-02	2.01E-05	0.20 g/ton	
				Ag	5.01E-01	0.0002	1.97 g/ton	
		Zn-Pb skarn, 18c	2.50E+05	Cu	9.53E+02	0.3811		
				Au	1.23E-01	4.91E-05	0.49 g/ton	
				Zn	1.60E+04	6.4192		
				Ag	1.68E+01	0.0067	67.16 g/ton	
				Pb	6.92E+03	2.7692		
		Polymetallic veins, 22c	8.55E+03	Cu	4.71E+00	0.0551		
				Au	1.71E-02	0.0002	2.00 g/ton	
				Zn	4.36E+02	5.1018		
				Ag	8.97E+00	0.1049	1.05 kg/ton	
				Pb	6.63E+02	7.7525		

Table 5YA. Undiscovered mineral-resource endowment of mineral-resource tracts in the Yakutat quadrangle, Tongass National Forest and adjacent lands, southeastern Alaska. (All values are in metric tons; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Mineral-deposit type no.	4 Deposit tonnage	5 Commodity	6 Metal content, in tons	7 Calculated metal grade in percent	8 Calculated grade, units as shown	9 Tract tonnage totals in millions
01YA	Fairweather Range	Sierran massive sulfide, 28a	5.34E+04	Cu	8.88E+02	1.6631		78.49
				Au	1.22E-01	0.0002	2.28 g/ton	
				Zn	2.30E+03	4.3137		
				Ag	7.02E+00	0.0132	131.52 g/ton	
				Pb	4.81E+02	0.8999		
		Au-Qtz veins, 36a	1.14E+05	Au	7.69E-01	0.0007	6.75 g/ton	
				Ag	1.84E-01	0.0002	1.61 g/ton	
		Porphyry Cu-Mo, 21a	7.83E+07	Cu	3.88E+05	0.4961		
				Mo	1.04E+04	0.0132		
				Au	1.24E+00	1.58E-06	0.02 g/ton	
				Ag	1.13E+02	0.0001	1.45 g/ton	
02YA	Yakutat Range	Au-Qtz veins, 36a	1.68E+06	Au	1.08E+01	0.0006	6.46 g/ton	1.68
				Ag	1.79E+00	0.0001	1.07 g/ton	

Table 6. Commodity prices used in calculation of gross-in-place value of undiscovered mineral resources, Tongass National Forest and adjacent lands. (Prices are averages for the decade 1978-1987, based on U.S. Bureau of Mines (1983, 1988). Prices have been rounded to two places. The following conversions were used: 0.9078 mt = 1 st, 1 kg = 2.2 lb, 1 st = 2,000 lb, 1 stu = 20 lb, 31.1 g = 1 troy oz; from Coldwell (1990). Prices for antimony and tin calculated specifically for this report by a method similar to that of the USBM).

Commodity	Symbol	Price (English)	Price (Metric)
Antimony	Sb	$1.66/lb	$3,652.00/mt
Barite	Barite	$ 39.00/st	$ 42.96/mt
Cobalt	Co	6.70/lb	14,760.96/mt
Columbium Oxide	Cb_2O_5	2.94/lb	6,477.20/mt
Copper	Cu	0.92/lb	2026.88/mt
Gold	Au	456.43/tr oz	14.68/g
Iron	Fe	65.85/st	72.54/mt
Lead	Pb	0.38/lb	837.19/mt
Molybdenum	Mo	5.72/lb	12,601.89/mt
Nickel	Ni	2.85/lb	6,278.92/mt
Palladium	Pd	135.75/tr oz	4.36/g
Platinum	Pt	503.38/tr oz	16.19/g
Rare Earth Metals	RE	5.65/lb	12,447.68/mt
Silver	Ag	11.58/tr oz	0.37/g
Thorium Oxide	ThO_2	4.43/lb	9.75/kg
Tin	Sn	8.62/lb	18,964.00/mt
Titanium	Ti	6.82/lb	15,025.34/mt
Tungsten Oxide	WO_3	31.35/stu	3,453.40/mt
Uranium Oxide	U_3O_8	16.65/lb	36,682.09/mt
Vanadium Oxide	V_2O_5	4.10/lb	9,032.83/mt
Yttrium Oxide	Y_2O_3	6.24/lb	13,747.52/mt
Zinc	Zn	0.47/lb	1,035.47/mt
Zirconium Oxide	ZrO_2	172.00/st	189.47/mt

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
ATLIN QUADRANGLE							
01AL	Lace River	0.99	Cu	6.71E+03	2026.88	1.36E+07	
			Au	3.33E-01	14.68	4.89E+06	
			Zn	1.82E+04	1035.47	1.89E+07	
			Ag	1.86E+01	0.37	6.90E+06	
			Pb	9.56E+03	837.19	8.00E+06	
			W	2.50E+03	3453.4	8.65E+06	
							6.09E+07
03AL	Chilkoot Range metabasalts	0.41	Cu	6.88E+03	2026.88	1.39E+07	
			Au	3.81E-01	14.68	5.59E+06	
			Zn	1.77E+03	1035.47	1.83E+06	
			Ag	4.26E+00	0.37	1.58E+06	
			Pb	4.19E+01	837.19	3.50E+04	
							2.30E+07
BRADFIELD CANAL QUADRANGLE							
01BC	Bradfield Canal Coast Mountains	35.24	Cu	1.34E+03	2026.88	2.72E+06	
			Au	2.20E-01	14.68	3.23E+06	
			Zn	1.73E+04	1035.47	1.79E+07	
			Ag	2.53E+01	0.37	9.35E+06	
			Pb	9.07E+03	837.19	7.59E+06	
		16.71	Mo	1.29E+04	12601.89	1.63E+08	
			Fe	1.74E+07	72.54	1.26E+09	
							1.46E+09
02BC	Cone Mountain	18.24	Cu	8.11E+00	2026.88	1.64E+04	
			Au	2.59E-02	14.68	3.81E+05	
			Zn	4.98E+02	1035.47	5.16E+05	
			Ag	9.73E+00	0.37	3.60E+06	
			Pb	6.56E+02	837.19	5.49E+05	
			Mo	1.45E+04	12601.89	1.83E+08	
							1.88E+08
04BC	Glacier Basin-Berg Basin	0.13	Cu	1.06E+02	2026.88	2.16E+05	
			Au	2.73E-01	14.68	4.01E+06	
			Zn	6.50E+03	1035.47	6.73E+06	
			Ag	1.11E+02	0.37	4.09E+07	
			Pb	9.03E+03	837.19	7.56E+06	
							5.94E+07
05BC	Harding River	0.38	Cu	1.85E+03	2026.88	3.75E+06	
			Au	3.11E-01	14.68	4.56E+06	
			Zn	2.38E+04	1035.47	2.47E+07	
			Ag	2.79E+01	0.37	1.03E+07	
			Pb	1.14E+04	837.19	9.55E+06	
							5.29E+07
07BC	Eulachon Creek	7.09	Fe	3.71E+06	72.54	2.69E+08	
							2.69E+08

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued ,

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
08BC	Gracey Creek Glacier	0.01	Cu	9.15E+00	2026.88	1.85E+04	
			Au	2.89E-02	14.68	4.24E+05	
			Zn	5.74E+02	1035.47	5.94E+05	
			Ag	6.02E+00	0.37	2.23E+06	
			Pb	6.37E+02	837.19	5.34E+05	
							3.80E+06
10BC	Burroughs Bay	72.49	Cu	3.66E+05	2026.88	7.43E+08	
			Mo	9.86E+03	12601.89	1.24E+08	
			Au	1.63E+00	14.68	2.39E+07	
			Ag	1.15E+02	0.37	4.24E+07	
							9.33E+08
12BC	Chickamin Glacier	80.55	Cu	9.72E+02	2026.88	1.97E+06	
			Au	5.70E-01	14.68	8.36E+06	
			Zn	1.32E+04	1035.47	1.37E+07	
			Ag	2.30E+02	0.37	8.52E+07	
			Pb	1.75E+04	837.19	1.47E+07	
			Mo	6.08E+04	12601.89	7.66E+08	
							8.90E+08
13BC	Texas Creek-Hyder	83.68	Cu	4.17E+05	2026.88	8.44E+08	
			Au	1.71E+00	14.68	2.50E+07	
			Zn	4.44E+03	1035.47	4.60E+06	
			Ag	1.73E+02	0.37	6.39E+07	
			Pb	3.92E+03	837.19	3.28E+06	
			Mo	1.19E+04	12601.89	1.50E+08	
							1.09E+09
CRAIG QUADRANGLE							
01CR	Coronation Island	2.19	Cu	4.84E+03	2026.88	9.82E+06	
			Au	1.49E+00	14.68	2.18E+07	
			Zn	1.31E+05	1035.47	1.36E+08	
			Ag	4.77E+02	0.37	1.77E+08	
			Pb	1.33E+05	837.19	1.12E+08	
							4.55E+08
03CR	Sweetwater Lake	0.19	Cu	2.54E+03	2026.88	5.15E+06	
			Au	6.94E-02	14.68	1.02E+06	
			Zn	2.01E+03	1035.47	2.08E+06	
			Ag	3.47E+00	0.37	1.28E+06	
							9.53E+06
07CR	Lava Creek	0.85	Th	4.02E+03	9750	3.92E+07	
			RE	3.20E+03	12447.68	3.99E+07	
			U	6.62E+01	46682.09	3.09E+06	
							8.21E+07
09CR	Lower Cleveland Peninsula	4.59	Au	2.89E+01	14.68	4.25E+08	
			Ag	5.76E+00	0.37	2.13E+06	
			Sb	6.20E+01	3652.00	2.26E+05	
							4.27E+08

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued.

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
10CR	South central Prince of Wales Island	12.02	Cu	1.58E+05	2026.88	3.20E+08	
			Au	7.08E+00	14.68	1.04E+08	
			Zn	8.82E+04	1035.47	9.14E+07	
			Ag	7.57E+02	0.37	2.80E+08	
			Pb	5.88E+00	837.19	4.92E+03	
							7.95E+08
12CR	Kasaan Peninsula	8.61	Cu	1.14E+05	2026.88	2.32E+08	
			Au	1.94E+00	14.68	2.84E+07	
			Ag	1.63E+01	0.37	6.03E+06	
		182.63	Fe	8.93E+07	72.54	6.48E+09	
							6.75E+09
13CR	Baker Island	69.49	Cu	3.87E+05	2026.88	7.85E+08	
			Au	1.42E+00	14.68	2.09E+07	
			Zn	2.09E+03	1035.47	2.17E+06	
			Ag	1.39E+02	0.37	5.13E+07	
			Pb	2.80E+03	837.19	2.35E+06	
			Mo	9.05E+03	12601.89	1.14E+08	
							9.75E+08
14CR	San Juan Bautista Island	0.04	Cu	3.48E+01	2026.88	7.05E+04	
			Au	8.05E-02	14.68	1.18E+06	
			Zn	1.93E+03	1035.47	2.00E+06	
			Ag	2.94E+01	0.37	1.09E+07	
			Pb	2.70E+03	837.19	2.26E+06	
							1.64E+07
15CR	Port Saint Nicholas	15.23	Th	5.30E+03	9750	5.16E+07	
			RE	4.29E+03	12447.68	5.34E+07	
			U	7.22E+01	36682.09	2.65E+06	
			Mo	1.02E+04	12601.89	1.29E+08	
							2.37E+08
16CR	Black Lake-Lake Saint Nicholas	15.92	Mo	1.24E+04	12601.89	1.56E+08	1.56E+08
17CR	Pin Peak	16.64	Mo	1.29E+04	12601.89	1.62E+08	
			Cu	2.59E+01	2026.88	5.25E+04	
			Au	3.46E-02	14.68	5.08E+05	
			Zn	4.40E+02	1035.47	4.56E+05	
			Ag	7.52E+00	0.37	2.78E+06	
			Pb	7.45E+02	837.19	6.24E+05	
							1.66E+08
18CR	Maybeso Creek	15.78	Mo	1.16E+04	12601.89	1.46E+08	
			Cu	3.72E+02	2026.88	7.54E+05	
			Au	9.01E-01	14.68	1.32E+07	
			Zn	1.93E+04	1035.47	1.99E+07	
			Ag	3.34E+02	0.37	1.23E+08	
			Pb	2.70E+04	837.19	2.26E+07	
							3.26E+08

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
19CR	Suemez Island	16.60	Mo	1.30E+04	12601.89	1.64E+08	
			Cu	1.07E+01	2026.88	2.18E+04	
			Au	2.83E-02	14.68	4.15E+05	
			Zn	4.36E+02	1035.47	4.51E+05	
			Ag	5.37E+00	0.37	1.99E+06	
			Pb	4.65E+02	837.19	3.90E+05	
			Th	4.52E+03	9750	4.41E+07	
			RE	4.16E+03	12447.68	5.18E+07	
			U	9.69E+01	36682.09	3.55E+06	
							2.66E+08
20CR	Trocadero Bay-Cholmondeley Sound	1.41	Cu	2.39E+04	2026.88	4.84E+07	
			Au	3.11E+00	14.68	4.56E+07	
			Zn	5.37E+04	1035.47	5.56E+07	
			Ag	1.68E+02	0.37	6.22E+07	
			Pb	1.20E+04	837.19	1.00E+07	
							2.22E+08
21CR	Copper Mountain	38.98	Cu	2.26E+04	2026.88	4.59E+07	
			Au	3.76E-01	14.68	5.52E+06	
			Ag	2.77E+00	0.37	1.02E+06	
			Fe	1.89E+07	72.54	1.37E+09	
							1.43E+09
22CR	Dora Bay	5.18	Th	2.53E+04	9750	2.47E+08	
			RE	2.14E+04	12447.68	2.67E+08	
			U	4.37E+02	36682.09	1.60E+07	
							5.30E+08
23CR	Dolomi	0.49	Cu	1.54E+02	2026.88	3.11E+05	
			Au	3.05E+00	14.68	4.48E+07	
			Zn	7.16E+03	1035.47	7.41E+06	
			Ag	1.21E+02	0.37	4.48E+07	
			Pb	9.97E+03	837.19	8.35E+06	
							1.06E+08
24CR	Northern Dall	16.44	Mo	1.30E+04	12601.89	1.63E+08	
			Cu	1.48E+03	2026.88	3.00E+06	
			Au	3.04E-01	14.68	4.47E+06	
			Zn	2.02E+04	1035.47	2.09E+07	
			Ag	2.60E+01	0.37	9.62E+06	
			Pb	1.11E+04	837.19	9.28E+06	
							2.11E+08
25CR	Southeast Sukkwan Island	0.95	Th	4.90E+03	9750	4.78E+07	
			RE	4.62E+03	12447.68	5.75E+07	
			U	8.03E+01	36682.09	2.94E+06	
							1.08E+08

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
26CR	Moira Sound	79.28	Mo	6.12E+04	12601.89	7.71E+08	
			Cu	9.35E+02	2026.88	1.90E+06	
			Au	1.66E-01	14.68	2.44E+06	
			Zn	1.41E+04	1035.47	1.46E+07	
			Ag	2.74E+01	0.37	1.01E+07	
			Pb	8.36E+03	837.19	7.00E+06	
							8.07E+08
27CR	Niblack	0.76	Cu	1.27E+04	2026.88	2.57E+07	
			Au	1.63E+00	14.68	2.40E+07	
			Zn	2.84E+04	1035.47	2.94E+07	
			Ag	9.06E+01	0.37	3.35E+07	
			Pb	6.34E+03	837.19	5.31E+06	
							1.18E+08
DIXON ENTRANCE QUADRANGLE							
01DE	Forrester Island	16.67	Mo	1.28E+04	12601.89	1.61E+08	1.61E+08
05DE	Kassa Inlet	1.07	Th	4.96E+03	9750	4.84E+07	
			RE	4.16E+03	12447.68	5.18E+07	
			U	1.10E+02	36682.09	4.05E+06	
							1.04E+08
06DE	Bokan Mountain	16.13	Th	7.82E+04	9750	7.62E+08	
			RE	6.62E+04	12447.68	8.24E+08	
			U	1.26E+03	36682.09	4.63E+07	
							1.63E+09
08DE	Southern Dall & Long Islands	0.33	Cu	1.15E+03	2026.88	2.33E+06	
			Au	7.63E-01	14.68	1.12E+07	
			Zn	1.65E+04	1035.47	1.71E+07	
			Ag	2.47E+02	0.37	9.14E+07	
			Pb	2.01E+04	837.19	1.68E+07	
							1.39E+08
09DE	Barrier Islands	1.46	Cu	2.46E+04	2026.88	4.98E+07	
			Au	3.24E+00	14.68	4.75E+07	
			Zn	5.45E+04	1035.47	5.65E+07	
			Ag	1.75E+02	0.37	6.49E+07	
			Pb	1.25E+04	837.19	1.05E+07	
							2.29E+08
10DE	Southeastern-most Prince of Wales Island	20.67	Mo	1.20E+04	12601.89	1.51E+08	
			Cu	3.11E+00	2026.88	6.30E+03	
			Au	1.06E-02	14.68	1.56E+05	
			Zn	3.24E+02	1035.47	3.36E+05	
			Ag	7.72E+00	0.37	2.86E+06	
			Pb	7.09E+02	837.19	5.93E+05	
			Th	2.47E+04	9750	2.41E+08	
			RE	2.09E+04	12447.68	2.60E+08	
			U	3.57E+02	36682.09	1.31E+07	
							6.68E+08

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
JUNEAU QUADRANGLE							
01JU	White Glacier	0.26	Cu	4.64E+03	2026.88	9.40E+06	
			Au	5.63E-01	14.68	8.27E+06	
			Zn	9.49E+03	1035.47	9.83E+06	
			Ag	2.88E+01	0.37	1.07E+07	
			Pb	2.01E+03	837.19	1.68E+06	
							3.98E+07
02JU	Casement Glacier	83.00	Mo	1.16E+04	12601.89	1.47E+08	
			Cu	4.25E+05	2026.88	8.61E+08	
			Au	1.48E+00	14.68	2.18E+07	
			Zn	4.23E+02	1035.47	4.37E+05	
			Ag	1.30E+02	0.37	4.81E+07	
			Pb	8.01E+02	837.19	6.70E+05	
							1.08E+09
04JU	Sullivan Island to Sullivan River	2.64	Cu	3.94E+04	2026.88	7.99E+07	
			Au	1.06E+00	14.68	1.55E+07	
			Zn	3.01E+04	1035.47	3.12E+07	
			Ag	5.17E+01	0.37	1.91E+07	
			Pb	9.29E+03	837.19	7.78E+06	
							1.54E+08
05JU	Excursion River	0.04	Cu	6.09E+01	2026.88	1.23E+05	
			Au	1.05E-01	14.68	1.55E+06	
			Zn	2.03E+03	1035.47	2.10E+06	
			Ag	3.63E+01	0.37	1.34E+07	
			Pb	2.85E+03	837.19	2.39E+06	
							1.96E+07
06JU	Nun Mountain	0.66	Cu	5.91E+03	2026.88	1.20E+07	
			Au	4.43E-01	14.68	6.50E+06	
			Zn	2.10E+04	1035.47	2.17E+07	
			Ag	2.02E+01	0.37	7.49E+06	
			Pb	9.27E+03	837.19	7.76E+06	
							5.54E+07
07JU	Neka Bay, W of	0.62	Cu	5.31E+03	2026.88	1.08E+07	
			Au	2.22E-01	14.68	3.26E+06	
			Zn	1.67E+04	1035.47	1.73E+07	
			Ag	1.48E+01	0.37	5.46E+06	
			Pb	8.58E+03	837.19	7.18E+06	
							4.40E+07
11JU	Kensington-Jualin & Eagle River-Juneau	3.62	Cu	1.27E+04	2026.88	2.58E+07	
			Au	1.88E+01	14.68	2.76E+08	
			Zn	2.86E+04	1035.47	2.96E+07	
			Ag	9.90E+01	0.37	3.66E+07	
			Pb	6.72E+03	837.19	5.62E+06	
							3.73E+08

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
13JU	Juneau Ice-Field	3.07	Cu	2.68E+04	2026.88	5.43E+07	
			Au	1.48E+00	14.68	2.18E+07	
			Zn	8.96E+04	1035.47	9.27E+07	
			Ag	9.05E+01	0.37	3.35E+07	
			Pb	4.59E+04	837.19	3.84E+07	
							2.41E+08
KETCHIKAN QUADRANGLE							
03KC	Chickamin River	0.67	Cu	6.26E+03	2026.88	1.27E+07	
			Au	3.59E-01	14.68	5.27E+06	
			Zn	1.91E+04	1035.47	1.97E+07	
			Ag	5.59E+01	0.37	2.07E+07	
			Pb	1.15E+04	837.19	9.61E+06	
							6.80E+07
07KC	Chickamin-Rudyerd	1.48	Cu	1.91E+04	2026.88	3.88E+07	
			Au	2.82E-01	14.68	4.13E+06	
			Zn	3.86E+02	1035.47	3.99E+05	
			Ag	1.17E+01	0.37	4.33E+06	
			Pb	7.29E+02	837.19	6.10E+05	
							4.83E+07
08KC	Southern Revillagigedo Island	0.15	Cu	9.09E+02	2026.88	1.84E+06	
			Au	6.18E-01	14.68	9.07E+06	
			Zn	3.87E+03	1035.47	4.01E+06	
			Ag	4.79E+01	0.37	1.77E+07	
			Pb	3.40E+03	837.19	2.84E+06	
							3.55E+07
10KC	Boca de Quadra-Quartz Hill	97.17	Mo	7.31E+04	12601.89	9.22E+08	
			Cu	2.15E+04	2026.88	4.36E+07	
			Au	3.63E-01	14.68	5.33E+06	
			Zn	2.00E+03	1035.47	2.07E+06	
			Ag	3.60E+01	0.37	1.33E+07	
			Pb	2.89E+03	837.19	2.42E+06	
							9.88E+08
14KC	Southwestern Gravina Island-Eastern Annette Island	0.84	Cu	1.38E+04	2026.88	2.81E+07	
			Au	1.85E+00	14.68	2.72E+07	
			Zn	3.22E+04	1035.47	3.34E+07	
			Ag	1.28E+02	0.37	4.74E+07	
			Pb	9.33E+03	837.19	7.81E+06	
							1.44E+08
16KC	Tongass Narrows	1.56	Cu	8.34E+00	2026.88	1.69E+04	
			Au	9.15E+00	14.68	1.34E+08	
			Zn	3.52E+02	1035.47	3.64E+05	
			Ag	1.07E+01	0.37	3.97E+06	
			Pb	5.30E+02	837.19	4.43E+05	
							1.39E+08

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
18KC	Boca de Quadra-Sitlan Island	0.06	Cu	9.35E+02	2026.88	1.90E+06	
			Au	1.06E-01	14.68	1.55E+06	
			Zn	2.41E+03	1035.47	2.49E+06	
			Ag	1.50E+01	0.37	5.55E+06	
			Pb	1.13E+03	837.19	9.47E+05	
							1.24E+07
MOUNT FAIRWEATHER QUADRANGLE							
04MF	Mount Fairweather (Brew and others, 1978)	82.00	Cu	2.71E-01	2026.88	5.49E+02	
			Ni	4.35E-01	6278.92	2.73E+03	
							3.28E+03
05MF	Tarr Inlet (Brew and others,	45.00	Cu	1.80E-01	2026.88	3.65E+02	
	1978)	0.90	Cu	1.35E-02	2026.88	2.74E+01	
			Zn	1.80E-02	1035.47	1.86E+01	
							4.11E+02
06MF	Reid Inlet (Brew and others, 1978)		Au	1.40E+04	456.43	6.39E+06	
							6.39E+06
07MF	Muir Inlet	0.43	Cu	1.16E+03	2026.88	2.35E+06	
			Au	2.94E-01	14.68	4.32E+06	
			Zn	2.57E+04	1035.47	2.66E+07	
			Ag	8.74E+01	0.37	3.23E+07	
			Pb	2.08E+04	837.19	1.74E+07	
							8.30E+07
	(Brew and others 1978)	90.00	Mo	1.58E-01	12601.89	1.99E+03	
							1.99E+03
09MF	Crillon-LaPerouse (Brew and others, 1978)	82.00	Cu	2.71E-01	2026.88	5.49E+02	
			Ni	4.35E-01	6278.92	2.73E+03	
							3.28E+03
10MF	Cape Spencer North	0.47	Cu	3.02E+03	2026.88	6.12E+06	
			Au	1.21E-01	14.68	1.77E+06	
			Zn	2.24E+03	1035.47	2.32E+06	
			Ag	4.20E+01	0.37	1.55E+07	
			Pb	3.36E+03	837.19	2.81E+06	
			Ni	3.35E+03	6278.92	2.11E+07	
			Pt	1.39E-04	16.19	2.24E+03	
			Co	1.89E+01	14760.96	2.79E+05	
			Pd	4.52E-04	4.36	1.97E+03	
							4.99E+07
11MF	Dundas River	80.71	Mo	9.79E+03	12601.89	1.23E+08	
			Cu	4.45E+05	2026.88	9.01E+08	
			Au	2.05E+00	14.68	3.01E+07	
			Zn	4.07E+02	1035.47	4.21E+05	
			Ag	1.35E+02	0.37	5.01E+07	
			Pb	7.57E+02	837.19	6.33E+05	
							1.11E+09

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
PORT ALEXANDER QUADRANGLE							
05PA	Security Bay	0.04	Cu	3.11E+01	2026.88	6.30E+04	
			Au	8.88E-02	14.68	1.30E+06	
			Zn	2.39E+03	1035.47	2.47E+06	
			Ag	3.52E+01	0.37	1.30E+07	
			Pb	2.96E+03	837.19	2.48E+06	
							1.94E+07
06PA	Saginaw Bay-Cornwalis Peninsula	14.95	Cu	9.10E+02	2026.88	1.84E+06	
			Au	1.14E-01	14.68	1.68E+06	
			Zn	4.91E+05	1035.47	5.08E+08	
			Ag	2.45E+02	0.37	9.08E+07	
			Pb	2.27E+05	837.19	1.90E+08	
							7.93E+08
08PA	Southwest Kuiu	75.82	Mo	1.08E+04	12601.89	1.37E+08	
			Cu	3.88E+05	2026.88	7.86E+08	
			Au	1.52E+00	14.68	2.23E+07	
			Zn	2.02E+03	1035.47	2.09E+06	
			Ag	1.70E+02	0.37	6.30E+07	
			Pb	3.84E+03	837.19	3.21E+06	
							1.01E+09

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
PETERSBURG QUADRANGLE							
01PE	Kake-Gunnuck & Sitkum Creeks	3.62	Cu	3.88E+03	2026.88	7.85E+06	
			Au	1.08E-01	14.68	1.59E+06	
			Zn	2.72E+05	1035.47	2.82E+08	
			Ag	2.45E+02	0.37	9.07E+07	
			Pb	1.53E+05	837.19	1.28E+08	
							5.09E+08
05PE	Southwest Kupreanof	1.57	Cu	5.32E+01	2026.88	1.08E+05	
			Au	8.74E+00	14.68	1.28E+08	
			Zn	2.00E+03	1035.47	2.07E+06	
			Ag	5.98E+02	0.37	2.21E+08	
			Pb	3.45E+03	837.19	2.89E+06	
							3.55E+08
06PE	Tunehean Creek-Castle River, southeast Zarembo, central Etolin, Niblack and Deer Island	1.05	Th	5.33E+03	9.75	5.20E+07	
			RE	4.54E+03	12447.68	5.66E+07	
			U	8.59E+01	36682.09	3.15E+06	
							1.12E+08
07PE	Kosciusko-Northern Prince of Wales	84.49	Mo	1.04E+04	12601.89	1.32E+08	
			Cu	4.54E+05	2026.88	9.21E+08	
			Au	2.13E+00	14.68	3.13E+07	
			Zn	6.01E+03	1035.47	6.22E+06	
			Ag	2.21E+02	0.37	8.16E+07	
			Pb	8.11E+03	837.19	6.79E+06	
							1.18E+09
08PE	Salmon Bay	1.08	Th	5.16E+03	9.75	5.03E+07	
			RE	4.58E+03	12447.68	5.70E+07	
			U	1.14E+02	36682.09	4.18E+06	
							1.12E+08
12PE	Duncan Canal-Zarembo Island	1.39	Cu	2.30E+04	2026.88	4.67E+07	
			Au	3.04E+00	14.68	4.47E+07	
			Zn	5.14E+04	1035.47	5.32E+07	
			Ag	1.68E+02	0.37	6.22E+07	
			Pb	1.16E+04	837.19	9.75E+06	
							2.17E+08

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
13PE	Kupreanof Mountain	0.60	Cu	9.56E+03	2026.88	1.94E+07	
			Au	3.16E-01	14.68	4.63E+06	
			Zn	1.11E+03	1035.47	1.15E+06	
			Ag	3.58E+00	0.37	1.32E+06	
			Pb	1.45E+01	837.19	1.22E+04	
							2.65E+07
14PE	Woewodski	1.22	Cu	9.28E+02	2026.88	1.88E+06	
			Au	7.88E+00	14.68	1.16E+08	
			Zn	2.20E+03	1035.47	2.28E+06	
			Ag	8.82E+00	0.37	3.26E+06	
			Pb	5.09E+02	837.19	4.26E+05	
							1.23E+08
15PE	Outer Etolin	0.01	Cu	9.61E+00	2026.88	1.95E+04	
			Au	1.96E-02	14.68	2.88E+05	
			Zn	4.23E+02	1035.47	4.38E+05	
			Ag	6.44E+00	0.37	2.38E+06	
			Pb	4.77E+02	837.19	4.00E+05	
							3.53E+06
20PE	Groundhog Basin	18.96	Sn	1.81E+05	18964	3.43E+09	
							3.43E+09
SUMDUM QUADRANGLE							
02SD	Snettisham	0.07	Au	5.43E-01	14.68	7.97E+06	
			Ag	9.88E-02	0.37	3.65E+04	
							8.00E+06
04SD	Tracy Arm-Stikine River	0.94	Cu	1.43E+04	2026.88	2.89E+07	
			Au	2.50E+00	14.68	3.66E+07	
			Zn	3.21E+04	1035.47	3.32E+07	
			Ag	1.03E+02	0.37	3.80E+07	
			Pb	7.18E+03	837.19	6.01E+06	
							1.43E+08
05SD	Endicott Peninsula	0.33	Cu	4.41E+03	2026.88	8.95E+06	
			Au	1.17E+00	14.68	1.72E+07	
			Zn	1.22E+04	1035.47	1.26E+07	
			Ag	7.20E+01	0.37	2.66E+07	
			Pb	5.21E+03	837.19	4.36E+06	
							6.98E+07
06SD	Dawes Glacier-Buddington Range	0.04	Cu	2.98E+01	2026.88	6.04E+04	
			Au	8.83E-02	14.68	1.30E+06	
			Zn	2.21E+03	1035.47	2.29E+06	
			Ag	3.93E+01	0.37	1.45E+07	
			Pb	3.08E+03	837.19	2.58E+06	
							2.08E+07

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
SITKA QUADRANGLE							
01SI	Yakobi-Mirror Harbor	2.03	Cu	1.50E+04	2026.88	3.04E+07	
			Au	6.38E-03	14.68	9.36E+04	
			Ni	1.61E+04	6278.92	1.01E+08	
			Pt	9.52E-04	16.19	1.54E+04	
			Co	6.95E+01	14760.96	1.03E+06	
			Pd	3.48E-03	4.36	1.52E+04	
							1.32E+08
02SI	Yakobi-Chichagof	1.59	Cu	5.97E+03	2026.88	1.21E+07	
			Au	8.27E+00	14.68	1.21E+08	
			Zn	1.40E+03	1035.47	1.45E+06	
			Ag	4.68E+00	0.37	1.73E+06	
			Pb	2.33E+01	837.19	1.95E+04	
							1.37E+08
03SI	Lisianski Inlet	0.45	Au	3.05E+00	14.68	4.47E+07	
			Ag	4.70E-01	0.37	1.74E+05	
							4.49E+07
04SI	Lake Elfindahl, Rust mountain, Granite Islands, Deep Bay, Krusof Island, Takatz Bay and Trap Bay, Crawfish Inlet-Gut Bay, Redfish Bay	78.92	Mo	1.10E+04	12601.89	1.39E+08	
			Cu	4.13E+05	2026.88	8.37E+08	
			Au	1.40E+00	14.68	2.06E+07	
			Zn	4.92E+02	1035.47	5.10E+05	
			Ag	1.26E+02	0.37	4.65E+07	
			Pb	5.40E+02	837.19	4.52E+05	
							1.04E+09
07SI	Tarn Mountain, Moore Mountains	1.19	Cu	6.95E+03	2026.88	1.41E+07	
			Au	1.05E+00	14.68	1.55E+07	
			Zn	5.34E+04	1035.47	5.53E+07	
			Ag	1.12E+02	0.37	4.15E+07	
			Pb	3.43E+04	837.19	2.87E+07	
							1.55E+08
08SI	Tenakee Inlet, S of head of	0.45	Cu	3.22E+03	2026.88	6.53E+06	
			Au	1.65E-03	14.68	2.43E+04	
			Ni	3.56E+03	6278.92	2.24E+07	
			Pt	2.64E-04	16.19	4.27E+03	
			Co	1.74E+01	14760.96	2.57E+05	
			Pd	8.22E-04	4.36	3.59E+03	
							2.92E+07
10SI	Seal Creek	0.68	Cu	5.71E+03	2026.88	1.16E+07	
			Au	3.87E-01	14.68	5.68E+06	
			Zn	2.02E+04	1035.47	2.09E+07	
			Ag	2.29E+01	0.37	8.46E+06	
			Pb	9.85E+03	837.19	8.25E+06	
							5.49E+07

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
11SI	Tenakee-Sitkoh Bay	1.02	Th	4.95E+03	9.75	4.82E+07	
			RE	4.27E+03	12447.68	5.31E+07	
			U	9.32E+01	36682.09	3.42E+06	
							1.05E+08
13SI	Admiralty Island	0.72	Cu	8.12E+03	2026.88	1.65E+07	
			Au	6.86E-01	14.68	1.01E+07	
			Zn	1.25E+04	1035.47	1.30E+07	
			Ag	3.99E+01	0.37	1.48E+07	
			Pb	2.63E+03	837.19	2.20E+06	
			Ni	3.49E+03	6278.92	2.19E+07	
			Pt	2.26E-04	16.19	3.65E+03	
			Co	1.56E+01	14760.96	2.30E+05	
			Pd	6.55E-04	4.36	2.85E+03	
							7.86E+07
14SI	King Salmon Bay	0.05	Cu	9.56E+02	2026.88	1.94E+06	
			Au	1.17E-01	14.68	1.71E+06	
			Zn	1.90E+03	1035.47	1.97E+06	
			Ag	6.36E+00	0.37	2.35E+06	
			Pb	4.22E+02	837.19	3.53E+05	
							8.33E+06
SKAGWAY QUADRANGLE							
07SK	Takhinsha Mountains	57.99	Mo	8.84E+03	12601.89	1.11E+08	
			Cu	2.77E+05	2026.88	5.61E+08	
			Au	1.17E+00	14.68	1.72E+07	
			Ag	9.72E+01	0.37	3.60E+07	
							7.25E+08
09SK	Mount Henry Clay	1.21	Cu	1.33E+04	2026.88	2.70E+07	
			Au	4.43E+00	14.68	6.51E+07	
			Zn	3.00E+04	1035.47	3.10E+07	
			Ag	9.52E+01	0.37	3.52E+07	
			Pb	6.44E+03	837.19	5.39E+06	
							1.64E+08
10SK	Surgeon Mountains and upper Tsirku River	1.63	Cu	2.27E+04	2026.88	4.60E+07	
			Au	8.79E-01	14.68	1.29E+07	
			Zn	2.36E+03	1035.47	2.45E+06	
			Ag	9.98E+00	0.37	3.69E+06	
			Pb	5.21E+02	837.19	4.36E+05	
							6.55E+07
11SK	Porcupine, lower Tsirku River, and Takhin River	4.29	Cu	1.35E+01	2026.88	2.73E+04	
			Au	7.59E-01	14.68	1.11E+07	
			Zn	3.02E+05	1035.47	3.13E+08	
			Ag	2.78E+02	0.37	1.03E+08	
			Pb	2.02E+05	837.19	1.69E+08	
							5.96E+08

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
12SK	Chilkat River and Chilkat Inlet, W side	0.18	Cu	8.96E+02	2026.88	1.82E+06	
			Au	9.90E-01	14.68	1.45E+07	
			Zn	2.61E+03	1035.47	2.71E+06	
			Ag	1.50E+01	0.37	5.54E+06	
			Pb	1.27E+03	837.19	1.06E+06	
							2.56E+07
14SK	Chilkat River and Chilkat Inlet, E side	0.46	Cu	7.23E+03	2026.88	1.47E+07	
			Au	8.50E-01	14.68	1.25E+07	
			Zn	2.08E+03	1035.47	2.16E+06	
			Ag	4.05E+00	0.37	1.50E+06	
			Pb	4.89E+01	837.19	4.09E+04	
							3.08E+07
16SK	Skagway River	71.54	Mo	9.69E+03	12601.89	1.22E+08	
			Cu	3.79E+05	2026.88	7.67E+08	
			Au	1.53E+00	14.68	2.24E+07	
			Zn	1.88E+04	1035.47	1.94E+07	
			Ag	1.47E+02	0.37	5.45E+07	
			Pb	1.12E+04	837.19	9.35E+06	
							9.95E+08
17SK	Meade Glacier	0.31	Cu	1.31E+03	2026.88	2.65E+06	
			Au	1.87E-01	14.68	2.75E+06	
			Zn	1.89E+04	1035.47	1.96E+07	
			Ag	1.76E+01	0.37	6.52E+06	
			Pb	9.70E+03	837.19	8.12E+06	
							3.96E+07
TAKU RIVER QUADRANGLE							
02TR	Bacon Glacier & Mount Ogden	15.82	Mo	1.15E+04	12601.89	1.45E+08	
			Cu	4.12E+03	2026.88	8.35E+06	
			Au	1.75E-01	14.68	2.57E+06	
			Zn	1.71E+04	1035.47	1.77E+07	
			Ag	1.26E+01	0.37	4.65E+06	
			Pb	8.31E+03	837.19	6.96E+06	
							1.85E+08
03TR	Kluchman Mountain	0.01	Cu	1.17E+01	2026.88	2.37E+04	
			Au	3.39E-02	14.68	4.97E+05	
			Zn	5.01E+02	1035.47	5.19E+05	
			Ag	9.17E+00	0.37	3.39E+06	
			Pb	6.51E+02	837.19	5.45E+05	
							4.98E+06
04TR	Snow Tower-Sawyer Glacier	0.51	Cu	4.12E+03	2026.88	8.34E+06	
			Au	1.91E-01	14.68	2.80E+06	
			Zn	1.65E+04	1035.47	1.71E+07	
			Ag	2.63E+01	0.37	9.72E+06	
			Pb	7.59E+03	837.19	6.35E+06	
							4.43E+07

Table 7. Metal tonnages and gross-in-place values (GIPV) calculated for individual mineral-resource tracts, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract	
YAKUTAT QUADRANGLE								
01YA	Fairweather Range	78.49	Mo	1.04E+04	12601.89	1.30E+08		
			Cu	3.89E+05	2026.88	7.89E+08		
			Au	2.14E+00	14.68	3.14E+07		
			Zn	2.30E+03	1035.47	2.39E+06		
			Ag	1.21E+02	0.37	4.46E+07		
			Pb	4.81E+02	837.19	4.02E+05		
							9.98E+08	
02YA	Yakutat Range	1.68	Au	1.08E+01	14.68	1.59E+08		
			Ag	1.79E+00	0.37	6.64E+05		
							1.60E+08	
TOTAL GIPV FOR ALL TRACTS								4.09E+10

Table 8. Aggregated metal tonnages and gross-in place values (GIPV), on a commodity-by-commodity basis, of undiscovered mineral resources, Tongass National Forest and adjacent lands, southeastern Alaska. (All tonnages are metric; see text for complete explanation)

1 Commodity	2 Metal content, in tons	3 Commodity prices	4 GIPV Commodity
Cu	5.04E+06	2026.88	1.02E+10
Mo	4.45E+05	12601.89	5.61E+09
Au*	1.68E+02	14.68	2.46E+09
Zn	2.22E+06	1035.47	2.30E+09
Ag*	7.55E+03	0.37	2.79E+09
Pb	1.19E+06	837.19	9.98E+08
Fe	1.29E+08	72.54	9.38E+09
Th	1.67E+05	9.75	1.63E+09
Re	1.42E+05	12447.68	1.77E+09
U	2.77E+03	36682.09	1.02E+08
Ni	2.65E+04	6278.92	1.66E+08
Pt*	1.58E-03	16.19	2.56E+04
Co	1.21E+02	14760.96	1.79E+06
Pd*	5.41E-03	4.36	2.36E+04
Sb	6.20E+01	3652	2.26E+05
Sn	1.81E+05	18964	3.43E+09
W	2.50E+03	3453.4	8.63E+06
Total	*1.39E+08*		*4.09E+10*

*, commodity priced in grams

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
ATLIN QUADRANGLE							
01AL	Lace River	0.99	Cu	6.71E+03	2026.88	1.36E+07	
			Au	3.33E-01	14.68	4.89E+06	
			Zn	1.82E+04	1035.47	1.89E+07	
			Ag	1.86E+01	0.37	6.90E+06	
			Pb	9.56E+03	837.19	8.00E+06	
			W	2.50E+03	3453.4	8.65E+06	
							6.09E+07
03AL	Chilkoot Range metabasalts	0.41	Cu	6.88E+03	2026.88	1.39E+07	
			Au	3.81E-01	14.68	5.59E+06	
			Zn	1.77E+03	1035.47	1.83E+06	
			Ag	4.26E+00	0.37	1.58E+06	
			Pb	4.19E+01	837.19	3.50E+04	
							2.30E+07
BRADFIELD CANAL QUADRANGLE							
01BC	Bradfield canal Coast Mountains	35.24	Cu	1.34E+03	2026.88	2.72E+06	
			Au	2.20E-01	14.68	3.23E+06	
			Zn	1.73E+04	1035.47	1.79E+07	
			Ag	2.53E+01	0.37	9.35E+06	
			Pb	9.07E+03	837.19	7.59E+06	
		16.71	Mo	1.29E+04	12601.89	1.63E+08	
			Fe	1.74E+07	72.54	1.26E+09	
							1.46E+09
02BC	Cone Mountain	18.24	Cu	8.11E+00	2026.88	1.64E+04	
			Au	2.59E-02	14.68	3.81E+05	
			Zn	4.98E+02	1035.47	5.16E+05	
			Ag	9.73E+00	0.37	3.60E+06	
			Pb	6.56E+02	837.19	5.49E+05	
			Mo	1.45E+04	12601.89	1.83E+08	
							1.88E+08
04BC	Glacier Basin-Berg Basin	0.13	Cu	1.06E+02	2026.88	2.16E+05	
			Au	2.73E-01	14.68	4.01E+06	
			Zn	6.50E+03	1035.47	6.73E+06	
			Ag	1.11E+02	0.37	4.09E+07	
			Pb	9.03E+03	837.19	7.56E+06	
							5.94E+07
05BC	Harding River	0.38	Cu	1.85E+03	2026.88	3.75E+06	
			Au	3.11E-01	14.68	4.56E+06	
			Zn	2.38E+04	1035.47	2.47E+07	
			Ag	2.79E+01	0.37	1.03E+07	
			Pb	1.14E+04	837.19	9.55E+06	
							5.29E+07
07BC	Eulachon Creek	7.09	Fe	3.71E+06	72.54	2.69E+08	
							2.69E+08

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)- continued.

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
08BC	Gracey Creek Glacier	0.01	Cu	9.15E+00	2026.88	1.85E+04	
			Au	2.89E-02	14.68	4.24E+05	
			Zn	5.74E+02	1035.47	5.94E+05	
			Ag	6.02E+00	0.37	2.23E+06	
			Pb	6.37E+02	837.19	5.34E+05	
							3.80E+06
10BC	Burroughs Bay	72.49	Cu	3.66E+05	2026.88	7.43E+08	
			Mo	9.86E+03	12601.89	1.24E+08	
			Au	1.63E+00	14.68	2.39E+07	
			Ag	1.15E+02	0.37	4.24E+07	
							9.33E+08
12BC	Chickamin Glacier	80.55	Cu	9.72E+02	2026.88	1.97E+06	
			Au	5.70E-01	14.68	8.36E+06	
			Zn	1.32E+04	1035.47	1.37E+07	
			Ag	2.30E+02	0.37	8.52E+07	
			Pb	1.75E+04	837.19	1.47E+07	
			Mo	6.08E+04	12601.89	7.66E+08	
							8.90E+08
13BC	Texas Creek-Hyder	83.68	Cu	4.17E+05	2026.88	8.44E+08	
			Au	1.71E+00	14.68	2.50E+07	
			Zn	4.44E+03	1035.47	4.60E+06	
			Ag	1.73E+02	0.37	6.39E+07	
			Pb	3.92E+03	837.19	3.28E+06	
			Mo	1.19E+04	12601.89	1.50E+08	
							1.09E+09
CRAIG QUADRANGLE							
01CR	Coronation Island	2.19	Cu	4.84E+03	2026.88	9.82E+06	
			Au	1.49E+00	14.68	2.18E+07	
			Zn	1.31E+05	1035.47	1.36E+08	
			Ag	4.77E+02	0.37	1.77E+08	
			Pb	1.33E+05	837.19	1.12E+08	
							4.55E+08
03CR	Sweetwater Lake	0.19	Cu	2.54E+03	2026.88	5.15E+06	
			Au	6.94E-02	14.68	1.02E+06	
			Zn	2.01E+03	1035.47	2.08E+06	
			Ag	3.47E+00	0.37	1.28E+06	
							9.53E+06
07CR	Lava Creek	0.85	Th	4.02E+03	9750	3.92E+07	
			RE	3.20E+03	12447.68	3.99E+07	
			U	6.62E+01	46682.09	3.09E+06	
							8.21E+07
09CR	Lower Cleveland Peninsula	4.59	Au	2.89E+01	14.68	4.25E+08	
			Ag	5.76E+00	0.37	2.13E+06	
			Sb	6.20E+01	3652.00	2.26E+05	
							4.27E+08

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)- continued.

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
10CR	South central	12.02	Cu	9.47E+04	2026.88	1.92E+08	
	Prince of Wales	7.21	Au	4.25E+00	14.68	6.24E+07	
	Island		Zn	5.29E+04	1035.47	5.48E+07	
			Ag	4.54E+02	0.37	1.68E+08	
			Pb	3.53E+00	837.19	2.95E+03	
							4.77E+08
12CR	Kasaan	8.61	Cu	4.00E+04	2026.88	8.11E+07	
	Peninsula	3.01	Au	6.78E-01	14.68	9.95E+06	
			Ag	5.70E+00	0.37	2.11E+06	
		182.63	Fe	3.13E+07	72.54	2.27E+09	
		63.92					2.36E+09
13CR	Baker Island	69.49	Cu	3.87E+05	2026.88	7.85E+08	
			Au	1.42E+00	14.68	2.09E+07	
			Zn	2.09E+03	1035.47	2.17E+06	
			Ag	1.39E+02	0.37	5.13E+07	
			Pb	2.80E+03	837.19	2.35E+06	
			Mo	9.05E+03	12601.89	1.14E+08	
							9.75E+08
14CR	San Juan	0.04	Cu	3.48E+01	2026.88	7.05E+04	
	Bautista Island		Au	8.05E-02	14.68	1.18E+06	
			Zn	1.93E+03	1035.47	2.00E+06	
			Ag	2.94E+01	0.37	1.09E+07	
			Pb	2.70E+03	837.19	2.26E+06	
							1.64E+07
16CR	Black Lake-Lake	15.92	Mo	6.18E+03	12601.89	7.79E+07	7.79E+07
	Saint Nicholas	7.96					
17CR	Pin Peak	16.64	Mo	9.64E+03	12601.89	1.21E+08	
		12.48	Cu	1.94E+01	2026.88	3.93E+04	
			Au	2.60E-02	14.68	3.81E+05	
			Zn	3.30E+02	1035.47	3.42E+05	
			Ag	5.64E+00	0.37	2.09E+06	
			Pb	5.59E+02	837.19	4.68E+05	
							1.25E+08
18CR	Maybeso Creek	15.78	Mo	9.88E+03	12601.89	1.25E+08	
		13.41	Cu	3.16E+02	2026.88	6.41E+05	
			Au	7.66E-01	14.68	1.12E+07	
			Zn	1.64E+04	1035.47	1.70E+07	
			Ag	2.84E+02	0.37	1.05E+08	
			Pb	2.30E+04	837.19	1.92E+07	
							2.77E+08
							1.03E+10

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
19CR	Suemez Island	16.60	Mo	1.30E+04	12601.89	1.64E+08	
			Cu	1.07E+01	2026.88	2.18E+04	
			Au	2.83E-02	14.68	4.15E+05	
			Zn	4.36E+02	1035.47	4.51E+05	
			Ag	5.37E+00	0.37	1.99E+06	
			Pb	4.65E+02	837.19	3.90E+05	
			Th	4.52E+03	9750	4.41E+07	
			RE	4.16E+03	12447.68	5.18E+07	
			U	9.69E+01	36682.09	3.55E+06	
							2.66E+08
20CR	Trocadero Bay-	1.41	Cu	1.48E+04	2026.88	3.00E+07	
	Cholmondeley	0.87	Au	1.93E+00	14.68	2.83E+07	
	Sound		Zn	3.33E+04	1035.47	3.45E+07	
			Ag	1.04E+02	0.37	3.86E+07	
			Pb	7.44E+03	837.19	6.23E+06	
							1.38E+08
21CR	Copper	38.98	Cu	1.36E+04	2026.88	2.75E+07	
	Mountain	23.39	Au	2.25E-01	14.68	3.31E+06	
			Ag	1.66E+00	0.37	6.14E+05	
			Fe	1.14E+07	72.54	8.25E+08	
							8.56E+08
22CR	Dora Bay	5.18	Th	1.77E+04	9750	1.73E+08	
		3.63	RE	1.50E+04	12447.68	1.87E+08	
			U	3.06E+02	36682.09	1.12E+07	
							3.71E+08
23CR	Dolomi	0.49	Cu	1.12E+02	2026.88	2.27E+05	
		0.36	Au	2.23E+00	14.68	3.27E+07	
			Zn	5.22E+03	1035.47	5.41E+06	
			Ag	8.84E+01	0.37	3.27E+07	
			Pb	7.28E+03	837.19	6.09E+06	
							7.72E+07
24CR	Northern Dall	16.44	Mo	7.13E+03	12601.89	8.98E+07	
		9.04	Cu	8.13E+02	2026.88	1.65E+06	
			Au	1.67E-01	14.68	2.46E+06	
			Zn	1.11E+04	1035.47	1.15E+07	
			Ag	1.43E+01	0.37	5.29E+06	
			Pb	6.10E+03	837.19	5.10E+06	
							1.16E+08
25CR	Southeast	0.95	Th	3.19E+03	9750	3.11E+07	
	Sukkwan Island	0.62	RE	2.54E+03	12447.68	3.16E+07	
			U	4.41E+01	36682.09	1.62E+06	
							6.43E+07

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
26CR	Moira Sound	79.28	Mo	6.12E+04	12601.89	7.71E+08	
			Cu	9.35E+02	2026.88	1.90E+06	
			Au	1.66E-01	14.68	2.44E+06	
			Zn	1.41E+04	1035.47	1.46E+07	
			Ag	2.74E+01	0.37	1.01E+07	
			Pb	8.36E+03	837.19	7.00E+06	
							8.07E+08
27CR	Niblack	0.76	Cu	1.27E+04	2026.88	2.57E+07	
			Au	1.63E+00	14.68	2.40E+07	
			Zn	2.84E+04	1035.47	2.94E+07	
			Ag	9.06E+01	0.37	3.35E+07	
			Pb	6.34E+03	837.19	5.31E+06	
							1.18E+08
DIXON ENTRANCE QUADRANGLE							
05DE	Kassa Inlet	1.07	Th	4.96E+03	9750	4.84E+07	
			RE	4.16E+03	12447.68	5.18E+07	
			U	1.10E+02	36682.09	4.05E+06	
							1.04E+08
06DE	Boken Mountain	16.13	Th	7.82E+04	9750	7.62E+08	
			RE	6.62E+04	12447.68	8.24E+08	
			U	1.26E+03	36682.09	4.63E+07	
							1.63E+09
08DE	Southern Dall & Long Islands	0.33 0.20	Cu	6.91E+02	2026.88	1.40E+06	
			Au	4.58E-01	14.68	6.72E+06	
			Zn	9.91E+03	1035.47	1.03E+07	
			Ag	1.48E+02	0.37	5.48E+07	
			Pb	1.20E+04	837.19	1.01E+07	
							8.33E+07
09DE	Barrier Islands	1.46	Cu	2.46E+04	2026.88	4.98E+07	
			Au	3.24E+00	14.68	4.75E+07	
			Zn	5.45E+04	1035.47	5.65E+07	
			Ag	1.75E+02	0.37	6.49E+07	
			Pb	1.25E+04	837.19	1.05E+07	
							2.29E+08
10DE	Southeastern-most Prince of Wales Island	20.67	Mo	1.20E+04	12601.89	1.51E+08	
			Cu	3.11E+00	2026.88	6.30E+03	
			Au	1.06E-02	14.68	1.56E+05	
			Zn	3.24E+02	1035.47	3.36E+05	
			Ag	7.72E+00	0.37	2.86E+06	
			Pb	7.09E+02	837.19	5.93E+05	
			Th	2.47E+04	9750	2.41E+08	
			RE	2.09E+04	12447.68	2.60E+08	
			U	3.57E+02	36682.09	1.31E+07	
							6.68E+08
							5.53E+09

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
JUNEAU QUADRANGLE							
02JU	Casement	83.00	Mo	1.28E+03	12601.89	1.61E+07	
	Glacier	9.13	Cu	4.67E+04	2026.88	9.47E+07	
			Au	1.63E-01	14.68	2.40E+06	
			Zn	4.65E+01	1035.47	4.81E+04	
			Ag	1.43E+01	0.37	5.29E+06	
			Pb	8.81E+01	837.19	7.37E+04	
							1.19E+08
04JU	Sullivan Island to	2.64	Cu	3.43E+04	2026.88	6.95E+07	
	Sullivan River	2.30	Au	9.21E-01	14.68	1.35E+07	
			Zn	2.62E+04	1035.47	2.71E+07	
			Ag	4.49E+01	0.37	1.66E+07	
			Pb	8.08E+03	837.19	6.77E+06	
							1.34E+08
05JU	Excursion	0.04	Cu	1.52E+01	2026.88	3.09E+04	
	River	0.01	Au	2.63E-02	14.68	3.87E+05	
			Zn	5.06E+02	1035.47	5.24E+05	
			Ag	9.08E+00	0.37	3.36E+06	
			Pb	7.13E+02	837.19	5.97E+05	
							4.90E+06
06JU	Nun Mountain	0.66	Cu	5.32E+03	2026.88	1.08E+07	
		0.59	Au	3.98E-01	14.68	5.85E+06	
			Zn	1.89E+04	1035.47	1.95E+07	
			Ag	1.82E+01	0.37	6.74E+06	
			Pb	8.34E+03	837.19	6.98E+06	
							4.99E+07
07JU	Neka Bay, W of	0.62	Cu	5.31E+03	2026.88	1.08E+07	
			Au	2.22E-01	14.68	3.26E+06	
			Zn	1.67E+04	1035.47	1.73E+07	
			Ag	1.48E+01	0.37	5.46E+06	
			Pb	8.58E+03	837.19	7.18E+06	
							4.40E+07
11JU	Kensington-	3.62	Cu	4.20E+03	2026.88	8.51E+06	
	Jualin & Eagle	1.19	Au	6.20E+00	14.68	9.10E+07	
	River-Juneau		Zn	9.43E+03	1035.47	9.76E+06	
			Ag	3.27E+01	0.37	1.21E+07	
			Pb	2.22E+03	837.19	1.86E+06	
							1.23E+08
13JU	Juneau Ice-	3.07	Cu	2.68E+04	2026.88	5.43E+07	
	Field		Au	1.48E+00	14.68	2.18E+07	
			Zn	8.96E+04	1035.47	9.27E+07	
			Ag	9.05E+01	0.37	3.35E+07	
			Pb	4.59E+04	837.19	3.84E+07	
							2.41E+08

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
KETCHIKAN QUADRANGLE							
03KC	Chickamin	0.67	Cu	6.26E+03	2026.88	1.27E+07	
	River		Au	3.59E-01	14.68	5.27E+06	
			Zn	1.91E+04	1035.47	1.97E+07	
			Ag	5.59E+01	0.37	2.07E+07	
			Pb	1.15E+04	837.19	9.61E+06	
							6.80E+07
07KC	Chickamin-	1.48	Cu	1.91E+04	2026.88	3.88E+07	
	Rudyerd		Au	2.82E-01	14.68	4.13E+06	
			Zn	3.86E+02	1035.47	3.99E+05	
			Ag	1.17E+01	0.37	4.33E+06	
			Pb	7.29E+02	837.19	6.10E+05	
							4.83E+07
08KC	Southern	0.15	Cu	7.27E+02	2026.88	1.47E+06	
	Revillagigedo	0.12	Au	4.94E-01	14.68	7.26E+06	
	Island		Zn	3.10E+03	1035.47	3.21E+06	
			Ag	3.83E+01	0.37	1.42E+07	
			Pb	2.72E+03	837.19	2.27E+06	
							2.84E+07
10KC	Boca de Quadra-	97.17	Mo	7.31E+04	12601.89	9.22E+08	
	Quartz Hill		Cu	2.15E+04	2026.88	4.36E+07	
			Au	3.63E-01	14.68	5.33E+06	
			Zn	2.00E+03	1035.47	2.07E+06	
			Ag	3.60E+01	0.37	1.33E+07	
			Pb	2.89E+03	837.19	2.42E+06	
							9.88E+08
14KC	Southwestern	0.84	Cu	7.89E+03	2026.88	1.60E+07	
	Gravina Island-	0.48	Au	1.06E+00	14.68	1.55E+07	
	Eastern Annette		Zn	1.84E+04	1035.47	1.90E+07	
	Island		Ag	7.31E+01	0.37	2.70E+07	
			Pb	5.32E+03	837.19	4.45E+06	
							8.20E+07
16KC	Tongass	1.56	Cu	1.67E+00	2026.88	3.38E+03	
	Narrows	0.31	Au	1.83E+00	14.68	2.69E+07	
			Zn	7.03E+01	1035.47	7.28E+04	
			Ag	2.15E+00	0.37	7.95E+05	
			Pb	1.06E+02	837.19	8.87E+04	
							2.78E+07
18KC	Boca de Quadra-	0.06	Cu	9.35E+02	2026.88	1.90E+06	
	Sitlan Island		Au	1.06E-01	14.68	1.55E+06	
			Zn	2.41E+03	1035.47	2.49E+06	
			Ag	1.50E+01	0.37	5.55E+06	
			Pb	1.13E+03	837.19	9.47E+05	
							1.24E+07

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
MOUNT FAIRWEATHER QUADRANGLE							
11MF	Dundas River	80.71	Mo	1.47E+03	12601.89	1.85E+07	
		12.11	Cu	6.67E+04	2026.88	1.35E+08	
			Au	3.07E-01	14.68	4.51E+06	
			Zn	6.10E+01	1035.47	6.31E+04	
			Ag	2.03E+01	0.37	7.52E+06	
			Pb	1.13E+02	837.19	9.50E+04	
							1.66E+08
PORT ALEXANDER QUADRANGLE							
05PA	Security Bay	0.04	Cu	3.11E+01	2026.88	6.30E+04	
			Au	8.88E-02	14.68	1.30E+06	
			Zn	2.39E+03	1035.47	2.47E+06	
			Ag	3.52E+01	0.37	1.30E+07	
			Pb	2.96E+03	837.19	2.48E+06	
							1.94E+07
06PA	Saginaw Bay-Cornwalis Peninsula	14.95	Cu	7.73E+02	2026.88	1.57E+06	
		12.71	Au	9.73E-02	14.68	1.43E+06	
			Zn	4.17E+05	1035.47	4.32E+08	
			Ag	2.09E+02	0.37	7.72E+07	
			Pb	1.93E+05	837.19	1.62E+08	
							6.74E+08
08PA	Southwest Kuiu	75.82	Mo	1.08E+04	12601.89	1.37E+08	
			Cu	3.88E+05	2026.88	7.86E+08	
			Au	1.52E+00	14.68	2.23E+07	
			Zn	2.02E+03	1035.47	2.09E+06	
			Ag	1.70E+02	0.37	6.30E+07	
			Pb	3.84E+03	837.19	3.21E+06	
							1.01E+09
							3.84E+09

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued.

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
PETERSBURG QUADRANGLE							
05PE	Southwest Kupreanof	1.57	Cu	5.32E+01	2026.88	1.08E+05	
			Au	8.74E+00	14.68	1.28E+08	
			Zn	2.00E+03	1035.47	2.07E+06	
			Ag	5.98E+02	0.37	2.21E+08	
			Pb	3.45E+03	837.19	2.89E+06	
							3.55E+08
06PE	Tunehean Creek-Castle River, southeast Zarembo, central Etolin, Niblack and Deer Island	1.05	Th	5.33E+03	9.75	5.20E+07	
			RE	4.54E+03	12447.68	5.66E+07	
			U	8.59E+01	36682.09	3.15E+06	
							1.12E+08
07PE	Kosciusko-Northern Prince of Wales	84.49	Mo	1.04E+04	12601.89	1.32E+08	
			Cu	4.54E+05	2026.88	9.21E+08	
			Au	2.13E+00	14.68	3.13E+07	
			Zn	6.01E+03	1035.47	6.22E+06	
			Ag	2.21E+02	0.37	8.16E+07	
			Pb	8.11E+03	837.19	6.79E+06	
							1.18E+09
08PE	Salmon Bay	1.08	Th	5.16E+03	9.75	5.03E+07	
			RE	4.58E+03	12447.68	5.70E+07	
			U	1.14E+02	36682.09	4.18E+06	
							1.12E+08
12PE	Duncan Canal-Zarembo Island	1.39	Cu	2.30E+04	2026.88	4.67E+07	
			Au	3.04E+00	14.68	4.47E+07	
			Zn	5.14E+04	1035.47	5.32E+07	
			Ag	1.68E+02	0.37	6.22E+07	
			Pb	1.16E+04	837.19	9.75E+06	
							2.17E+08
13PE	Kupreanof Mountain	0.60	Cu	9.56E+03	2026.88	1.94E+07	
			Au	3.16E-01	14.68	4.63E+06	
			Zn	1.11E+03	1035.47	1.15E+06	
			Ag	3.58E+00	0.37	1.32E+06	
			Pb	1.45E+01	837.19	1.22E+04	
							2.65E+07
14PE	Woewodski	1.22	Cu	9.28E+02	2026.88	1.88E+06	
			Au	7.88E+00	14.68	1.16E+08	
			Zn	2.20E+03	1035.47	2.28E+06	
			Ag	8.82E+00	0.37	3.26E+06	
			Pb	5.09E+02	837.19	4.26E+05	
							1.23E+08

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued.

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
15PE	Outer Etolin	0.01	Cu	9.61E+00	2026.88	1.95E+04	
			Au	1.96E-02	14.68	2.88E+05	
			Zn	4.23E+02	1035.47	4.38E+05	
			Ag	6.44E+00	0.37	2.38E+06	
			Pb	4.77E+02	837.19	4.00E+05	
							3.53E+06
20PE	Groundhog Basin	18.96	Sn	1.81E+05	18964	3.43E+09	
							3.43E+09
SUMDUM QUADRANGLE							
02SD	Snettisham	0.07	Au	5.43E-01	14.68	7.97E+06	
			Ag	9.88E-02	0.37	3.65E+04	
							8.00E+06
04SD	Tracy Arm-Stikine River	0.94	Cu	1.43E+04	2026.88	2.89E+07	
			Au	2.50E+00	14.68	3.66E+07	
			Zn	3.21E+04	1035.47	3.32E+07	
			Ag	1.03E+02	0.37	3.80E+07	
			Pb	7.18E+03	837.19	6.01E+06	
							1.43E+08
05SD	Endicott Peninsula	0.33	Cu	4.41E+03	2026.88	8.95E+06	
			Au	1.17E+00	14.68	1.72E+07	
			Zn	1.22E+04	1035.47	1.26E+07	
			Ag	7.20E+01	0.37	2.66E+07	
			Pb	5.21E+03	837.19	4.36E+06	
							6.98E+07
06SD	Dawes Glacier-Buddington Range	0.04	Cu	2.98E+01	2026.88	6.04E+04	
			Au	8.83E-02	14.68	1.30E+06	
			Zn	2.21E+03	1035.47	2.29E+06	
			Ag	3.93E+01	0.37	1.45E+07	
			Pb	3.08E+03	837.19	2.58E+06	
							2.08E+07
SITKA QUADRANGLE							
01SI	Yakobi-Mirror Harbor	2.03	Cu	1.50E+04	2026.88	3.04E+07	
			Au	6.38E-03	14.68	9.36E+04	
			Ni	1.61E+04	6278.92	1.01E+08	
			Pt	9.52E-04	16.19	1.54E+04	
			Co	6.95E+01	14760.96	1.03E+06	
			Pd	3.48E-03	4.36	1.52E+04	
							1.32E+08
02SI	Yakobi-Chichagof	1.59	Cu	5.38E+03	2026.88	1.09E+07	
		1.43	Au	7.44E+00	14.68	1.09E+08	
			Zn	1.26E+03	1035.47	1.31E+06	
			Ag	4.21E+00	0.37	1.56E+06	
			Pb	2.09E+01	837.19	1.75E+04	
							1.23E+08

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued.

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
03SI	Lisianski Inlet	0.45	Au	3.05E+00	14.68	4.47E+07	
			Ag	4.70E-01	0.37	1.74E+05	
							4.49E+07
04SI	Lake Elfindah,	78.92	Mo	1.10E+04	12601.89	1.39E+08	
	Rust mountain,		Cu	4.13E+05	2026.88	8.37E+08	
	Granite Islands,		Au	1.40E+00	14.68	2.06E+07	
	Deep Bay, Krusof		Zn	4.92E+02	1035.47	5.10E+05	
	Island, Takatz Bay		Ag	1.26E+02	0.37	4.65E+07	
	and Trap Bay,		Pb	5.40E+02	837.19	4.52E+05	
	Crawfish Inlet-Gut						1.04E+09
	Bay, Redfish Bay						
07SI	Tam Mountain,	1.19	Cu	6.95E+03	2026.88	1.41E+07	
	Moore Mountains		Au	1.05E+00	14.68	1.55E+07	
			Zn	5.34E+04	1035.47	5.53E+07	
			Ag	1.12E+02	0.37	4.15E+07	
			Pb	3.43E+04	837.19	2.87E+07	
							1.55E+08
08SI	Tenakee Inlet, S	0.45	Cu	3.22E+03	2026.88	6.53E+06	
	of head of		Au	1.65E-03	14.68	2.43E+04	
			Ni	3.56E+03	6278.92	2.24E+07	
			Pt	2.64E-04	16.19	4.27E+03	
			Co	1.74E+01	14760.96	2.57E+05	
			Pd	8.22E-04	4.36	3.59E+03	
							2.92E+07
10SI	Seal Creek	0.68	Cu	5.71E+03	2026.88	1.16E+07	
			Au	3.87E-01	14.68	5.68E+06	
			Zn	2.02E+04	1035.47	2.09E+07	
			Ag	2.29E+01	0.37	8.46E+06	
			Pb	9.85E+03	837.19	8.25E+06	
							5.49E+07
11SI	Tenakee-Sitkoh	1.02	Th	4.95E+03	9.75	4.82E+07	
	Bay		RE	4.27E+03	12447.68	5.31E+07	
			U	9.32E+01	36682.09	3.42E+06	
							1.05E+08
13SI	Admiralty Island	0.72	Cu	7.47E+03	2026.88	1.51E+07	
		0.66	Au	6.31E-01	14.68	9.26E+06	
			Zn	1.15E+04	1035.47	1.19E+07	
			Ag	3.67E+01	0.37	1.36E+07	
			Pb	2.42E+03	837.19	2.02E+06	
			Ni	3.21E+03	6278.92	2.02E+07	
			Pt	2.08E-04	16.19	3.36E+03	
			Co	1.43E+01	14760.96	2.12E+05	
			Pd	6.02E-04	4.36	2.63E+03	
							7.23E+07
							7.56E+09

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
SKAGWAY QUADRANGLE							
16SK	Skagway River	71.54	Mo	4.84E+03	12601.89	6.10E+07	
		35.77	Cu	1.89E+05	2026.88	3.84E+08	
			Au	7.63E-01	14.68	1.12E+07	
			Zn	9.38E+03	1035.47	9.72E+06	
			Ag	7.35E+01	0.37	2.72E+07	
			Pb	5.58E+03	837.19	4.67E+06	
							4.97E+08
17SK	Meade Glacier	0.31	Cu	1.31E+03	2026.88	2.65E+06	
			Au	1.87E-01	14.68	2.75E+06	
			Zn	1.89E+04	1035.47	1.96E+07	
			Ag	1.76E+01	0.37	6.52E+06	
			Pb	9.70E+03	837.19	8.12E+06	
							3.96E+07
TAKU RIVER QUADRANGLE							
02TR	Bacon Glacier & Mount Ogden	15.82	Mo	1.15E+04	12601.89	1.45E+08	
			Cu	4.12E+03	2026.88	8.35E+06	
			Au	1.75E-01	14.68	2.57E+06	
			Zn	1.71E+04	1035.47	1.77E+07	
			Ag	1.26E+01	0.37	4.65E+06	
			Pb	8.31E+03	837.19	6.96E+06	
							1.85E+08
03TR	Kluchman Mountain	0.01	Cu	1.17E+01	2026.88	2.37E+04	
			Au	3.39E-02	14.68	4.97E+05	
			Zn	5.01E+02	1035.47	5.19E+05	
			Ag	9.17E+00	0.37	3.39E+06	
			Pb	6.51E+02	837.19	5.45E+05	
							4.98E+06
04TR	Snow Tower-Sawyer Glacier	0.51	Cu	4.12E+03	2026.88	8.34E+06	
			Au	1.91E-01	14.68	2.80E+06	
			Zn	1.65E+04	1035.47	1.71E+07	
			Ag	2.63E+01	0.37	9.72E+06	
			Pb	7:59E+03	837.19	6.35E+06	
							4.43E+07
YAKUTAT QUADRANGLE							
01YA	Fairweather Range	78.49	Mo	4.76E+03	12601.89	6.00E+07	
		36.11	Cu	1.79E+05	2026.88	3.63E+08	
			Au	9.82E-01	14.68	1.44E+07	
			Zn	1.65E+04	1035.47	1.71E+07	
			Ag	5.55E+01	0.37	2.05E+07	
			Pb	2.21E+02	837.19	1.85E+05	
							4.75E+08

Table 9. Metal tonnages and gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts, that are totally or partially in the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation of headings.)-continued

1 Map No.	2 Name	3 Tract tonnage, in millions*	4 Commodity	5 Metal content, in tons	5a Commodity prices	6 GIPV commodity	7 GIPV of tract
02YA	Yakutat Range	1.68	Au	8.35E+00	14.68	1.23E+08	
		1.29	Ag	1.38E+00	0.37	5.11E+05	
							1.23E+08
Total GIPV of all tracts							2.86E+10

* Where two numbers appear in this column, the upper is the total tonnage in the tract as given in table 7 and the lower is the tonnage that is within the Tongass National Forest.

Table 10. Aggregated metal tonnages and gross-in-place values (GIPV), on a commodity-by -commodity basis, for those parts of mineral-resource tracts that are totally or partially in parts of the Tongass National Forest, southeastern Alaska. (All tonnages are metric; see text for complete explanation)

1 Commodity	2 Metal content, in tons	3 Commodity prices	4 GIPV Commodity
Cu	3.37E+06	2026.88	6.84E+09
Mo	4.90E+05	12601.89	6.17E+09
Au*	1.20E+02	14.68	1.77E+09
Zn	1.34E+06	1035.47	1.38E+09
Ag*	5.40E+03	0.37	2.00E+09
Pb	7.02E+05	837.19	5.88E+08
Fe	6.37E+07	72.54	4.62E+09
Th	1.53E+05	9.75	1.49E+06
Re	1.30E+05	12447.68	1.61E+09
U	2.54E+03	36682.09	9.30E+07
Ni	2.28E+04	6278.92	1.43E+08
Pt*	1.42E-03	16.19	2.30E+04
Co	1.01E+02	14760.96	1.49E+06
Pd*	4.91E-03	4.36	2.14E+04
Sb	6.20E+01	3652.00	2.26E+05
Sn	1.81E+05	18964.00	3.43E+09
W	2.50E+03	3453.40	8.65E+06
total	*7.01E+07*		*2.87E+10*

*, commodity priced in grams

Table 11. Gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts that are totally or partially in parts of the Tongass National Forest that are now open to mineral entry. (All tonnages are metric. See text for complete explanation.)

1 Map no.	2 Name	3 Tract GIPV	4 Fraction of tract in Tongass NF and open to mineral entry	5 Tract GIPV in in that part
ATLIN QUADRANGLE				
01AL	Lace River	6.09E+07	1	6.09E+07
03AL	Chilkoot Range metabasalts	2.30E+07	1	2.30E+07
BRADFIELD CANAL QUADRANGLE				
01BC	Bradfield Canal Coast Mountains	1.46E+09	0.82	1.20E+09
02BC	Cone Mountain	1.88E+08	1	1.88E+08
04BC	Glacier Basin-Berg Basin	5.94E+07	0.87	5.17E+07
05BC	Harding River	5.29E+07	1	5.29E+07
10BC	Burroughs Bay	9.33E+08	0.19	1.77E+08
12BC	Chickamin Glacier	8.90E+08	0.38	3.38E+08
13BC	Texas Creek-Hyder	1.09E+09	1	1.09E+09
CRAIG QUADRANGLE				
03CR	Sweetwater Lake	9.53E+06	0.91	8.67E+06
07CR	Lava Creek	8.21E+07	1	8.21E+07
09CR	Lower Cleveland Peninsula	4.27E+08	1	4.27E+08
10CR	South central Prince of Wales Island	7.95E+08	0.6	4.77E+08

Table 11. Gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts that are totally or partially in parts of the Tongass National Forest that are now open to mineral entry. (All tonnages are metric. See text for complete explanation.)-continued

1 Map no.	2 Name	3 Tract GIPV	4 Fraction of tract in Tongass NF and open to mineral entry	5 Tract GIPV in that part
12CR	Kasaan Peninsula	6.75E+09	0.35	2.36E+09
13CR	Baker Island	9.75E+08	1	9.75E+08
14CR	San Juan Bautista Island	1.64E+07	1	1.64E+07
16CR	Black Lake-Lake Saint Nicholas	1.56E+08	0.5	7.80E+07
17CR	Pin Peak	1.66E+08	0.75	1.25E+08
18CR	Maybeso Creek	3.26E+08	0.85	2.77E+08
19CR	Suemez Island	2.66E+08	1	2.66E+08
20CR	Trocadero Bay-Cholmondeley Sound	2.22E+08	0.62	1.38E+08
21CR	Copper Mountain	1.43E+09	0.6	8.58E+08
22CR	Dora Bay	5.30E+08	0.7	3.71E+08
23CR	Dolomi	1.06E+08	0.73	7.74E+07
24CR	Northern Dall	2.11E+08	0.55	1.16E+08
25CR	Southeast Sukkwan Island	1.08E+08	0.65	7.02E+07
26CR	Moira Sound	8.07E+08	1	8.07E+08
27CR	Niblack	1.18E+08	1	1.18E+08
DIXON ENTRANCE QUADRANGLE				
05DE	Kassa Inlet	1.04E+08	0.5	5.20E+07
06DE	Bokan Mountain	1.63E+09	1	1.63E+09
08DE	Southern Dall & Long Islands	1.39E+08	0.6	8.34E+07

Table 11. Gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts that are totally or partially in parts of the Tongass National Forest that are now open to mineral entry. (All tonnages are metric. See text for complete explanation.)-continued

1 Map no.	2 Name	3 Tract GIPV	4 Fraction of tract in Tongass NF and open to mineral entry	5 Tract GIPV in that part
09DE	Barrier Islands	2.29E+08	0.1	2.29E+07
10DE	Southeastern-most Prince of Wales Island	6.68E+08	1	6.68E+08
JUNEAU QUADRANGLE				
02JU	Casement Glacier	1.08E+09	0.11	1.19E+08
04JU	Sullivan Island to Sullivan River	1.54E+08	0.76	1.17E+08
05JU	Excursion River	1.96E+07	0.25	4.90E+06
06JU	Nun Mountain	5.54E+07	0.9	4.99E+07
07JU	Neka Bay, W of	4.40E+07	0.83	3.65E+07
11JU	Kensington-Jualin & Eagle River-Juneau	3.73E+08	0.33	1.23E+08
13JU	Juneau Ice-Field	2.41E+08	1	2.41E+08
KETCHIKAN QUADRANGLE				
08KC	Southern Revillagigedo Island	3.55E+07	0.5	1.78E+07
10KC	Boca de Quadra-Quartrz Hill	9.88E+08	0.6	5.93E+08
14KC	Southwestern Gravina Island-Eastern Annette Island	1.44E+08	0.57	8.21E+07
16KC	Tongass Narrows	1.39E+08	0.2	2.78E+07
MOUNT FAIRWEATHER QUADRANGLE				
11MF	Dundas River	1.11E+09	0.15	1.67E+08
PORT ALEXANDER QUADRANGLE				
05PA	Security Bay	1.94E+07	1	1.94E+07

TGST8ALL.XLS

Table 11. Gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts that are totally or partially in parts of the Tongass National Forest that are now open to mineral entry. (All tonnages are metric. See text for complete explanation.)-continued

1 Map no.	2 Name	3 Tract GIPV	4 Fraction of tract in Tongass NF and open to mineral entry	5 Tract GIPV in that part
06PA	Saginaw Bay-Cornwalis Peninsula	7.93E+08	0.85	6.74E+08
08PA	Southwest Kuiu	1.01E+09	1	1.01E+09
PETERSBURG QUADRANGLE				
05PE	Southwest Kupreanof	3.55E+08	1	3.55E+08
06PE	Tunehean Creek-Castle River, southeast Zarembo, central Etolin, Niblack and Deer Island	1.12E+08	1	1.12E+08
07PE	Kosciusko-Northern Prince of Wales	1.18E+09	1	1.18E+09
08PE	Salmon Bay	1.12E+08	1	1.12E+08
12PE	Duncan Canal-Zarembo Island	2.17E+08	0.95	2.06E+08
13PE	Kupreanof Mountain	2.65E+07	0.9	2.39E+07
14PE	Woewodski	1.23E+08	1	1.23E+08
15PE	Outer Etolin	3.53E+06	1	3.53E+06
20PE	Groundhog Basin	3.43E+09	1	3.43E+09
SUMDUM QUADRANGLE				
02SD	Snettisham	8.00E+06	1	8.00E+06
04SD	Tracy Arm-Stikine River	1.43E+08	0.44	6.29E+07

Table 11. Gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts that are totally or partially in parts of the Tongass National Forest that are now open to mineral entry. (All tonnages are metric. See text for complete explanation.)-continued

1 Map no.	2 Name	3 Tract GIPV	4 Fraction of tract in Tongass NF and open to mineral entry	5 Tract GIPV in that part
05SD	Endicott Penin-sula	6.98E+07	1	6.98E+07
06SD	Dawes Glacier-Buddington Range	2.08E+07	0.95	1.98E+07
SITKA QUADRANGLE				
01SI	Yakobi-Mirror Harbor	1.32E+08	0.5	6.60E+07
02SI	Yakobi-Chichagof	1.37E+08	0.4	5.48E+07
03SI	Lisianski Inlet	4.49E+07	0.32	1.44E+07
04SI	Lake Elfindah, Rust mountain, Granite Islands, Deep Bay, Krusof island, Takatz Bay and Trap Bay, Crawfish Inlet-Gut Bay, Red-fish Bay	1.04E+09	0.48	4.99E+08
07SI	Tam Mountain, Moore Mountains	1.55E+08	1	1.55E+08
08SI	Tenakee Inlet, S of head of	2.92E+07	1	2.92E+07
10SI	Seal Creek	5.49E+07	1	5.49E+07
11SI	Tenakee-Sitkoh Bay	1.05E+08	1	1.05E+08
13SI	Admiralty Island	7.86E+07	0.18	1.41E+07
SKAGWAY QUADRANGLE				
16SK	Skagway River	9.95E+08	0.5	4.98E+08

Table 11. Gross-in-place values (GIPV) calculated for those parts of individual mineral-resource tracts that are totally or partially in parts of the Tongass National Forest that are now open to mineral entry. (All tonnages are metric. See text for complete explanation.)-continued

1 Map no.	2 Name	3 Tract GIPV	4 Fraction of tract in Tongass NF and open to mineral entry	5 Tract GIPV in that part
17SK	Meade Glacier	3.96E+07	100	3.96E+07
TAKU RIVER QUADRANGLE				
02TR	Bacon Glacier & Mount Ogden	1.85E+08	100	1.85E+08
03TR	Kluchman Mountain	4.98E+06	100	4.98E+06
04TR	Snow Tower-Sawyer Glacier	4.43E+07	0.41	1.82E+07
YAKUTAT QUADRANGLE				
01YA	Fairweather Range	9.98E+08	0.37	3.69E+08
02YA	Yakutat Range	1.60E+08	0.31	4.96E+07
Total GIPV for Mineral Resources in Tongass National Forest lands now open to mineral entry				2.44E+10

Table 12. Ratios of gross-in-place value (GIPV) to area for individual mineral-resource tracts that are wholly or partially in the Tongass National Forest. (Information is from tables 4 and 7 of this report. All tonnages are metric.)

1 Map No.	2 Name	3 GIPV of tract	4 Tract area (sq. km)	5 GIPV/area
ATLIN QUADRANGLE				
01AL	Lace River	6.09E+07	32	1.90E+06
03AL	Chilkoot Range metabasalts	2.30E+07	21	1.10E+06
BRADFIELD CANAL QUADRANGLE				
01BC	Bradfield Canal Coast Mountains	1.46E+09	212	6.89E+06
02BC	Cone Mountain	1.88E+08	219	8.58E+05
04BC	Glacier Basin-Berg Basin	5.94E+07	499	1.19E+05
05BC	Harding River	5.29E+07	142	3.73E+05
07BC	Eulachon Creek	2.69E+08	76	3.54E+06
08BC	Gracey Creek Glacier	3.80E+06	60	6.33E+04
10BC	Burroughs Bay	9.33E+08	62	1.50E+07
12BC	Chickamin Glacier	8.90E+08	199	4.47E+06
13BC	Texas Creek-Hyder	1.09E+09	68	1.60E+07
CRAIG QUADRANGLE				
01CR	Coronation Island	4.55E+08	73	6.23E+06
03CR	Sweetwater Lake	9.53E+06	649	1.47E+04
07CR	Lava Creek	8.21E+07	68	1.21E+06
09CR	Lower Cleveland Peninsula	4.27E+08	145	2.94E+06

Table 12. Ratios of gross-in-place value (GIPV) to area for individual mineral-resource tracts that are wholly or partially in the Tongass National Forest. (Information is from tables 4 and 7 of this report. All tonnages are metric.)--Continued.

1 Map No.	2 Name	3 GIPV of tract	4 Tract area (sq. km)	5 GIPV/area
10CR	South central Prince of Wales Island	7.95E+08	1608	4.94E+05
12CR	Kasaan Peninsula	6.75E+09	196	3.44E+07
13CR	Baker Island	9.75E+08	85	1.15E+07
14CR	San Juan Bautista Island	1.64E+07	21	7.81E+05
16CR	Black Lake-Lake Saint Nicholas	1.56E+08	233	6.70E+05
17CR	Pin Peak	1.66E+08	60	2.77E+06
18CR	Maybeso Creek	3.26E+08	90	3.62E+06
19CR	Suemez Island	2.66E+08	141	1.89E+06
20CR	Trocadero Bay-Cholmondeley Sound	2.22E+08	833	2.67E+05
21CR	Copper Mountain	1.43E+09	116	1.23E+07
22CR	Dora Bay	5.30E+08	31	1.71E+07
23CR	Dolomi	1.06E+08	92	1.15E+06
24CR	Northern Dall	2.11E+08	276	7.64E+05
25CR	Southeast Sukkwan Island	1.08E+08	23	4.70E+06
26CR	Moira Sound	8.07E+08	275	2.93E+06
27CR	Niblack	1.18E+08	78	1.51E+06
DIXON ENTRANCE QUADRANGLE				
05DE	Kassa Inlet	1.04E+08	26	4.00E+06

Table 12. Ratios of gross-in-place value (GIPV) to area for individual mineral-resource tracts that are wholly or partially in the Tongass National Forest. (Information is from tables 4 and 7 of this report. All tonnages are metric.)--Continued.

1 Map No.	2 Name	3 GIPV of tract	4 Tract area (sq. km)	5 GIPV/area
06DE	Bokan Mountain	1.63E+09	33	4.94E+07
08DE	Southern Dall and Long Islands	1.39E+08	436	3.19E+05
09DE	Barrier Islands	2.29E+08	117	1.96E+06
10DE	Southeastern-most Prince of Wales Island	6.68E+08	146	4.58E+06
JUNEAU QUADRANGLE				
02JU	Casement Glacier	1.08E+09	576	1.88E+06
04JU	Sullivan Island to Sullivan River	1.54E+08	335	4.60E+05
05JU	Excursion River	1.96E+07	430	4.56E+04
06JU	Nun Mountain	5.54E+07	246	2.25E+05
07JU	Neka Bay, W of	4.40E+07	50	8.80E+05
11JU	Kensington-Jualin and Eagle River-Juneau	3.73E+08	897	4.16E+05
13JU	Juneau Ice-field	2.41E+08	506	4.76E+05
KETCHIKAN QUADRANGLE				
03KC	Chickamin River	6.80E+07	148	4.59E+05
07KC	Chickamin Rudyerd	4.83E+07	764	6.32E+04
08KC	Southern Revillagigedo Island	3.55E+07	1237	2.87E+04
10KC	Boca de Quadra-Quartz Hill	9.88E+08	627	1.57E+06

Table 12. Ratios of gross-in-place value (GIPV) to area for individual mineral-resource tracts that are wholly or partially in the Tongass National Forest. (Information is from tables 4 and 7 of this report. All tonnages are metric.)--Continued.

1 Map No.	2 Name	3 GIPV of tract	4 Tract area (sq. km)	5 GIPV/area
14KC	Southwestern Gravina Island-Eastern Annette Is.	1.44E+08	183	7.87E+05
16KC	Tongass Narrows	1.39E+08	224	6.21E+05
18KC	Boca de Quadra-Sitlan Island	1.24E+07	292	4.25E+04
MOUNT FAIRWEATHER QUADRANGLE				
11MF	DUNDAS RIVER	1.11E+09	413	2.69E+06
PORT ALEXANDER QUADRANGLE				
05PA	Security Bay	1.94E+07	239	8.12E+04
06PA	Saginaw Bay-Cornwalis Peninsula	7.93E+08	153	5.18E+06
08PA	Southwest Kuiu	1.01E+09	277	3.65E+06
PETERSBURG QUADRANGLE				
05PE	Southwest Kupreanof	3.55E+08	640	5.55E+05
06PE	Tunehean Creek-Castle River, southeast Zarembo, central Etolin, Niblack and Deer Island	1.12E+08	330	3.39E+05
07PE	Kosciusko-Northerr Prince of Wales	1.18E+09	287	4.11E+06
08PE	Salmon Bay	1.12E+08	16	7.00E+06
12PE	Duncan Canal-Zarembo Island	2.17E+08	676	3.21E+05
13PE	Kupreanof Mountain	2.65E+07	28	9.46E+05

Table 12. Ratios of gross-in-place value (GIPV) to area for individual mineral-resource tracts that are wholly or partially in the Tongass National Forest. (Information is from tables 4 and 7 of this report. All tonnages are metric.)--Continued.

1 Map No.	2 Name	3 GIPV of tract	4 Tract area (sq. km)	5 GIPV/area
14PE	Woewodski	1.23E+08	30	4.10E+06
15PE	Outer Etolin	3.53E+06	461	7.66E+03
20PE	Groundhog Basin	3.43E+09	43	7.98E+07
SUMDUM QUADRANGLE				
02SD	Snettisham	8.00E+06	23	3.48E+05
04SD	Tracy Arm-Stikine River	1.43E+08	1112	1.29E+05
05SD	Endicott Peninsula	6.98E+07	537	1.30E+05
06SD	Dawes Glacier-Buddington Range	2.08E+07	320	6.50E+04
SITKA QUADRANGLE				
01SI	Yakobi-Mirror Harbor	1.32E+08	117	1.13E+06
02SI	Yakobi-Chichagof	1.37E+08	836	1.64E+05
03SI	Lisianski Inlet	4.49E+07	342	1.31E+05
04SI	Lake Elfindahl, Rus mountain, Granite Islands, Deep Bay, Krusof Island, Takatz Bay and Trap Bay, Crawfish Inlet-Gut Bay, Redfish Bay	1.04E+09	1351	7.70E+05
07SI	Tarn Mountain, Moore Mountains	1.55E+08	77	2.01E+06
08SI	Tenakee Inlet, S of head of	2.92E+07	61	4.79E+05
10SI	Seal Creek	5.49E+07	123	4.46E+05

Table 12. Ratios of gross-in-place value (GIPV) to area for individual mineral-resource tracts that are wholly or partially in the Tongass National Forest. (Information is from tables 4 and 7 of this report. All tonnages are metric.)--Continued.

1 Map No.	2 Name	3 GIPV of tract	4 Tract area (sq. km)	5 GIPV/area
11SI	Tenakee-Sitkoh Bay	1.05E+08	187	5.61E+05
13SI	Admiralty Island	7.86E+07	1967	4.00E+04
SKAGWAY QUADRANGLE				
16SK	Skagway River	9.95E+08	407	2.44E+06
17SK	Meade Glacier	3.96E+07	135	2.93E+05
TAKU RIVER QUADRANGLE				
02TR	Bacon Glacier and Mount Ogden	1.85E+08	225	8.22E+05
03TR	Kluchman Mountain	4.98E+06	156	3.19E+04
04TR	Snow Tower-Sawyer Glacier	4.43E+07	536	8.26E+04
YAKUTAT QUADRANGLE				
01YA	Fairweather Range	9.98E+08	2920	3.42E+05
02YA	Yakutat Range	1.60E+08	2815	5.68E+04

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and 6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
ATLIN QUADRANGLE							
THERE ARE NO MINES, PROSPECTS, OR OCCURRENCES IN THE ATLIN QUADRANGLE.							
BRADFIELD CANAL QUADRANGLE							
BC022	Heckla	One ton ore with*:					
		0.08 oz/T Au	0.08	456.43	36.51		
		53.4 oz/T Ag	53.4	11.58	618.37		
		21.6% Pb	522	0.38	243.96		
		32.1% Zn	642	0.47	301.74		
		4.1% Cu	82	0.92	75.44		
						1276.03	
BC026	Marietta	350 oz Au	350	456.43	159750.50		
						159750.50	
BC047	Homestake	One ton ore with*:					
		0.29oz/T Au	0.29	456.43	132.36		
		5 oz/T Ag	5	11.58	57.90		
		50.0% Pb	1000	0.38	380.00		
		0.7% Zn	14	0.47	6.58		
		22.87% Cu	457.4	0.92	420.81		
						997.65	
BC053	Cantu	One ton ore with*:					
		0.24 oz/T Au	0.24	456.43	109.54		
		22.4 oz/T Ag	22.4	11.58	259.39		
		40.4% Pb	808	0.38	307.04		
		8.9% Zn	178	0.47	83.66		
						759.64	
BC074	Riverside	30,000 T with:					
		3000 oz Au	3000	456.43	1369290.00		
		100,000 oz Ag	100000	11.58	1158000.00		
		250,000 lb Pb	250000	0.38	95000.00		
		20,000 lb Zn	20000	0.47	9400.00		
		100,000 lb Cu	100000	0.92	92000 00		
		3,500 units WO3	3500	31.35	109725.00		
						2833415.00	
							2996198.814

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and 6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)-continued.

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
CRAIG QUADRANGLE							
CR003	McCullough	One ton ore with*:					
		2.0% Cu	40	0.92	36.80		
						36.80	
CR023	Lucky Nell	75 T ore with*					
		5.0 oz/T Au	375	456.43	171161.25		
						171161.25	
CR038	Puyallup	250 oz Au*	250	456.43	114107.50		
		CHECK MRDS!!				114107.50	
CR043	Cascade	250 oz Au*	250	456.43	114107.50		
						114107.50	
CR044	Cracker Jack	250 oz Au*	250	456.43	114107.50		
						114107.50	
CR047	Harris Creek	250 oz Au*	250	456.43	114107.50		
						114107.50	
CR048	Dawson	3,000 oz Au*	3000	456.43	1369290.00		
		5,000 oz Ag*	5000	11.58	57900.00		
						1427190.00	
CR050	Big Harbor	136 T with*:					
		6.5% Cu	17680	0.92	16265.60		
						16265.60	
CR066	Rush and Brown	One ton with*:					
		0.26 oz/T Au	0.26	456.43	118.67		
		10.5% Cu	210	0.92	193.20		
						311.87	
CR067	Salt Chuck,	326,000 T with:					
	Leibrant	0.036 oz/T Au	11736	456.43	5356662.48		
		0.17 oz/T Ag	55420	11.58	641763.60		
		0.95% Cu	6194000	0.92	5698480.00		
		0.063 oz/T Pd	20538	135.75	2788033.50		
						14484939.58	
CR072	Brown and	One ton with*:					
	Metzdorf	0.027 oz/T Au	0.027	456.43	12.32		
						12.32	
CR075	It	Unknown T with:					
		0.685 oz/T Au					
		0.478 oz/T Ag					
		3.99% Cu					
					Estimate*.	4560000.00	

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and 6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)-continued.

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
CR081	Uncle Sam	350 T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
CR086, 087, 088	Mamie, Mount Andrew, Stevens-town	270,000 T with:					
		6,939 oz Au	6939	456.43	3167167.77		
		55,930 oz Ag	55930	11.58	647669.40		
		12,817,000 lbs Cu	12817000	0.92	11791640.00		
						15606477.17	
CR102	Khayyam	280,000 T with:					
		1,180 oz Au	1180	456.43	538587.40		
		1,540 oz Ag	1540	11.58	17833.20		
		7,040,000 lbs Cu	7040000	0.92	6476800.00		
						7033220.60	
CR112	Jumbo	123,000 T with:					
		7,076 oz Au	7076	456.43	3229698.68		
		87,778 oz Ag	87778	11.58	1016469.24		
		10,194,264 lbs Cu	10194264	0.92	9378722.88		
						13624890.80	
CR123	Copper City	Est. 1,000 T with*:					
		0.225 oz/T Au	225	456.43	102696.75		
		3.35 oz/T Ag	3350	11.58	38793.00		
						141489.75	
CR124	Flat Island	Unknown T with*:					
		500 oz Ag	500	11.58	5790.00		
						5790.00	
CR144	Cymru	>155,000 T with:					
		250 oz Au*	250	456.43	114107.50		
		1,500 oz Ag	1500	11.58	17370.00		
		155,000 lbs Cu	155000	0.92	142600.00		
						274077.50	
CR149	Niblack	Unknown T with:					
		1,100 oz Au	1100	456.43	502073.00		
		15,000 oz Ag	15000	11.58	173700.00		
		1,400,000 lbs Cu	1400000	0.92	1288000.00		
						1963773.00	
CR153	Valpariso	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
		500 oz Ag	500	11.58	5790.00		
						119897.50	

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and 6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)-continued.

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
CR155	Golden Fleece	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
		500 oz Ag	500	11.58	5790.00		
						119897.50	
CR158	Fortune	Test shipment with*:					
		250 oz Au	250	456.43	114107.50		
		500 oz Ag	500	11.58	5790.00		
						119897.50	
CR165	Gold Standard	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
		500 oz Ag	500	11.58	5790.00		
						119897.50	
CR168	Helm Bay,						
	Helm Bay King	Unknown T with*:					
	(Sleeping Beauty)	250 oz Au	250	456.43	114107.50		
		500 oz Ag	500	11.58	5790.00		
						119897.50	
							60479661.25
DIXON ENTRANCE QUADRANGLE							
DE039	Ross-Adams	120,000 T with					
		1.0% U3O8	2400000	16.65	39960000.00		
						39960000.00	
							39960000.0

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and 6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)-continued.

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
JUNEAU QUADRANGLE							
JU016	Sandy Cove	Test shipments with*:					
		500 oz Au	500	456.43	228215.00		
		500 oz Ag	500	11.58	5790.00		
						234005.00	
JU020	Alaska-Endicott	200 T with:					
		48.38 oz Au	48.38	456.43	22082.08		
		20.0 oz Ag	20	11.58	231.60		
						22313.68	
JU026	Buttercup, Howard Bay	7 T with:					
		44.0 oz/T Ag	308	11.58	3566.64		
		3.55% Cu	497	0.92	457.24		
						4023.88	
JU032	Admiralty-Alaska, Willoughby	Unknown T with:					
		12,500 oz Au	12500	456.43	5705375.00		
						5705375.00	
JU034	Alaska Dano, Warhorse	Unknown T with*:					
		75 oz Au	75	456.43	34232.25		
						34232.25	
JU037	Williams Vein, Alaska Empire	Unknown T with*:					
		Significant Au		Estimate:	600000.00		
						600000.00	
JU044	Greens Creek	In 1989, 264,600 T					
		with: 23,530 oz Au	23530	456.43	10739797.90		
		5,166,591 oz Ag	5166591	11.58	59829123.78		
		8,698 metric T Pb	8698	837.19	7281878.62		
		19,843 metric T Zn	19843	1035.47	20546831.21		
						98397631.51	
JU047	Ivanhoe	3,000 T with					
		340 oz Au	340	456.43	155186.20		
						155186.20	
JU049	Horrible	500 T with:					
		73 oz Au	73	456.43	33319.39		
						33319.39	
JU050	Bear	5,500 T with*:					
		800 oz Au	800	456.43	365144.00		
						365144.00	
JU051	Kensington	12,000 T with*:					
		1,600 oz Au	1600	456.43	730288.00		
						730288.00	

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and 6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)-continued.

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
JU054	Northern Belle	23,000 T with*:					
		3,200 oz Au	3200	456.43	1460576.00		
						1460576.00	
JU055	Comet	50,000 T with:					
		22,250 oz Au	22250	456.43	10155567.50		
						10155567.50	
JU058	Jualin	Unknown T with:					
		48,375 oz Au	48375	456.43	22079801.25		
						22079801.25	
JU063	Aurora Borealis	Unknown T with:					
		266 oz Au	266	456.43	121410.38		
						121410.38	
JU072	Eagle River, Amalga	Unknown T with:					
		23,000 oz Au	23000	456.43	10497890.00		
						10497890.00	
JU084	Peterson Lake	Est. 500 T with*:					
		0.3 oz/T Au	150	456.43	68464.50		
						68464.50	
JU097	Gold Creek placer	Unknown yardage with	63280	456.43	28882890.40		
		63,280 oz Au				28882890.40	
JU101	Alaska-Juneau	88.5 million T (of which 47.2 million T were milled) with:					
		3,500,000 oz Au	3500000	456.43	1597505000.00		
		1,900,000 oz Ag	1900000	11.58	22002000.00		
		40,200,000 lbs Pb	40200000	0.38	15276000.00		
						1634783000.00	
JU109	Ibex, Silver Queen, Glacier, Copper Streak	Unknown T with:					
		22,500 oz Au	22500	456.43	10269675.00		
						10269675.00	
JU125	Treadwell Group (includes Treadwell, 700-Foot, Mexican, Ready Bullion)	28.8 million T with:					
		Au, Ag, Cu, Pb, but breakdown not available			67500000.00		
						67500000.00	
JU133	Alaska Treasure	One ton test with:					
		0.34 oz/T Au	0.34	456.43	155.19		
						155.19	
							1892100949

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)continued.

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
KETCHIKAN QUADRANGLE							
KC004	Gold Standard	Unknown T with*:					
		3,000 oz Au	3000	456.43	1369290.00		
						1369290.00	
KC007	Gold Mountain	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
KC019	Wildcat	5 T test shipment with:	6.25	456.43	2852.69		
		1.25 oz/T Au				2852.69	
KC022	Mahoney	Unknown T with*:					
		2.0 oz Au	2	456.43	912.86		
		347 oz Ag	347	11.58	4018.26		
		214 lbs Cu	214	0.92	196.88		
		42,086 lbs Pb	42086	0.38	15992.68		
		74,829 lbs Zn	74829	0.47	35169.63		
						56290.31	
KC032	Sealevel	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
KC033	Goo Goo	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
KC044	Gold Stream	5,000 T with*:					
		0.88 oz/T Au	4400	456.43	2008292.00		
						2008292.00	
							3779047.5
MOUNT FAIRWEATHER QUADRANGLE							
MF002	Echo Creek placer	Unknown yardage with:					
		4,000 oz Au	4000	456.43	1825720.00		
						1825720.00	
MF011	Topsy Creek placer	Unknown yardage with:					
		4,000 oz Au	4000	456.43	1825720.00		
						1825720.00	
MF019	Boussoule Bay placer	Unknown yardage with:					
		4,000 oz Au	4000	456.43	1825720.00		
						1825720.00	
MF032	A.F. Parker	7.5 T with*:					
		5.13 oz/T Au	38 475	456.43	17561.14		
		1.55 oz/T Ag	11.625	11.58	134.62		
						17695.76	
MF033	Leroy	Unknown T with:					
		2,857 oz Au	2857	456.43	1304020.51		
						1304020.51	
MF034	Rainbow	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)continued.

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
MF035	Sentinel	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
MF036	Monarch #1 and #2	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
MF038	Incas	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
MF042	Galena	30 T with*:					
		0.16 oz/T Au	4.8	456.43	2190.86		
		0.30 oz/T Ag	9	11.58	104.22		
		0.79% Zn	47400	0.47	22278.00		
						24573.08	
MF043	Hopalong	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
MF065	Willoughby Island, W end	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
							7508094.36
PORT ALEXANDER QUADRANGLE							
PA004	Cache	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
PA005	Lucky Chance	Unknown T with*:					
		250 oz Au	250	456.43	114107.50		
						114107.50	
							228215

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and 6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)-continued.

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
PETERSBURG QUADRANGLE							
PE022	Castle Island barite	750,000 T barite:	750000	39	29250000.0		
						29250000.0	
PE023	Helen S.	Unknown T with*:					
		250 oz Au	250	456.43	114107.5		
						114107.5	
PE024	Harvey Creek	Unknown T with*:					
		250 oz Au	250	456.43	114107.5		
						114107.5	
PE025	Maid of Mexico	Unknown T with*:					
		100 oz Au		456.43	45643.0		
		100 oz Ag		11.58	1158.0		
						46801.0	
PE026	Hattie	Unknown T with*:					
		100 oz Au		456.43	45643.0		
		100 oz Ag		11.58	1158.0		
						46801.0	
							29571817
PRINCE RUPERT QUADRANGLE							
PR002	Nelson and Tift	Unknown T with*:					
		250 oz Au	250	456.43	114107.5		
						114107.5	
							114107.5
SUMDUM QUADRANGLE							
SD005	Crystal	Unknown T with:					
		2,000 oz Au	2000	456.43	912860.0		
						912860.0	
SD018	Powers Creek placer	Unknown yardage with:					
		2,000 oz Au	2000	456.43	912860.0		
						912860.0	
SD022	Sumdum Chief	Unknown T with:					
		24,000 oz Au	24000	456.43	10954320.0		
		24,000 oz Ag	24000	11.58	277920.0		
						11232240.0	
SD026	Mildred and nearby localities	Unknown T with:					
		3,000 oz Au	3000	456.43	1369290.0		
						1369290.0	
SD028	Spruce Creek placer	Unknown yardage with*:					
		250 oz Au	250	456.43	114107.5		
						114107.5	

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and 6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)-continued.

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
SD036	Holkham Bay	Unknown T with:					
		50 oz Au	50	456.43	22821.5		
						22821.5	
SD039	Chuck River placer	Unknown yardage with*:					
		250 oz Au	250	456.43	114107.5		
						114107.5	
SD040	K & D	Unknown T with*:					
		250 oz Au	250	456.43	114107.5		
						114107.5	
							14792394
SITKA QUADRANGLE							
SI005	Apex-El Nido	Unknown T with:					
		50,000 oz Au	50000	456.43	22821500.0		
		Est. 7,200 oz Ag	7200	11.58	83376.0		
						22904876.0	
SI010	Cobol (Pinta Bay)	130 T with:					
		100 oz Au	100	456.43	45643.0		
						45643.0	
SI025	Golden Hand	Unknown T with*:					
		250 oz Au	250	456.43	114107.5		
						114107.5	
SI030	Hirst-Chichagof	Unknown T with:					
		87,980 oz Au	87980	456.43	40156711.4		
		20,000 oz Ag	20000	11.58	231600.0		
						40388311.4	
SI036	Chichagof (mine)	Unknown T with:					
		700,000 oz Au	700000	456.43	319501000.0		
		200,000 oz Ag	200000	11.58	2316000.0		
						321817000.0	
SI039	Alaska-Chichagof	660 T with:					
		1.0 oz/T Au	660	456.43	301243.8		
						301243.8	
SI043	Jumbo, Duluth	Unknown T with*:					
		250 oz Au	250	456.43	114107 5		
						114107.5	
SI054	Cobol (Slocum Arm)	Unknown T with*:					
		250 oz Au	250	456.43	114107.5		
						114107.5	
							385799397

Table 13. Values of past mineral-resource production, 1900 -1989, Tongass National Forest and adjacent areas, southeastern Alaska. (Data are from tables 2 and 6; * indicates that assumptions discussed in text are used; all unlabelled values are US dollars.)-continued.

1 Map No.	2 Name	3 Commodities produced and amount	3a Units	3b Price per unit	4 Value	5 Value for locality	6 Value for quadrangle
SKAGWAY QUADRANGLE							
SK026	Glacier Creek (Christmas Creek) placer	Unknown yardage with*: 250 oz Au	250	456.43	114107.5	114107.5	
SK032	Cahoon Creek placer	Unknown yardage with*: 250 oz Au	250	456.43	114107.5	114107.5	
SK033	McKinley Creek placer	Unknown yardage with*: 250 oz Au	250	456.43	114107.5	114107.5	
SK035	Porcupine Creek, loc. 1, placer	Unknown yardage with: 60,000 oz Au	60000	456.43	27385800.0	27385800.0	
SK039	Nugget Creek placer	Unknown yardage with: 300 oz Au	300	456.43	136929.0	136929.0	
SK084	Inspiration Point	Unknown T with*: 250 oz Au	250	456.43	114107.5	114107.5	
							27979159
TAKU RIVER QUADRANGLE							
TR008	Enterprise	Unknown T with: 100 oz Au	100	456.43	45643.0	45643.0	
							45643
YAKUTAT QUADRANGLE							
YA003	Yakutat Beach	Unknown yardage with*: 250 oz Au	250	456.43	114107.5	114107.5	
							114107.5
TOTAL VALUE OF PRODUCTION FROM ALL QUADRANGLES							2465468791

Table 14. Estimated value of past mineral-resource exploration and development activities, southeastern Alaska; 1900-1989; in millions of 1989 dollars. (Reference given only for years for which detailed estimates are available; see text for explanation.)

1 Year	2 Amount	3 Reference	4 Remarks
EXPLORATION			
1900 to 1940	197.21		41 yrs at $4.81 million/yr
1941	01.01		
1942	01.01		
1943	01.01		
1944	01.01		
1945	01.11		
1946	01.21		
1947	01.31		
1948	01.41		
1949	01.51		
1950	01.61		
1951	01.71		
1952	01.81		
1953	01.91		
1954	02.01		
1955	04.81		
1956	04.81		
1957	04.81		
1958	04.81		
1959	04.81		
1960	03.59	T.K. Bundtzen, written comm., 1989	
1961	01.87	T.K. Bundtzen, written comm., 1989	
1962	00.96	T.K. Bundtzen, written comm., 1989	
1963	00.94	T.K. Bundtzen, written comm., 1989	
1964	00.98	T.K. Bundtzen, written comm., 1989	
1965	00.88	T.K. Bundtzen, written comm., 1989	
1966	01.63	T.K. Bundtzen, written comm., 1989	
1967	01.71	T.K. Bundtzen, written comm., 1989	
1968	03.39	T.K. Bundtzen, written comm., 1989	
1969	05.35	T.K. Bundtzen, written comm., 1989	
1970	04.74	T.K. Bundtzen, written comm., 1989	
1971	08.08	T.K. Bundtzen, written comm., 1989	
1972	03.82	T.K. Bundtzen, written comm., 1989	
1973	04.75	T.K. Bundtzen, written comm., 1989	
1974	05.15	T.K. Bundtzen, written comm., 1989	
1975	02.94	T.K. Bundtzen, written comm., 1989	
1976	10.79	T.K. Bundtzen, written comm., 1989	
1977	17.71	T.K. Bundtzen, written comm., 1989	
1978	23.49	T.K. Bundtzen, written comm., 1989	

Table 14. Estimated value of past mineral-resource exploration and development activities, southeastern Alaska; 1900-1989; in millions of 1989 dollars. (Reference given only for years for which detailed estimates are available; see text for explanation.)-continued

1 Year	2 Amount	3 Reference	4 Remarks
1979	06.93	T.K. Bundtzen, written comm., 1989	
1980	05.85	T.K. Bundtzen, written comm., 1989	
1981	29.73	T.K. Bundtzen, written comm., 1989	
1982	02.07	T.K. Bundtzen, written comm., 1989	
1983	02.54	T.K. Bundtzen, written comm., 1989	
1984	03.56	T.K. Bundtzen, written comm., 1989	
1985	02.98	T.K. Bundtzen, written comm., 1989	
1986	03.08	T.K. Bundtzen, written comm., 1989	
1987	06.21	T.K. Bundtzen, written comm., 1989	
1988	20.64	T.K. Bundtzen, written comm., 1989	
Subtotal Exploration	429.26		
DEVELOPMENT			
1960-1988:			
Greens Creek	106.01	T.K. Bundtzen, written comm., 1989 (Pre-1989 expenditures not adjusted for inflation)	
Quartz Hill	14.55	T.K. Bundtzen, written comm., 1989 (Pre-1989 expenditures not adjusted for inflation)	
Subtotal Development	120.56		
TOTAL	547.82		