U. S. Department of the Interior
Bureau of Land Management

Alaska State Office
222 West 7th Avenue, #13
Anchorage, Alaska 99513

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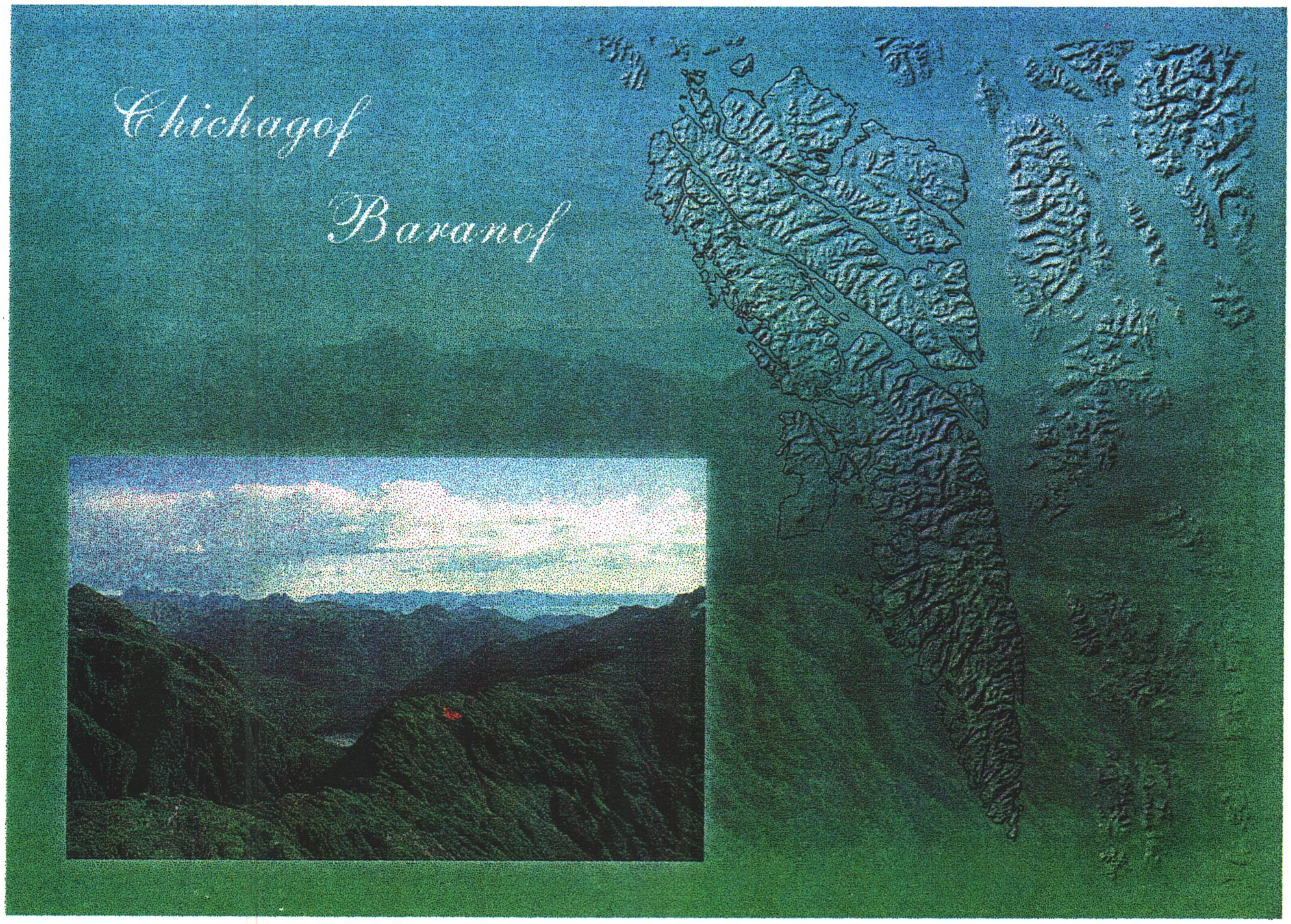
Mineral Resources of the Chichagof and Baranof Islands Area, Southeast Alaska

Peter E. Bittenbender
Jan C. Still
Kenneth M. Maas, and
Mitchell E. McDonald, Jr.



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Cover

Digital elevation model of northern Southeast Alaska with the Chichagof and Baranof Islands Study Area outlined. Inset shows the west ridge of Mt. Muravief on southern Baranof Island.

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MINERAL ASSESSMENT REPORT

Mineral Resources of the Chichagof and Baranof Islands Area, Southeast Alaska

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MINERAL RESOURCES OF THE CHICHAGOF AND BARANOF ISLANDS AREA, SOUTHEAST ALASKA

By Peter E. Bittenbender, Jan C. Still,
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ABSTRACT

The Chichagof and Baranof Islands area constitutes over two and a half million acres along the northwest coast of southeast Alaska. BLM personnel investigated mineral occurrences in the area between 1995 and 1997. This report provides information on those investigations and includes sections on land status, history and production, previous studies, general geology, and potential land use and resource development conflicts.

The historic Chichagof and Hirst-Chichagof Mines account for most of the past production of 791,000 ounces of gold and 228,000 ounces of silver from the Chichagof-Baranof area. These mines also account for most of the area's gold and silver resources of 675,000 ounces of gold and 195,000 ounces of silver. Much of the land with gold and silver potential in the west Chichagof area is covered by a wilderness designation that precludes mineral development.

Twenty-four million tons of nickel-copper-cobalt-bearing resources are located at Bohemia Basin on Yakobi Island. Similar, but smaller, magmatic segregation deposits occur at Mirror Harbor and Snipe Bay. A wilderness designation covers the Mirror Harbor area.

The Pacific Coast Gypsum Company produced 500,000 tons of gypsum from a mine near Iyoukeen Cove on eastern Chichagof Island between 1906 and 1923. The Chichagof-Baranof area also has the potential for porphyry copper and molybdenum, volcanic-related copper, and skarn deposits.

The Chichagof-Baranof study reveals for the first time information on volcanic-related copper on southern Baranof Island, and porphyry molybdenum and skarn, near Freshwater Bay on eastern Chichagof Island. The history of mineral activity in Silver Bay, along with previously unpublished maps and sample results are presented.

Executive Summary

The Chichagof and Baranof Islands area constitutes over two and a half million acres located along the northwest coast of southeast Alaska. The area includes historic producers of gold, silver, and gypsum. The area's main gold producers, the Chichagof and Hirst-Chichagof Mines, produced 791,000 ounces of gold and 228,000 ounces of silver between 1906 and 1943. Approximately 500,000 tons of gypsum was produced by the Pacific Gypsum Company from a mine near Iyoukeen Cove on eastern Chichagof Island between 1906 and 1923.

Bureau of Land Management (BLM) personnel (employees of the Bureau of Mines prior to 1996) investigated mineral occurrences in the Chichagof and Baranof Islands area during 1995, 1996, and 1997. BLM crews examined 46 mines and prospects, and over 50 reconnaissance sites, and collected over 850 samples. A 220-sample stream sediment reconnaissance program was carried out on southern Baranof Island. Detailed work was not performed on western Chichagof Island and Yakobi Island because extensive prior studies were conducted by the Bureau of Mines in 1978 and 1979 (Still and Weir, 1981; Kimball, 1982). Discussion of the western Chichagof and Yakobi Island mineral deposits is included here for completeness and to allow a comparison to be made with other deposits in the study area.

Based on the current mineral assessment, as well as on previous Bureau of Mines and U. S. Geological Survey (USGS) studies, 13 known mineral deposit areas (KMDA's) have been delineated. The boundaries of these areas were determined by geology, and the distribution and type of mineral deposits. Deposit types and commodities include: vein gold (gold, silver) magmatic segregation (nickel, copper, cobalt, chromium), porphyry (copper, molybdenum), and volcanic-related massive sulfide (copper, zinc). The potential to develop the minerals in each of the KMDA's depends upon the size and grade of the deposits, deposit types, mineralogy, commodities, access, and potential land use conflicts. Mineral development potential is addressed with regard to each of the KMDA's.

There are four KMDA's with vein gold potential, Doolth Mountain, West Coast Gold, Lisianski, and Silver Bay. The one with the highest potential for development is the Doolth Mountain KMDA. With inferred/hypothetical resources of 675,000 ounces of gold and 195,000 ounces of silver, it contains the largest known gold and silver resources in the Chichagof-Baranof study area. Most of these resources are within the 39 patented mining claims that form the Chichagof Mine and the Hirst-Chichagof Mine properties. The remainder of the Doolth Mountain KMDA is within a designated wilderness where mineral development is not allowed, except on claims with valid existing rights. The West Coast Gold KMDA has a significant number of known mineral occurrences, but also has a wilderness designation (except for one unpatented claim) and mining is not allowed without valid existing rights. The Lisianski KMDA also has a significant number of mineral occurrences, with about half of the area open to mining. The open area includes the Apex and El Nido Mines, which are reported to contain an approximately 26,000-ounce unconfirmed gold resource. The land status in most of the Silver Bay KMDA allows for mineral development, but the size, grade, and continuity of the deposits makes development unlikely.

Five KMDA's with potential for magmatic segregation deposits are located in the study area. The Bohemia Basin KMDA contains resources of over 24 million tons of nickel-copper-cobalt-bearing rock and is the area most likely to be developed. According to the economic feasibility studies by Coldwell (1998), the deposit at present is subeconomic, and would require approximately a doubling of metal value or size to approach economic viability. The Bohemia Basin resources are covered by nine patented claims. The Mirror Harbor and Snipe Bay KMDA's contain resources of 1 million tons and 94,000 tons of nickel-copper-cobalt-bearing rock, respectively. Both of these, however, are less likely to be developed. All of the land within the Mirror Harbor KMDA is designated as wilderness, as is about three quarters of the Snipe Bay KMDA. Two areas of magmatic segregation-type deposit potential least likely to be developed are the Red Bluff Bay and Hill KMDA's. Both are of limited size and grade, and are covered by land status designations restrictive to mineral development.

There are four KMDA's in the study area with potential for porphyry-type deposits and for volcanic-related massive sulfide deposits. The Warm Springs Bay and Slocum Arm KMDA's host porphyry-type mineralization. The mineralized rock in both areas covers a broad extent, however the Warm Springs Bay area is more likely to attract development, given its land status that is less restrictive to mineral development. The likelihood of mineral development in the KMDA's marked by volcanic-related deposits is considered as medium in the Mt. Baker area, and as low in the Mt. Muravief area.

The Chichagof-Baranof study reveals for the first time information on volcanic-related copper on southern Baranof Island. Results of the first examination of a molybdenum occurrence in a road pit south of Freshwater Bay is also discussed. BLM investigators discovered skarn minerals near Gypsum Creek on eastern Chichagof Island and report on recent claims staked for skarn potential near East Point, north of Tenakee Inlet. The history of mineral activity in Silver Bay, along with previously unpublished maps and sample results, is also presented.

TABLE OF ABBREVIATIONS / ACRONYMS

ANILCA	Alaska National Interest Lands Conservation Act (1980)
BLM	United States Department of Interior, Bureau of Land Management
Bureau of Mines	United States Department of Interior, Bureau of Mines
Forest Service	United States Department of Agriculture, Forest Service
KMDA('s)	know mineral deposit area(s)
LUD	Forest Service's "Land Use Designation"
MAS	Minerals Availability System (BLM's minerals database)
no.	number
oz	troy ounces
oz/t	troy ounces per short ton
oz/yd^3	troy ounces per cubic yard
PGM	platinum-group metals
ppb	parts per billion
ppm	parts per million
tons	short tons
USGS	United States Department of Interior, Geological Survey
°	degrees of azimuth (unless otherwise noted)

INTRODUCTION

Mining in the Chichagof-Baranof study area (Fig. 1) dates back to about 1870 and represents some of the earliest mining in Alaska. The area corresponds to the historic Chichagof District, also known as the Sitka Mining District (Knopf, 1912), which is an area that has produced significant quantities of gold, silver, and gypsum. Exploration efforts have also targeted occurrences of nickel, chromium, copper, and molybdenum. Occurrences of tungsten, iron, potassium feldspar, palygorskite, andalusite, and cement-grade limestone have also been noted. Mineral deposit types include vein gold, epithermal vein, magmatic segregation, hydrothermal or sedimentary gypsum, volcanic-related massive sulfide, porphyry copper and/or molybdenum, pegmatite, and iron-copper skarn.

The Bureau of Land Management (BLM) finished a three-year mineral assessment of the Chichagof and Baranof Islands area in 1997. This report summarizes the mineral endowment of the area from data generated during the current study and also from previous investigations, particularly those of the Bureau of Mines between 1979 and 1980 (Still and Weir, 1981; Kimball, 1982).

The Chichagof-Baranof study was initiated by the Bureau of Mines in 1995. With the closure of the Bureau of Mines in 1996, responsibility for the investigation was taken over by the BLM. Investigation of the area was undertaken at the request of the USDA, Forest Service (Forest Service) whose goal is to encourage and facilitate orderly mineral development, while ensuring operations are conducted in an environmentally sound manner, and that disturbed lands are reclaimed for other productive uses. Each element of this goal requires a thorough understanding of the mineral endowment and development potential of the selected area.

The Chichagof-Baranof mineral assessment included site surveying, geologic mapping, and sampling of historic mines, prospects, and mineral occurrences as well as reconnaissance investigations of prospective mineralized areas. BLM personnel investigated approximately 90 mines, prospects, or mineral occurrences during the course of this study. Reconnaissance-type investigations examined numerous exposures, particularly along the logging road network on the northeast side of Chichagof Island. A 220-sample, stream sediment reconnaissance program was carried out on southern Baranof Island in search of mineralized rock similar to that found in the Mt. Muravief area. In total, over 850 rock chip, placer, and stream sediment samples were collected for geochemical analysis. The overall project objectives were to:

- identify the type, amount, and distribution of mineral deposits in the district
- determine mineral resource estimates when possible
- conduct feasibility studies for selected deposit types
- address land use and resource issues related to mining activities

Field investigations during the current study explicitly excluded the historically significant deposits in the west Chichagof-Yakobi Island area. Mineral assessments of this area were previously completed by Bureau of Mines workers Still and Weir (1981) and Kimball (1982). A discussion of the west Chichagof-Yakobi Island area is included here, however, for completeness and so that a comparison can be made with other mineralized areas on Chichagof and Baranof Islands.

Discussion of the mineral endowment of the study area is structured upon 13 known mineral deposit areas (KMDA's) and the deposit type within each area. This approach provides an overview of the most important mineralized areas and allows a comparison to be made between areas with similar deposit types. Each KMDA is evaluated with regard to the size and grade of known resources, the extent and nature of the deposits, results of BLM sampling where applicable, current land status and how it affects mineral development activities, and accessibility of the areas. A brief discussion of additional prospects and mineral occurrences outside the more significant KMDA's is also provided. Detailed work was accomplished in the south Baranof and Freshwater Bay areas by the BLM in 1997, and in the Silver Bay area during the course of the study. The work accomplished in these areas is presented in separate sections, outside the framework of the KMDA comparison.

This report presents an overview of land status, mining history, previous studies, general geology and mineral deposit types, and a bibliography of geological and mining-related reports pertaining to the study area. Plate 1 shows the location of the KMDA's, mines, prospects, and mineral occurrences within the study area as well as many of the geographic locations mentioned in the text. Table A-1 summarizes pertinent information on mines, prospects, and mineral occurrences and is presented in Appendix A. Plate 1 and Table A-1 are cross-referenced using "prospect" numbers or "P" numbers (eg., P63). Plate 2 shows the locality of all samples collected from 1995 to 1997. Table B-1 in Appendix B is a corresponding table of analytical results. Plate 2 and Table B-1 are cross-referenced using a different set of "map" numbers. An alphabetical listing of mines, prospects, and mineral occurrences with correlated prospect and map numbers is presented in Appendix C.

Several publications have already been released regarding the current mineral assessment of the Chichagof-Baranof area. Bureau of Mines and BLM investigations conducted during 1995 and 1996 were published by Maas and others (1996) and Bittenbender and Still (1997), respectively. A report on the economic feasibility of mining low sulfide, vein gold- and magmatic segregation-type deposits in the Chichagof-Baranof area was published by Coldwell (1998).

PURPOSE OF PROGRAM

Mineral assessment studies in Alaska expand the body of public, minerals-related, knowledge and support Department of the Interior policies that improve Federal stewardship and land-use planning on public lands. They provide important geoscience, mining engineering, and mineral economic information that become part of a comprehensive inventory of resources on Federal land. The total data set allows physical, biological, and economic sciences to be considered in Federal land planning and decision making. The information and the resulting policies are necessary to ensure the sound use of natural resources, while preserving and protecting environmental and cultural values. Information provided by these studies is also useful to legislators, other land-managing agencies, and mineral industry leaders to make informed decisions affecting future mineral resource activities and their associated socioeconomic effects on the State of Alaska.

Mineral assessment studies improve the understanding of the mineral development

Base map adapted from U.S.G.S. 1:250,000-scale Mt. Fairweather(111), Juneau(112), Sitka(114), & Port Alexander(116) quadrangles

Figure 1. - Location map of the Chichagof and Baranof Islands study area.

potential of an area by creating an inventory of mineral resources, evaluating the likelihood that more resources may exist, and estimating the technical, environmental, and economic feasibility of mining certain mineral deposits. They also review land-use and environmental issues as they relate to potential mineral development scenarios. The mineral assessments address specific data and analysis requirements mandated by the National Environmental Policy Act (NEPA), the Federal Land Management and Policy Act (FLPMA), the National Forest Management Act, the Alaska National Interest Lands Conservation Act (ANILCA), and other statutes.

Area-wide mineral assessments of Alaska are conducted in coordination with several Federal agencies. Historically, these have included the Bureau of Mines, U.S. Geological Survey (USGS), BLM, and the Forest Service. Early in 1996, the Bureau of Mines was closed as an agency and its functions, personnel, and mandates in Alaska were transferred to the BLM under Secretarial Order 3196, dated January 19, 1996.

Under the BLM mineral assessment program, several mining districts (including Goodnews Bay, Juneau, Valdez Creek, Colville, and Ketchikan), national forests (Chugach), and BLM resource planning areas (Steese-White Mountains, Forty Mile, and Black River) have been investigated. Many of these studies have been conducted in coordination with State and nongovernmental organizations as well.

Authorities

In accordance with Section 1010 of the ANILCA (PL 96-487; 94 Stat. 2371) the Secretary of the Interior is authorized, "...to the full extent of his authority, assess the oil, gas, and other mineral potential on all public lands in the State of Alaska in order to expand the database with respect to the mineral potential of such lands. The mineral assessment program may include, but shall not be limited to, ... core and test drilling for geologic information.... To the maximum extent practicable, the Secretary shall consult and exchange information with the State of Alaska regarding the responsibilities of the Secretary under this section and similar programs undertaken by the State." The Wilderness Act, National Environmental Policy Act (NEPA), and Federal Land Policy and Management Act (FLPMA) also require interdisciplinary resource assessments before a major Federal land use decision is made on public lands.

Priorities

Mineral assessment study areas are chosen using a prioritization process that weighs several factors, including land status, mining history, current prospecting activity, geologic potential, accessibility, and conflicting land uses. The extent and age of previous studies is also taken into account. Input from other Federal agencies and the State of Alaska are heavily weighted in the process of prioritization. For instance, the priorities of the Forest Service, the leading land manager in southeast Alaska, were a major consideration in undertaking the Chichagof and Baranof Islands area study.

METHODOLOGY

Mines, prospects, and mineral occurrences are selected for examination after considering information from several different sources. An initial list is compiled from the Minerals Availability System (MAS) database, which was created and maintained by the Bureau of Mines through 1995. The Alaska portion of the MAS database is currently maintained by the BLM and contains information on mines, prospects, and mineral occurrences throughout Alaska. Each site from the MAS list is reviewed and prioritized after completing a thorough literature search. Properties with multiple references and evidence of past production or development are given high priority. Sites where recent work or claim staking has been performed are given moderate priority for field investigation. The literature may reveal that some sites represent claim staking only, consequently, locations and information are scarce. These sites are given a low priority. The literature search may also reveal properties that were not included in the MAS database, but nonetheless merit investigation.

Previous studies by government agencies such as the USGS or Alaska Division of Geological and Geophysical Surveys may contain geophysical or geochemical information on sites that warrant follow-up examination. Other factors that influence site selection include favorable regional geology and newly created access (e.g., logging roads, glacial retreat, etc.). Site examinations may also be recommended by area land managers, prospectors, and geologists.

LOCATION AND ACCESS

The Chichagof and Baranof Islands study area consists of the islands west of Chatham Strait and south of Cross Sound and Icy Strait. It includes Chichagof, Baranof, Inian, Lemesurier, Yakobi, Kruzof and the smaller islands along the Pacific coast (Fig. 1, Plate 1). The area is depicted on parts of the Mt. Fairweather, Juneau, Sitka, and Port Alexander 1:250,000-scale USGS quadrangle maps. Population centers in the district include Sitka, Hoonah, and the smaller communities of Tenakee Springs, Pelican, Elfin Cove, Port Alexander, and Baranof.

The area is characterized by rugged, glaciated topography with peaks in excess of 4,800 feet. The steep terrain restricts foot access in many places. Numerous inlets and bays cut through the islands providing rock exposure along shorelines that can be accessed by boat. Extensive logging road networks traverse the northeast part of Chichagof Island and can be accessed from Hoonah. Logging roads also provide access to the Sitkoh Bay-Corner Bay area. A short paved-road network surrounds Sitka. The Alaska Marine Highway System (ferry) provides service to Sitka, Hoonah, Tenakee Springs, and Pelican. Fixed-wing and helicopter service can be obtained from Sitka. Sitka is the largest population center in the area and offers some supplies and services. Juneau, approximately 90 miles northeast of Sitka, can also be used for logistical support.

LAND STATUS

Land management responsibilities in the Chichagof-Baranof area are divided among the Forest Service, regional and village Native corporations, the State of Alaska, and private entities (Fig. 2; see Plate 1 for additional geographic locations). Most of the land on Baranof Island and the adjacent islands is administered by the Forest Service and is open to mineral location and development. There are several exceptions. The major exception is the 319,568-acre South Baranof Wilderness created by ANILCA. It is managed by the Forest Service, but is closed to mineral entry. The St. Lazaria National Wildlife Refuge, located on a small island south of Kruzof Island, is managed by the Fish and Wildlife Service and is also closed to mineral entry. A small parcel of land north of Sitka is included within an enacted Municipal watershed classification (PL 78-262)

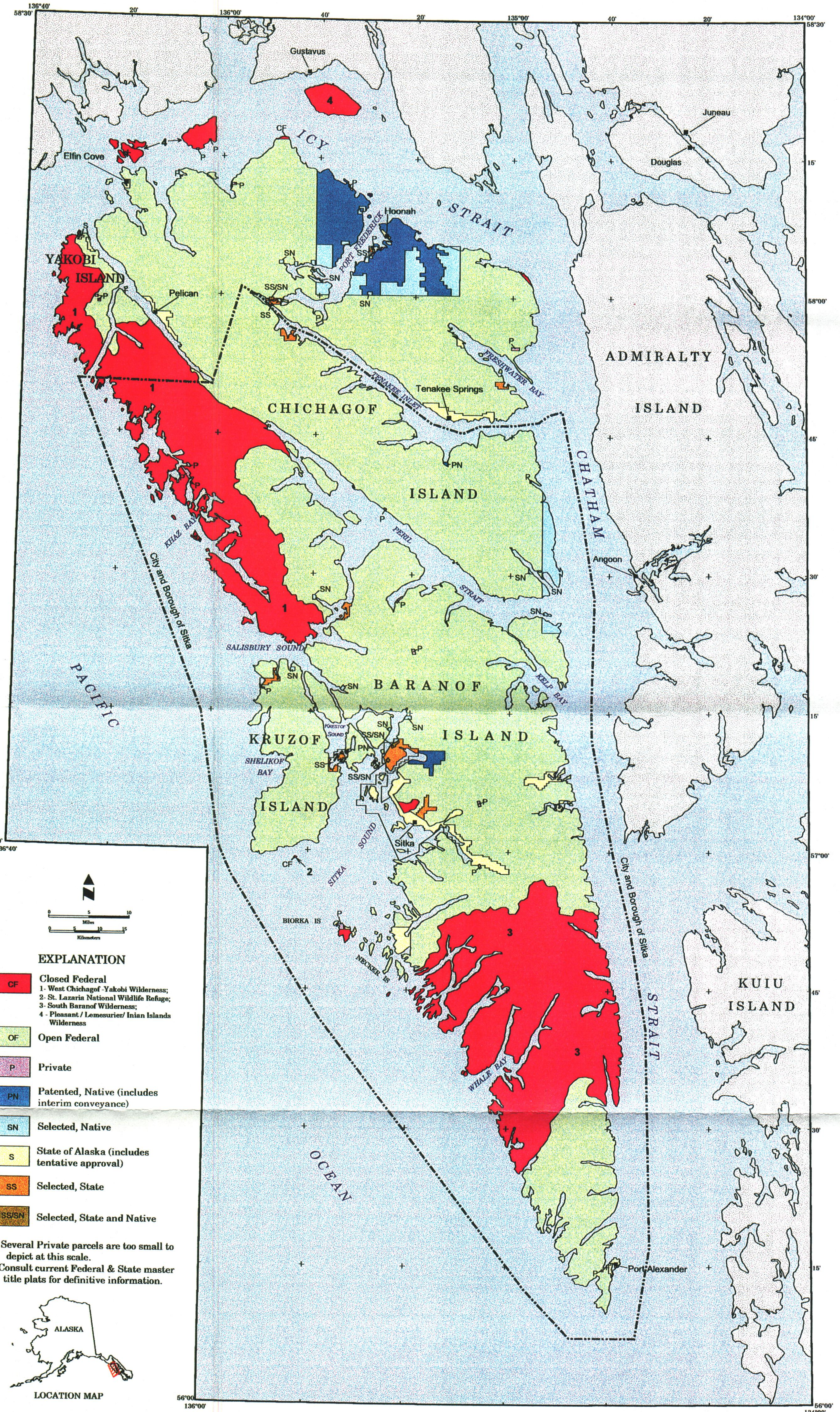


Figure 2. - Generalized land status map (Maas and others, 1996)

that precludes mineral entry. Several lakes on the east side of Baranof Island, including Baranof, Kasnyku, Carbon, Antipatr, Deer, and Betty Lakes, have been withdrawn by the State of Alaska as potential power sites. This classification does not preclude mineral entry, but it may place specific restrictions on mining-related activities.

A large part of Chichagof Island is managed by the Forest Service and is open to mineral location and development. However, significant acreage has been designated as LUD II (Land Use Designation II) by the Tongass Timber Reform Act (1990) and subsequent updates resulting from the Tongass Land Management Plan (1996). This designation restricts certain activities and provides for the area to be managed in a roadless state. Roads supporting mineral exploration and development activities in LUD II designated areas are allowed as specifically authorized uses.

The West Chichagof-Yakobi Wilderness occupies 265,529 acres on West Chichagof and Yakobi Islands, and is closed to mineral location and development. The newly created Pleasant-Inian-Lemesurier Islands Wilderness is also closed to mineral entry.

The Huna Totem Village Corporation (Native village corporation for Hoonah) owns a large tract of land on northeastern Chichagof Island, centered around the town of Hoonah. Mineral rights on this native corporation land are managed by Sealaska Corporation, the regional Native corporation for southeast Alaska. Sealaska also holds title to several parcels of subsurface estate in the same vicinity. Several parcels in this area are currently in selection status. The Shee-Atika Corporation (Native village corporation for Sitka) owns land near the Sitka airport as well as a parcel near Katlian Bay. The Kootznahoo Corporation (Native village corporation for Angoon) has selected land along Chatham Strait from Basket Bay south to Point Thatcher. Most Native corporation lands are available for mineral exploration and development as long as this use does not conflict with traditional, cultural, and subsistence uses. Lease arrangements must be made with the appropriate Native corporations prior to any activity.

State and Municipal land is found adjacent to Sitka, Tenakee Springs, Pelican, Elfin Cove, Baranof, and Port Alexander. Other small conveyances are scattered throughout the study area. The City and Borough of Sitka developed a draft comprehensive plan for lands within its jurisdiction in February, 1995. A general provision affecting the mining industry states, "any uses that can potentially degrade the natural habitat will be reviewed and monitored on a case-by-case basis (City and Borough of Sitka, 1995)." Users are encouraged to provide information to the Borough early in the permitting process.

Active and patented mining claims are present within the study area. Patented claims are present in the following locations: Lemesurier Island, Bohemia Basin, Kimshan Cove (Hirst-Chichagof Mine), Klag Bay (Chichagof Mine), Iyoukeen Cove (Kaiser Gypsum Mine), Rodman Bay and southeast of the head of Rodman Bay, Silver Bay (Stewart Mine), and Pande Basin. Ownership information for the patented claims within the City and Borough of Sitka boundaries can be obtained from the assessors office in Sitka. Records for unpatented, active claims are kept by the BLM and are available from the BLM offices in Anchorage and Juneau as well as from the Forest Service offices in Sitka and Juneau.

Private parcels are scattered throughout the study area, but most are too small to depict at the scale of Figure 2. Consult the Forest Service, BLM or State of Alaska to obtain more precise, up-to-date information on these parcels.

ACKNOWLEDGMENTS

A number of individuals provided assistance in field work and in compiling this report. Their efforts are gratefully acknowledged. The authors were assisted in locating, mapping, and sampling properties by Joseph Kurtak, BLM geologist, stationed in Anchorage, Alaska; Shirley Mercer, office automation specialist with the BLM in Juneau; and Sue Karl, a USGS geologist stationed in Anchorage, Alaska. Edward Gensler, environmental engineer with the BLM in Juneau, provided the analysis of potential conflicts between land use and resource development. Jerry Kouzes, BLM cartographic technician from Anchorage, Alaska, and Shirley Mercer drafted the figures presented in this report. Geographical Information System support was provided by TransPacific Computing, Juneau. John Kato acted as supervisor, overseeing the initiation of the study project in 1994. This role was assumed by Roger Baer in 1995.

The authors extend thanks to the Forest Service for the use of their extensive communications network established in the area. Ron Baer, Forest Service, Sitka, contributed minerals information that was not otherwise available. Superior accommodations and logistical support were provided by Jake Yearty, skipper of the M/V Ocean Ranger and by Gary McWilliams, skipper of the M/V Hyak. Coastal Helicopters and Ward Air of Juneau and Mountain Aviation of Sitka provided reliable air service. Personnel from the Forest Service's Hoonah Ranger Station provided boat and vehicle transportation to road networks outside of the main Hoonah road system.

Several individuals provided mineral information and access to their claims. Their assistance and cooperation improved the comprehensive nature of this study. Thanks are extended to Neil McKinnon, Bob Craig, Arne Johnson, John and Kay Burgess, and Robert DeArmond.

PREVIOUS STUDIES

There have been several geologic and mineral resource assessments conducted in the Chichagof and Baranof Islands area since the original discoveries of gold-bearing quartz veins near Sitka in 1871 (Fig. 3). A list of publications is presented in the bibliography of this report (p. 133). The following is a description of the more significant work completed in the study area.

Wright and Wright (1905, 1906) prepared the first summaries of mining developments in the Sitka Mining District in 1904 and 1905. Several other USGS workers compiled annual summaries of mineral activity in Alaska that contain a review of the Sitka Mining District. These include: Wright (1906, 1907a, 1908a, 1909), Knopf (1910, 1911), Brooks (1911a, 1911b, 1912, 1913, 1914, 1915, 1916, 1918,

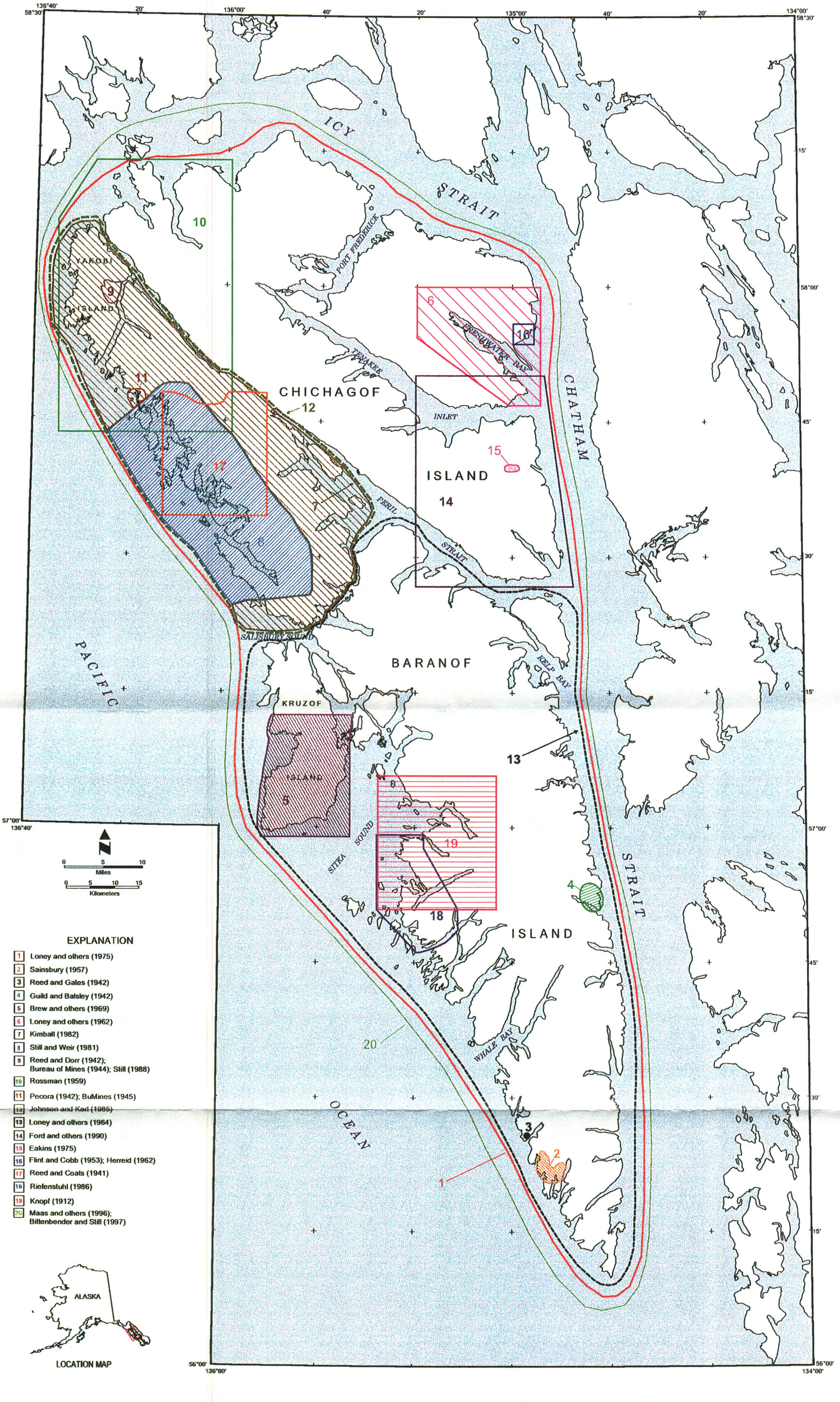


Figure 3. - Location and extent of selected geologic maps and previous study areas (Maas and others, 1996).

1923, 1925), Burchard (1914, 1920), Chapin (1916), Martin (1919, 1920), Brooks and Martin (1921), Brooks and Capps (1924), Buddington (1925, 1926), Moffit (1927), and Smith (1926, 1929, 1930a, 1930b, 1932, 1933, 1934a, 1934b, 1936, 1937a, 1937b, 1938, 1941, 1942a, 1942c, 1942e).

Examinations of the geology, mineral deposits, and geochemistry of various parts of the study area have been completed by USGS workers. The first extensive study of the Sitka Mining District was completed by Knopf (1912). Overbeck (1919) produced a compilation of the geology and mineral resources of the west coast of Chichagof Island. Reed and Coats (1941) summarized the geology and ore deposits of the Chichagof Mining District. Pecora (1942) described the nickel-copper deposits on the west coast of Chichagof Island, near Mirror Harbor. Rossman (1959) produced a report detailing the geology and ore deposits of Northwestern Chichagof Island. Loney, Condon, and Dutro produced a geologic map of the Freshwater Bay Area, Chichagof Island (Loney and others, 1962). Loney, Berg, Pomeroy, and Brew compiled a reconnaissance geologic map of Chichagof and Northwestern Baranof Islands (Loney and others, 1963). Berg and Hinckley (1963) produced a reconnaissance geologic map of Northern Baranof Island. Loney, Brew, Muffler, and Pomeroy produced a reconnaissance geologic map of Chichagof, Baranof, and Kruzof islands (Loney and others, 1975). Decker (1980a) produced a geologic map of western Chichagof Island. Johnson and Karl (1982) generated a reconnaissance geologic map of the Western Chichagof and Yakobi Islands Wilderness Area and a final geologic map in 1985 (Johnson and Karl, 1985). The most recent geologic map of Southeastern Alaska is by Gehrels and Berg (1992), and includes the Chichagof and Baranof Islands study area.

Several USGS reports detail the geology and mineral deposits of the West Chichagof/Yakobi Islands Wilderness Area. Analytical results from various types of samples taken in the wilderness area were compiled in 1980 (Hessin and others, 1980). A series of geochemical reports were produced in 1982 showing the distribution of individual elements from stream sediment samples, water samples, and heavy-mineral concentrate samples taken within the wilderness area (Hessin, 1982; Hessin and Crenshaw, 1982; Hessin and others, 1982a-f; Hessin and Day, 1982; Hessin and Hoffman, 1982). Johnson and Elliott (1984a-k) produced geochemical maps of individual elements from bedrock samples taken in the wilderness area in 1984. Johnson, Kimball, and Still compiled a report on the mineral resource potential of the wilderness area in 1982 (Johnson and others, 1982).

More site-specific work by USGS workers in the Chichagof-Baranof study area include reports on: Iyoukeen Cove (Burchard, 1920a; Stewart, 1932b; Twenhofel and others, 1949; Flint and Cobb, 1953); Red Bluff Bay (Guild and Balsley, 1942; Kennedy and Walton, 1946a); Bohemia Basin (Reed and Dorr, 1942; Kennedy and Walton, 1946b); Mirror Harbor (Kennedy and Walton, 1946a); Snipe Bay (Reed and Gates, 1942); Redfish Bay (Sainsbury, 1957); and the Apex El Nido area (Twenhofel, 1949).

E. H. Cobb of the USGS compiled metallic mineral resource maps for the Juneau, Mt. Fairweather, Port Alexander, and Sitka 1:250,000-scale quadrangles (Cobb, 1972a-d). He also wrote summaries of references to the mineral occurrences in the same quadrangles (Cobb. 1978a-d). H. C. Berg completed a report detailing the regional geology, metallogenesis, and mineral resources of

Southeastern Alaska, by quadrangle (Berg, 1984). Brew, Drew, Schmidt, Root, and Huber developed a methodology to estimate the undiscovered locatable mineral resources throughout the Tongass National Forest (Brew and others, 1991). The report discusses a number of mineral deposits in the current study area. Goldfarb and Miller (1997) edited a compilation of papers on the mineral deposits of Alaska that also mentions a number deposits in the Chichagof-Baranof study area.

Several reports pertaining to the mineral deposits in the area have been prepared by Bureau of Mines workers. One report describes the status of mining in the Chichagof Mining District (Thorne, 1967). Mineral assessment reports address the west part of Western Chichagof Island (Still and Weir, 1981) as well as adjacent parts of Chichagof Island and Yakobi Island (Kimball, 1982). A geochemical report describes the distribution of gold, platinum, palladium, and silver in parts of Bohemia Basin (Still, 1988).

Site-specific Bureau of Mines publications on mines in the area include reports on the Chichagof Mine (Humphrey, 1936a; Metz, 1978); the Hirst-Chichagof Mine (Humphrey, 1936b, 1938; Metz, 1978); Yakobi Island nickel (or Bohemia Basin; U. S. Bureau of Mines, 1944; Kennedy, 1944; East and others, 1948); Mirror Harbor nickel deposits (U. S. Bureau of Mines, 1944b; Traver, 1948); Snipe Bay nickel-cobalt deposits (Foley, 1989); Slocum Arm molybdenum (Thorne, 1952); diamond drilling of the Gypsum-Camel (or Camel Gypsum) prospect at Iyoukeen Cove (Jermain and Rutledge, 1952); and the Lucky Devil claims (or Mt. Baker; Thorne, 1960).

Geologists and mining engineers from the Alaska Territorial Department of Mines and its successor, the Division of Mines and Minerals, reported on specific mineral properties and mineralized areas in the Chichagof-Baranof area between 1918 and 1968. These reports are listed in Table 1, along with other reports published by the two agencies.

Table 1. Alaska Territorial Dept. of Mines and Division of Mines and Minerals reports

Author	Property Name		Date
	Author's	This report	
Ballard	Slocum Arm Molybdenite	Slocum Arm (P95)	1968
Bush and Kenly	Lucky Devil mining claims	Mt. Baker (P44)	1962
Gustafson	Camel Gypsum	same (P20)	1946
Herreid	Camel Gypsum/Pacific Gypsum	same (P20)	1962
Holdsworth and Williams	Red Bluff Bay	same (P138)	1953
Laney	Alaska Nickel Mines	Mirror Harbor (P45)	1942
McPhar Geophysics Ltd.	Chichagof area		1961
Racey	New Chichagof Mining Syndicate	same (P49)	1938

Author	Property Name		Date
	Author's	This report	
Roehm	Lucky Strike	Koby (P31)	1936f
Roehm	Alaska Gold Digger group	American Gold Company (P69)	1936c
Roehm	Chichagof Creek group	Helen Chichagof (P76)	1936b
Roehm	Goldwin group	same (P13)	1936d
Roehm	New Chichagof Mining Syndicate	same (P49)	1936e
Roehm	Mike Wall prospect	Woll (P82)	1936g
Roehm	Slocum-Grunter prospect	Cobol Mine (P91)	1936h
Roehm	Green Lake Group	same (P128)	1938a
Roehm	Halleck Island	same (P109)	1938b
Roehm	Krestof Group	same (P107)	1938c
Roehm	Little Blonde & High Grade Groups	same (106)	1938d
Roehm	Bohemia Tunnel	Bohemia Basin (P11)	1938e
Roehm	Lucky Chance Mine	same (P135)	1940
Ryason	Mt. Baker Copper prospect	same (P44)	1961
Smith	Doolth Peninsula		1924
Stewart	Mineral Resources - Chichagof Is.		1931
Vevelstad	Yakobi Island drill logs	Bohemia Basin (P11)	unknow n
Williams	El Nido Mine	Apex El Nido (P17)	1955
Winchell	Alaska Nickel Mines	Mirror Harbor (P45)	1918

Several unpublished reports and theses on mineral locations in the area have been completed and include: an M.S. thesis on wall-rock alteration at the Chichagof and Hirst-Chichagof Mines (Dadoly, 1987); reports on the Hirst-Chichagof Mining Company (Fiedler, 1941b; Kazee, 1941); New Chichagof Mining Syndicate (Nelson, 1932); an M.S. thesis on the Takanis copper-nickel-cobalt prospect, Bohemia Basin (Jirik, 1982); Bohemia Basin nickel (Ricker, 1941); Alaska Nickel Mines/Mirror Harbor (Flemming, 1917; Rogers, 1917; Healy, 1918; Jackson, 1918; Sanford, 1942; Traver, 1944); Apex El Nido Mine (Holmes, 1941); Mt. Baker copper prospect (Moerlein, 1971); report on several Chichagof Island prospects (Nelson, 1931a); Cobol Mine (Williams, 1928; Ship and Shipman, 1938); molybdenum ore dressing at Cobol (Wells, 1952); E. B. Sparling's Haywire Group (or Apex and El Nido; Decker, 1931);

Helen (Chichagof) Group (Nelson, 1932); Slim and Jim copper prospect (Storm, 1917); a Ph.D. thesis on the Cretaceous subduction complex on Western Chichagof Island (Decker, 1980b); an M.S. thesis on the geology of the Goddard Hot Springs area (Riefenstuhl, 1983).

MINING HISTORY/PRODUCTION

The history of mining activity in the Chichagof-Baranof area extends from the early 1870's to the present. Mineral production came predominantly from the Chichagof and Hirst-Chichagof Mines on the west side of Chichagof Island, but other sites recorded production as well. A summary of mine production in the study area is presented in Table 2.

The earliest mining activity in the study area took place on the Indian River near Sitka in 1871 (DeArmond, 1997a). No significant developments followed in the Indian River area, but additional discoveries were made in 1872 at the Stewart property in Silver Bay, southeast of Sitka. By 1879, a 10-stamp mill was erected on the Stewart property (Knopf, 1912). About the same time a 5-stamp mill was erected at the Lucky Chance Mine, also in the Silver Bay area, although exact details of this mine's development are unknown (Roehm, 1940). The gold rush to Juneau, which began in 1880-81, prompted an exodus from Silver Bay, and mining activity slowed considerably in the area.

Early prospecting also took place in the vicinity of Yakobi Island. Gold was discovered at the Bon Tara Mine near the eastern tip of the island, in 1887. About $1,100 worth of gold (55 oz) was recovered from the property (Overbeck, 1919). Yakobi Island was also the site of the Bohemia Basin nickel-copper-cobalt discovery in 1919 (Reed and Dorr, 1942). The area was drilled extensively during World War II (U.S. Bureau of Mines, 1944a; Kennedy and Walton, 1946b). The International Nickel Company (INCO) continued drilling the deposit in the 1950's (Kimball, 1982). Later, Inspiration Development Company completed 29,000 feet of drilling at Bohemia Basin between 1972 and 1979. They established a resource of about 24 million tons of mineralized rock (Thornsberry and DeWilliam, 1982).

Before the discovery of the larger Bohemia Basin deposit, a copper-nickel-cobalt deposit was found at Mirror Harbor on the northwest side of Chichagof Island in 1911 (Overbeck, 1919). Mirror Harbor was also drilled by the Bureau of Minesas part of its strategic minerals program during World War II (U.S. Bureau of Mines, 1944b).

The discovery of gold at Klag Bay in 1905 (Knopf, 1912) was the first chapter on what would become the principal gold-producing region of the study area. A quartz outcrop found at the Degroff Mine (later known as the Chichagof Mine) was so rich that ore was sacked and shipped directly to the Tacoma Smelter in Washington State (Still and Weir, 1981). The Golden Gate Mine was discovered in 1905 along the same fault that hosted mineralized rock at the Degroff Mine (Knopf, 1912). The Jumbo Mine was discovered in 1909, and 1,450 oz of gold were produced from a high-grade pocket found near the beach in Klag Bay (Still and Weir, 1981). This property was operated separately from the Degroff and Golden Gate Mines. A power plant was installed at Sister Lake in 1909 to provide power for the Degroff and Golden Gate properties. Operations at these two mines were consolidated in 1911 under the control of the Chichagof Mining Company (Reed and Coats, 1941). The consolidated mine operated almost continuously until 1942, and produced over 600,000 tons of ore, containing nearly 660,000 oz of gold and 195,000 oz of silver. Intermittent cleanup operations at the mine and reworking of old tailings continued until 1973 (Still and Weir, 1981).

The Alaska Chichagof Mine, also located in the Klag Bay area, was discovered in 1928, and incorporated into the Alaska Chichagof Mining Company by 1931. A test shipment was made in 1932. The Chichagof Mining Company optioned the property in 1936, and their records indicate that 660 oz of gold had been recovered from the mine (Reed and Coats, 1941; Still and Weir, 1981).

The Hirst-Chichagof Mine was discovered in 1905 at Kimshan Cove, north of Klag Bay. By 1918 the Hirst-Chichagof Mining Company was formed (Reed and Coats, 1941). The company began mining in 1922, and continued until 1943. The mine produced approximately 131,000 oz of gold and 33,000 oz of silver from over 140,000 tons of ore (Still and Weir, 1981).

The gold-bearing quartz veins at the Apex and El Nido properties turned out to be the next most productive after the Chichagof area mines. The veins were discovered west of Pelican by J. Cann in 1919 and 1920. The two mines that were developed produced over 17,000 oz of gold and 2,400 oz of silver during intermittent operation from 1924-1939. The majority of production came from the Apex workings (Holmes, 1941).

Other discoveries on the west side of Chichagof Island were less productive. The Mine Mountain veins were discovered in 1921 (Reed and Coats, 1941). Production between 1933 and 1935 amounted to about $3,500 worth of gold (about 100-150 oz; Kimball, 1982). The Koby gold prospect was discovered in 1933 by J. Koby (Roehm, 1936f). Most development work was completed by 1936, but no production was reported from the prospect (Kimball, 1982).

Gold and base metals were not the only products mined in the Chichagof-Baranof area. The gypsum deposit of the Pacific Coast Gypsum Company was discovered at Iyoukeen Cove in 1902. Active mining commenced in 1906 and continued intermittently until 1923 (Flint and Cobb, 1953). Nearly 500,000 tons of gypsum were removed from the site (Stewart, 1932b).

Several companies have recently explored deposits in the district. Sites receiving attention include the Chichagof, Hirst-Chichagof, Apex El Nido, Warm Springs Bay, and Silver Bay areas.

Table 2. Summary of mine production

Mine (Plate 1 #)	Activity Years	Gold (oz.)	Silver (oz.)	Gypsum, tons
Bon Tara (P12)	1887	55		
Apex El Nido (P17)	1924-28, 1934-35, 1937-39	17,000	2,400	
Mine Mountain (P34)	1933-35	100-150		
Jumbo (P70)	1909	1,450		
Chichagof (P75)	1912-1942	659,955	195,000	
Hirst-Chichagof (P60)	1922-1943	131,000	33,000	
Alaska Chichagof (P71)	1936	660		
Cobol (P91)	1926-1959	100		
Iyoukeen Cove (P21)	1906-23			500,000
TOTAL PRODUCTION		810,370	230,400	500,000

GENERAL GEOLOGY

The Chichagof-Baranof study area is underlain by rocks belonging to three tectonostratigraphic terranes (Berg and others, 1978). From west to east these are the 1) Chugach, 2) Wrangellia, and 3) Alexander terranes (Fig. 4).

The Chugach terrane extends from Baranof Island around the Gulf of Alaska to Kodiak Island (Silberling and others, 1992). It lies outboard of the Wrangellia and Alexander terranes and makes up most of Baranof Island and the west side of Chichagof Island. On Chichagof and northern Baranof Island the terrane is separated from the Wrangellia and Alexander terranes to the northeast by the west-vergent Border Ranges thrust fault and the Peril Strait right-lateral, strike-slip fault, respectively. East of Baranof Island the Chatham Strait regional, strike-slip fault separates the Chugach terrane from the Alexander terrane (Gehrels and Berg, 1994).

Chugach terrane rocks in the study area are made up of marine sedimentary and volcanic rocks that have been interpreted as a deformed flysch and melange sequence that forms a continental margin accretionary complex (Decker and others, 1979; Plafker and others, 1976; Plafker and others, 1977). Dominant units are the Cretaceous Kelp Bay Group that forms the melange and the Cretaceous Sitka Graywacke flysch sequence. The Kelp Bay

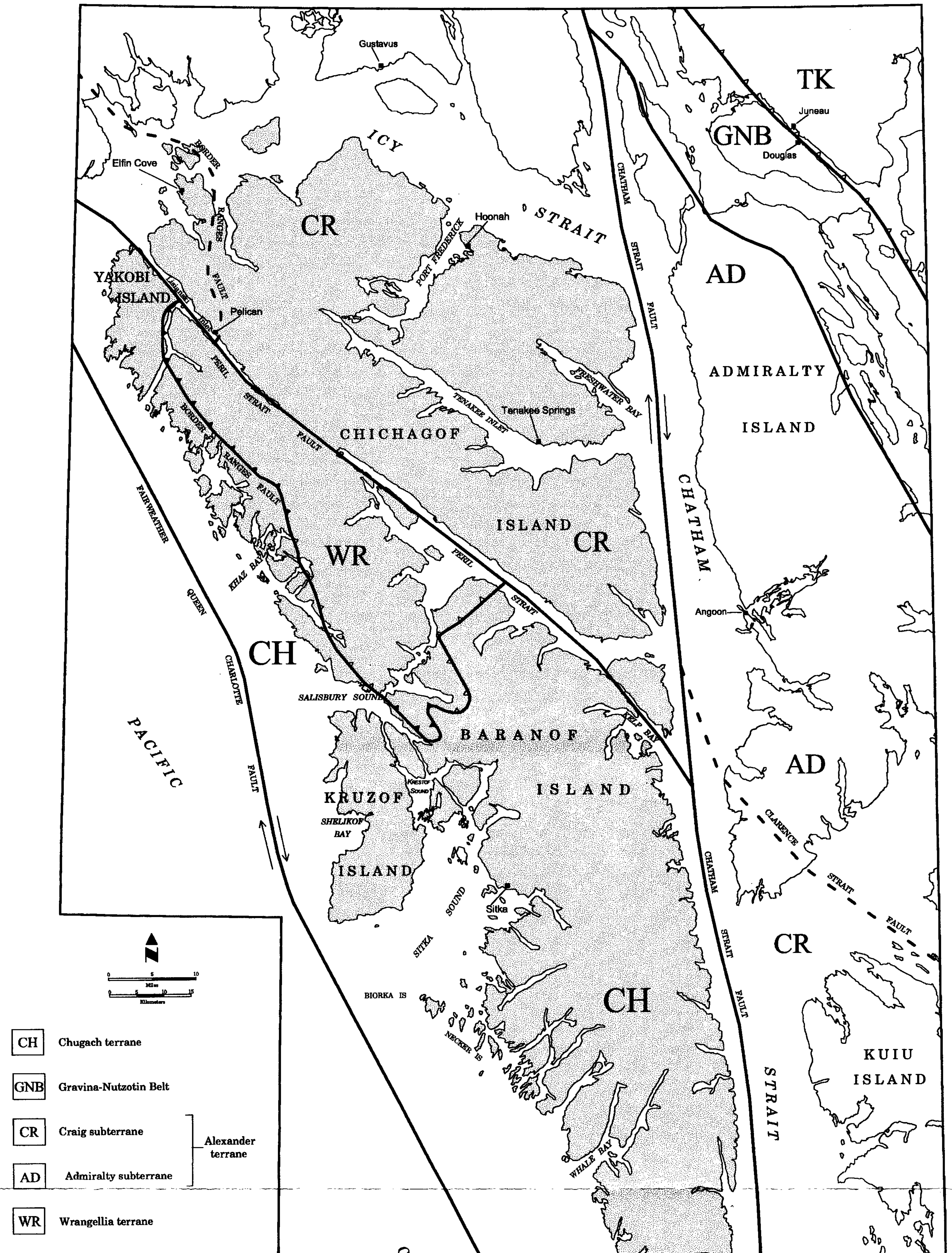


Figure 4. - Tectonostratigraphic terranes of the Chichagof - Baranof study area (from Monger and Berg, 1987).

Group west of the Border Ranges Fault includes the Pinnacle Peak Phyllite, the Waterfall Greenstone, and metavolcanic and metasedimentary rocks of the Khaz formation (Johnson and Karl, 1985; Karl and others, 1982). These units have been incised by Tertiary high-angle faults that include the northwest trending Sitka fault zone (Loney and others, 1975, Brew, 1997). These faults have been instrumental in the localization of gold-bearing quartz veins in the Klag Bay and Silver Bay areas.

The Wrangellia terrane extends along the northwest margin of North America from Vancouver Island to south-central Alaska (Jones and others, 1977; Silberling and others, 1992). Within the study area, Wrangellia terrane rocks are located on southwestern Chichagof Island and northwestern Baranof Island. They are separated from the Alexander terrane on the northeast by the Peril Strait fault. The Border Ranges fault separates Wrangellia from the Chugach terrane to the west and south (Gehrels and Berg, 1994).

The oldest Wrangellia terrane rocks found in the study area are late Paleozoic in age (Berg and others, 1978; Johnson and Karl, 1985). These rocks consist of a sequence of marine sedimentary and volcanic rocks. They are overlain by the Triassic Goon Dip Greenstone and Whitestripe Marble (Loney and others, 1975). These two units have been correlated with the Late Triassic Nickolai Greenstone and Chitistone Limestone of the Wrangellia terrane in the Wrangell Mountains (Plafker and others, 1976). Minor Jurassic sedimentary rocks are also included in the Wrangellia terrane as well as a Jurassic tonalite (Berg and others, 1978; Loney and others, 1975). The late Paleozoic Wrangellian depositional environment has been interpreted as an oceanic volcanic arc followed by rifting in Triassic time (Gehrels and Berg, 1988, 1994).

The Alexander terrane hosts the oldest rocks in the study area. The terrane is exposed throughout southeast Alaska and extends northward into southern Alaska (Silberling and others, 1992). The terrane has been divided into two subterranes, of which the Craig subterrane is found within the study area. It is located northeast of Peril Strait and Lisianski Inlet on the northeast side of Chichagof Island. Within the study area, the Alexander terrane is separated on the southwest from the Wrangellia and Chugach terranes by the Peril Strait fault and the Border Ranges fault. East of Chichagof Island, the Chatham Strait fault separates the Craig and Admiralty subterranes of the Alexander terrane (Silberling and others, 1992; Gehrels and Berg, 1994).

The Alexander terrane consists of Paleozoic sedimentary, volcanic, and intrusive rocks. Bedded units of the terrane include clastic sedimentary rocks of the Silurian Point Augusta Formation, the Silurian-Devonian Kennel Creek Limestone, the clastic and overlying limestone members of the Middle and Upper Devonian Cedar Cove Formation, the Upper Devonian Freshwater Bay andesitic and basaltic volcanics, and the Mississippian Iyoukeen Formation limestones (Loney and others, 1975). Intrusive rocks include the Silurian or older Sitkoh Bay alkalic suite (Ford and others, 1990). Alexander terrane rocks have been interpreted as evolving in an oceanic volcanic arc environment followed by a more stable, shallow marine setting (Gehrels and Saleeby, 1987; Gehrels and Berg, 1994).

Several plutonic belts have been distinguished in southeast Alaska, of which two occur in the Chichagof-Baranof study area: the "Fairweather-

Baranof" belt and the "Muir-Chichagof" belt (Brew and Morrell, 1983; Brew, 1994). The Fairweather-Baranof belt includes early to mid-Tertiary granodiorites, tonalites, trondhjemites, and gabbros on Baranof Island, on the west side of Chichagof Island, and on Yakobi Island. The Tertiary gabbroic rocks at the head of Tenakee Inlet are also included in this belt. Several outcrops of Mesozoic ultramafic rocks, particularly those at Red Bluff Bay and between Red Bluff Bay and Silver Bay have been prospected mainly for chromium and are included in this belt (Brew and Morrell, 1983; Loney and others, 1975).

Brew and Morrell's (1983) Muir-Chichagof belt includes the Cretaceous granodiorites, tonalites, diorites, and gabbros that crop out in an area from southwest of Peril Strait and Lisianski Inlet to northwest of the head of Tenakee Inlet. Scattered outcrops of granodiorite, quartz monzonite, and diorite northeast of this area are also included in the Muir-Chichagof belt (Brew and Morrell, 1983; Loney and others, 1975). The Silurian or older Sitkoh Bay alkalic suite (Ford and others, 1990) defines a third belt on northeast Chichagof Island, which was intruded into the Alexander terrane prior to accretion.

The Quaternary volcanic field at Mount Edgecumbe on Kruzof Island contains basalts, andesites, and dacites and represents the youngest lithified rocks in the study area (Brew and others, 1969; Brew, 1994). Volcanic activity ceased with explosive eruptions dated at about 5,000 years before present (Riehle and Brew, 1984).

Quaternary surficial sedimentary deposits are found along most drainages. These include glacial, glaciofluvial, alluvial, and colluvial deposits.

The structural grain of the Chichagof-Baranof study area is generally oriented northwest-southeast. This includes terranes and terrane boundaries, regional fault patterns, outcrop patterns of both bedded and intrusive rocks, bedding, and metamorphic foliation. In detail, the structural patterns of the area are complex and include areas disrupted by multiple episodes of folding and faulting. Intense folding ended by early Tertiary, but movement on faults in the area continues to the present (Loney and others, 1975; Gehrels and Berg, 1994).

Metamorphic belts have been defined across southeast Alaska by Brew and others (1992) and by Dusel-Bacon (1994). The metamorphism in the Chichagof-Baranof study area is generally related to accretionary tectonic events as well as to local intrusive activity. The degree of metamorphism in the area ranges from albite-epidote hornfels to possibly pyroxene hornfels facies contact metamorphic grades and from prehnite-pumpellyite to greenschist facies regional metamorphic grades (Brew and others, 1992; Dusel-Bacon, 1994).

LAND USE AND RESOURCE ISSUES

Land use and resource issues have been examined with respect to the 13 KMDA's in the Chichagof-Baranof area. The land use designations are those employed by the Forest Service, which is the dominant Federal land management agency in the study area. Various sources were used to determine land use designations including the 1996 Tongass Land

Management Plan (TLMP), a January 21, 1998 draft copy of a 1997 Forest Plan map, and Alaska Department of Fish and Game information on anadromous fish streams. A discussion of the land use designations within each KMDA and potential conflicts between land use designations and resource development are presented in each of the KMDA descriptions in the "Known Mineral Deposit Areas" section. The location and physical extent of each KMDA was compared to the boundaries of the land use designations listed below (A-O). In many cases a visual estimate was made to determine the amount of land covered by various land use designations in each KMDA.

A rating system is provided to estimate the scope of potential conflict between land use designations and resource development. Information used to determine the ratings includes the type and size of the deposits within the KMDA's and the potential mining method if developed, as well as possible access options for development. Ratings of 'none' through '3' are described following Table 3 below.

Below is a description of the various land use designations employed by the Forest Service. A table summarizing the land use designations within each KMDA and a rating of potential conflicts is also provided (Table 3).

A - The 'Wilderness' assessment was made from information provided on the 1997 Forest Plan map. This designation is characterized by extensive unmodified natural environments, and is withdrawn from all mineral entry. An act of Congress is required to withdraw areas from wilderness status before mineral development would be permitted. An exception to the restriction on mineral development is the existence of claims with valid existing rights that were located prior to the designation of wilderness. In this case access and mineral development would be allowed. Only the Doolth Mountain KMDA has claims with valid existing rights within a wilderness area.

B - The 'Land Use Designation II (LUD II)' assessment was made from information provided on the 1997 Forest Plan map. This designation is managed in a roadless state to preserve wildland character, and is open to locatable mineral entry with potentially significant restrictions.

C - No KMDA's encompassed any 'Special Interest Areas.'

D - No KMDA's encompassed any 'Wild & Scenic River Candidates.'

E -The 'Enacted Municipal Watershed' assessment was made from information provided on the 1997 Forest Plan map. This designation is mandated for Municipal water supply purposes. Municipal watersheds are closed to all mineral entry. Silver Bay was the only KMDA to encompass enacted Municipal watershed.

F - No KMDA's encompassed any 'Experimental Forest.'

G -The 'Deer Hunting' assessment was made from the 1996 Community Deer Harvest map of TLMP. This resource mapping datum is based on average harvest levels of Sitka black-tail deer for the years of 1987 - 1994. The location and physical extent of the KMDA was compared to known average harvest levels within hunting units or parts of hunting units encompassed by the KMDA. 'Low' deer harvest levels were attributed to areas averaging less than 100 deer per year, 'moderate' as averaging 100 to 500 per year, and 'high' harvest levels as averaging over 500 per year.

H - The 'Anadromous Fish Streams' assessment was made from information provided by the Alaska Department of Fish and Game, 1997. This resource mapping datum identifies all streams supporting any anadromous fish. Anadromous streams outside KMDA boundaries that may be affected by mineral development are also considered.

I - The 'Recreation' assessment was made from the 1996 Recreation Places Inventory map from TLMP. This designation includes both primitive and semi-primitive recreation. The areas are managed for a wide variety of recreation activities in a predominantly natural setting. They are considered particularly attractive to users engaged in recreation activities and receive recurring use. They include beaches, streamside or roadside areas, trail corridors or other features. A semi-primitive designation allows road-building. Recreation areas are open to mineral entry.

J - The 'Recreation Developments' assessment was made from the 1996 Recreation Places Inventory map from TLMP. Recreation developments include shelters, observation sites, campgrounds, cabins, and picnic sites. These developments are withdrawn from all mineral entry.

K - The 'Tourism Areas' assessment was made from the 1996 Recreation Places Inventory map from TLMP. Tourism areas are recreation areas important for commercial recreation and tourism, which are of value to the local and regional economy. They include areas used by outfitters and guides, resorts, charter boat operations, and bus lines as well as areas identified as attractions in tourism brochures.

L - The 'Timber Harvest' assessment was made from information provided on the 1997 Forest Plan map. This designation marks areas for timber production and is open to mineral development. Only the Slocum Arm KMDA includes any 'Timber Harvest' designated areas.

M - The 'Minerals Prescription Candidate' assessment was made from information provided on the 1997 Forest Plan map. This designation encompasses areas managed to encourage and facilitate locatable mineral exploration and development in an environmentally sound manner. The Lisianski and Bohemia Basin KMDA's were the only ones to include minerals prescription areas.

N - The 'State Land' assessment was made from information provided on the 1997 Forest Plan map. State land includes all intertidal lands. All the KMDA's encompass intertidal lands except for the Hill and Slocum Arm areas. In the Doolth Mountain area, significant resources are situated on State land in the intertidal zone. Intertidal lands are open to mineral entry. The Silver Bay and Warm Springs Bay KMDA's contain blocks of State land outside the intertidal zone.

O - The 'Private Land' assessment was made from information provided on the 1997 Forest Plan map as well as from master title plats and individual maps of mineral patent lands. Private land locations having the most significance for mineral development are the patented mining claims. The KMDA's with patented mining claims are Doolth Mountain, Bohemia Basin, and Silver Bay. The Silver Bay and Warm Springs Bay KMDA's include private land, other than patented mining claims. Mineral development is allowed on private land.

Table 3. Summary of land use and resource issues for each KMDA

KNOWN MINERAL DEPOSIT AREAS	LAND USE / RESOURCE ISSUE														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
DOOLTH MOUNTAIN	3	-	-	-	-	-	1	3	1	-	2	-	-	3	3
WEST COAST GOLD	3	-	-	-	-	-	1	2	1	-	2	-	-	-	-
LISIANSKI	2	1	-	-	-	-	1	2	2	-	2	-	2	-	-
SILVER BAY	-	-	-	-	1	-	2	2	2	2	2	-	-	1	1
BOHEMIA BASIN	1	1	-	-	-	-	1	3	2	-	2	-	3	-	3
MIRROR HARBOR	3	-	-	-	-	-	1	1	2	1	2	-	-	1	-
SNIPE BAY	2	-	-	-	-	-	1	1	-	-	-	-	-	-	-
RED BLUFF	3	-	-	-	-	-	1	2	1	-	2	-	-	-	-
HILL PROSPECT	3	-	-	-	-	-	-	1	-	-	-	-	-	-	-
WARM SPRINGS BAY	-	-	-	-	-	-	1	1	3	-	3	-	-	1	2
SLOCUM ARM	3	-	-	-	-	-	1	-	-	-	-	-	1	-	-
MT. BAKER	3	-	-	-	-	-	1	2	1	-	2	-	-	-	-
MOUNT MURAVIEF	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-

Ratings of potential land use and resource issue conflicts:

(-) None-	No land use conflicts; no effect identified.
(1) Minor-	Land use conflicts possible, but unlikely to affect mineral development; a slight effect identified which may be easily mitigated.
(2) Moderate-	Land use designations affect some mineralized areas; any effect may be mitigated by site specific stipulations.
(3) Major-	Land use designations affect most prominently mineralized areas; a considerable effect is identified requiring extensive mitigation measures and/or relocation.

Issues A-O defined as follows:

A - Wilderness/Monument
B - Land Use Designation II (LUD II)
C - Special Interest Area
D - Wild & Scenic River Candidate
E - Enacted Municipal Watershed
F - Experimental Forest
G - Subsistence Deer Hunting
H - Anadromous Fish Streams
I - Recreation
J - Recreation Developments
K - Tourism Areas
L - Timber Harvest
M - Minerals Prescription Candidate
N - State Land
O - Private Land

KNOWN MINERAL DEPOSIT AREAS

Known mineral deposit areas (KMDA's), as used in this report, are areas with a concentration of mineral occurrences of a single type. The boundaries of the KMDA's were delineated using information derived from the current investigation as well as from past Bureau of Mines and USGS studies. The areas have been defined to facilitate a discussion of the mineral endowment in the Chichagof-Baranof study area. By limiting the KMDA's to a single deposit type, a more meaningful comparison can be made regarding the mineral development potentials within the study area. The format is designed to provide a comparative overview for land managers, who are responsible for mineral activities on Federal, State, Municipal, and Native lands.

Vein Gold

There are four KMDA's in the study area that are defined by fault controlled, low sulfide, vein gold deposits: 1) Doolth Mountain, 2) West Coast Gold, 3) Lisianski, and 4) Silver Bay. Gold-bearing quartz veins of the Doolth Mountain, West Coast Gold, and Silver Bay KMDA's are predominately hosted in Cretaceous Sitka Graywacke or rocks of the Cretaceous Kelp Bay Group. The veins of the Lisianski KMDA are hosted in metamorphosed Paleozoic or Mesozoic volcanic and sedimentary rocks and Jurassic or Cretaceous diorite or granodiorite (Loney and others, 1975). Plate 1 shows the location of these KMDA's. The Doolth Mountain, West Coast Gold, and Silver Bay quartz veins generally strike to the northwest, parallel to the regional structural grain. The Lisianski veins strike northeast to east, at a high angle to the northwesterly regional grain. $^{40}Ar/^{39}Ar$ data suggest that gold vein formation in all four KMDA's was the product of a short-lived Eocene thermal event (Taylor and others, 1994; Haeussler and others, 1995).

The Doolth Mountain KMDA accounts for almost all of the study area's precious metal production and almost all of the area's resources of 675,000 oz of gold and 195,000 oz of silver. It is one of the areas most likely to be developed because of the relatively high tonnages and grades of its calculated resources and because it is covered by patented claims that allow for mineral development.

Evidence suggests only a moderate potential for economic deposits to be developed in the West Coast Gold and Lisianski KMDA's. Prospects in the West Coast Gold area have good geologic potential, but are limited in overall development potential because of the wilderness land use designation that covers the area, which prohibits mineral development. The data generated to date for the Lisianski prospects suggest restricted tonnages and therefore limited potential.

Examination of the mineral occurrences in the Silver Bay area indicates a small likelihood of locating an economic deposit. Despite the numerous quartz veins in the area, the veins are discontinuous and contain very spotty values.

Wilderness designations have a significant impact on the vein gold development potential in the study area. Outside the private holdings, all of the Doolth Mountain and West Coast Gold KMDA's are designated as wilderness where mining is prohibited. About half of the Lisianski KMDA is wilderness. Thirty-nine patented mining claims in the Doolth Mountain area, which contain almost all the resources in the study area, are in-holdings (private property) within the wilderness and could conceivably be developed.

Doolth Mountain KMDA

Location / Access

A series of fault-controlled, vein gold deposits define the 5- by 6-mile Doolth Mountain KMDA, located 50 air miles north-northwest of Sitka on the west coast of Chichagof Island (Plate 1, KMDA no. 5). The area topography rises from sea level to the summit of Doolth Mountain at an elevation of 2,159 feet and ranges from flat lying, brushy, forested lowlands to cliffy, alpine areas. Klag Bay, Kimshan Cove, and Ogden Passage comprise the area waterways. Most of the area prospects are located at, or sufficiently close, to tidewater so that they can be easily accessed by foot. Waterways in the area can be accessed by float plane or boat from Sitka. Figures 5 and 6 show important mines, prospects, patented claims, and the general geology in the Doolth Mountain area.

History / Production

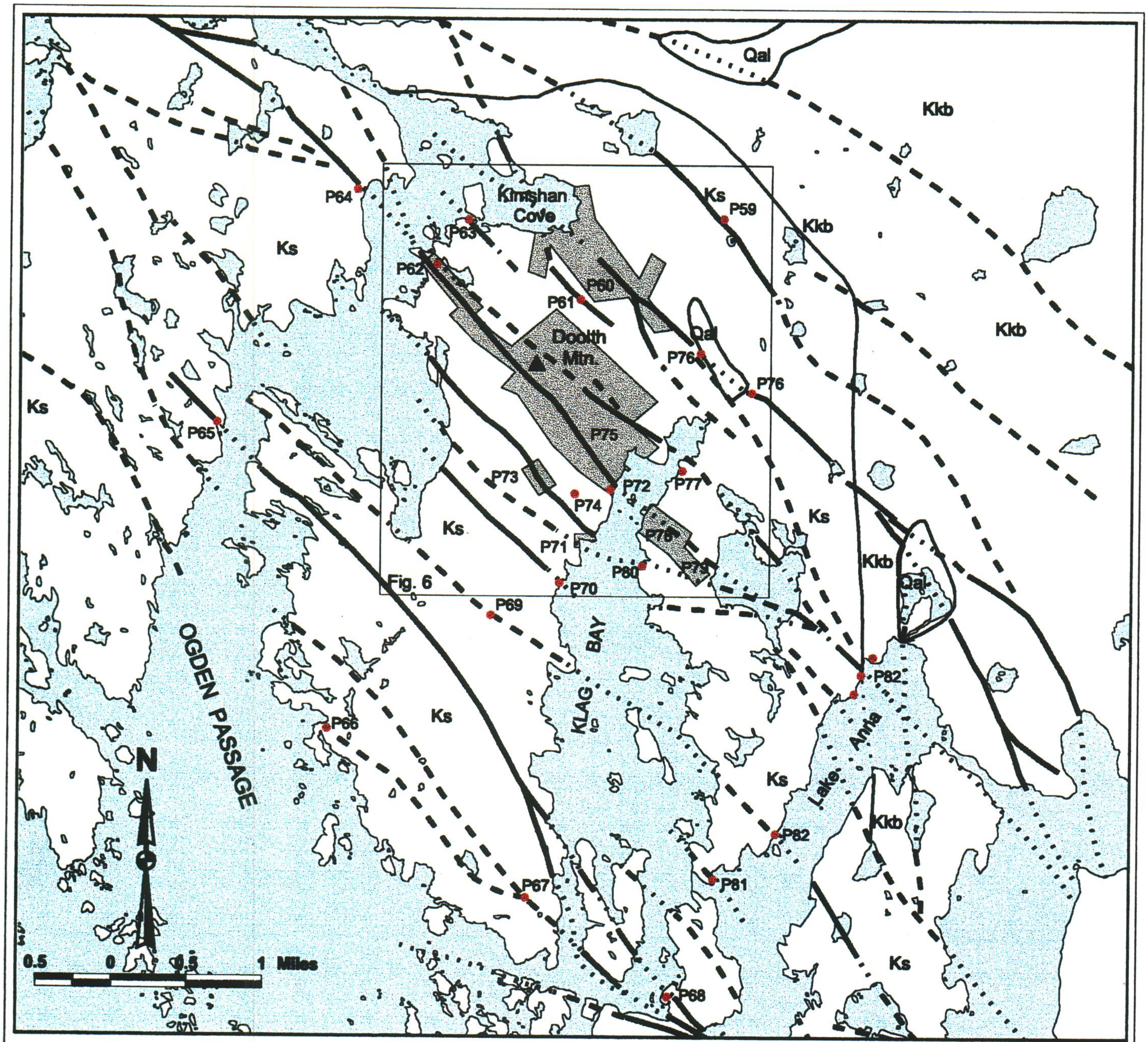
Gold was discovered at the Chichagof and Hirst-Chichagof deposits in 1905 (Knopf, 1912; Reed and Coats, 1941). The Chichagof Mine, initially financed on high-grade gold ore float, operated from 1906 to 1942. The Hirst-Chichagof Mine operated from 1922 to 1943. They jointly produced 791,000 oz of gold and 228,000 oz of silver from over 740,000 tons of ore (Still and Weir, 1981). The Jumbo Mine was discovered in 1909 and 1,450 oz of gold was reportedly mined from a high-grade pocket at the high tide line. The Alaska Chichagof Mine was discovered in 1928. The Chichagof Mining Company operated this property in 1936 and recovered 660 oz of gold from 600 tons or ore using the Chichagof Mill facilities (Still and Weir, 1981).

Other prospects in the Doolth Mountain area include the McKallick Lode, Basoiniuer, Chichagof Prosperity, Baney, and American Gold Company. These prospects were explored between 1906 and World War II (Still and Weir, 1981). There is no production reported from these prospects, nor are there sufficient data to estimate resources.

Geology

The Doolth Mountain area is underlain by the Cretaceous Sitka Graywacke, which is a flysch and melange member of the Chugach tectonostratigraphic terrane. The flysch and melange represent an accretionary prism on the outboard margins of the terrane (Plafker and others, 1977). The Sitka Graywacke is composed of weakly metamorphosed sandstone, siltstone, mudstone, and massive graywacke, which generally strikes to the northwest and dips steeply to the southwest (Loney and others, 1975).

The Sitka Graywacke is pervasively fractured by a network of parallel to subparallel, northwest striking, steeply southwest dipping faults (Fig.



P59	McKallick Lode	P71	Alaska Chichagof Mine
P60	Hirst-Chichagof Mine	P72	OB
P61	Hodson	P73	Flora
P62	Basoiniuer	P74	McKallick Chichagof Mines
P63	Chichagof Prosperity	P75	Chichagof Mine
P64	Bauer	P76	Helen Chichagof
P65	Hanlon	P77	Power Line
P66	McKallick Placer	P78	Handy
P67	Baney	P79	Andy
P68	Hansen and Bolshan	P80	Hill and Berkland
P69	American Gold Company	P81	Lake Anna
P70	Jumbo Mine	P82	Woll

Explanation

- Qal — Quaternary alluvial deposits
- Ks — Cretaceous Sitka graywacke
- Kkb — Cretaceous Kelp Bay group
- Fault, dashed where approximate, dotted where inferred
- Contact, dotted where inferred
- 54 — Outline of patented claim
- 61 — Prospect locations

Figure 5 : Greater Doolth Mountain area showing geology, prospects, and patented claims (Still and Weir, 1981; Johnson and Karl, 1985).

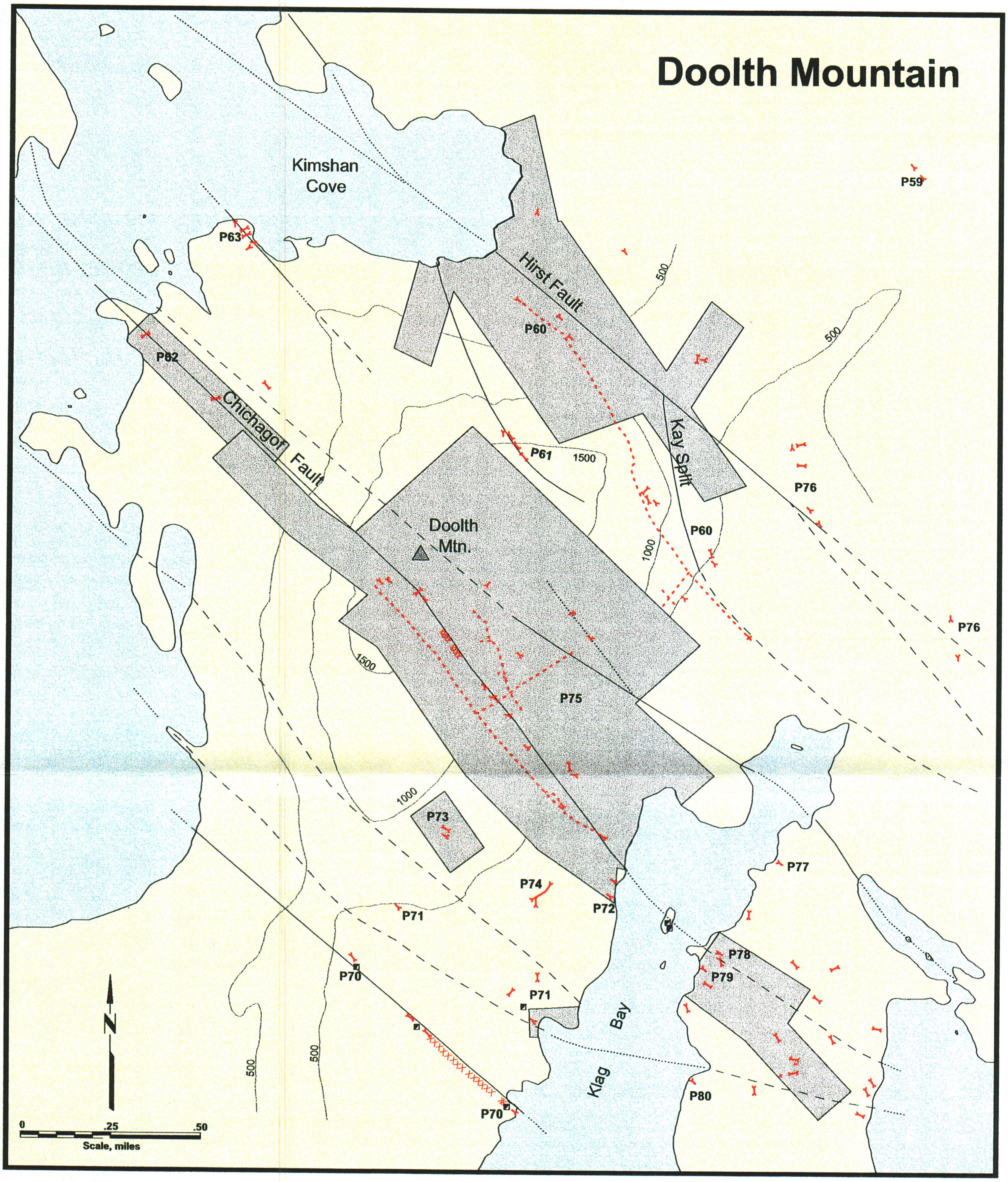


Figure 6: Doolth Mountain area showing faults, mine workings, prospects, and patented claim blocks (Still and Weir, 1981)

Prospect Table

P59	McKallick Lode
P60	Hirst-Chichagof Mine (patented and unpatented)
P61	Hodson
P62	Basoiniuer (patented)
P63	Chichagof Prosperity
P70	Jumbo Mine
P71	Alaska Chichagof Mine (patented)
P72	OB (patented and unpatented)
P73	Flora (patented)
P74	McKallick Chichagof Mines
P75	Chichagof Mine (patented)
P76	Helen Chichagof
P77	Power Line
P78	Handy (patented)
P79	Andy (patented)
P80	Hill & Berkland

Explanation

- Adit
- Trench / pit
- Main level, underground workings
- Fault, dashed where approximate, dotted where inferred
- Shaft
- Outline of patented claims
- P54 Prospect number

5). All the mines in the Doolth Mountain KMDA and most of the significant prospects are located along these faults. In the vicinity of the mines, the faults generally strike more northerly and dip more steeply than other faults in the area and cut the foliation in the enclosing rocks at a higher angle. This change in orientation created releasing bends that allowed for increased fluid migration and mineral deposition. Felsic dikes were intruded along the faults and are invariably sheared and deformed by later fault movement. Gold-bearing quartz veins were emplaced along sections of the faults. Gold was deposited along ribbons in the quartz, which indicate that deposition coincided with fault movement and that the deposition was probably episodic (Still and Weir, 1981).

Gold mineralization in the area is centered around Doolth Mountain itself, with grades decreasing away from the mountain. The gold occurs as tiny specks in the quartz and also with sulfides. Sulfides make up less than three percent of the veins and consist of pyrite, arsenopyrite, galena, sphalerite, and chalcopyrite. About 70-90% of the gold was free-milling and the remainder was recovered in the sulfide concentrate (Still and Weir, 1981).

Eocene granitic plutons are located about three miles west of the Doolth Mountain area. $^{40}Ar/^{39}Ar$ data suggest that the gold-bearing vein formation and the granitic plutons are products of a short-lived Eocene thermal event. They are thought to be related to the subduction of a spreading center beneath the Chugach accretionary prism (Taylor and others, 1994, Haeussler and others, 1995).

Chichagof Mine (P75)

The Chichagof Mine is located near the head of Klag Bay on the south side of Doolth Mountain. It is located along the Chichagof fault, which has an inferred strike length of at least 12 miles (Fig. 6).

The mine opened in 1905, when gold-bearing quartz float was discovered in a creek near the head of Klag Bay. Later that year, ore from a quartz outcrop was shipped to the Tacoma Smelter. The proceeds were used to finance a mill and further mining (Reed and Coats, 1941). From 1906 to 1942, the Chichagof Mine produced 660,000 oz of gold and 195,000 oz of silver from over 600,000 tons of ore (Still and Weir, 1981). Because of shortages of men and equipment created by World War II, the mine closed in 1942. From 1942 to 1973 small amounts of tailings were reworked. The mine and adjacent mineralized area is covered by 29 patented claims and ranks as the third largest lode-gold producer in Alaska (Still and Weir, 1981).

During 1978 and 1979, Bureau of Mines crews examined the Chichagof Mine surface and accessible underground workings and calculated resources. The following mine description and resource estimates are based on that investigation (Still and Weir, 1981). Resource calculations for the Big Croppings veins are from Golden Sitka Resources (1987), who completed additional work in that area.

> At the Chichagof Mine tabular but irregular ore zones have a long dimension that plunges to the south and a short dimension parallel to strike. Ore zones have widths to 15 feet, strike lengths to 1,000 feet, and vertical heights to 1,800 feet. One 14-foot-wide stope averaged 6 oz of gold per ton, whereas the average tenor for the life of the mine was 1.10 oz of gold per ton. Mining reached a depth of 2,700 feet below sea

level. Underground workings explore the fault for 4,800 feet in a horizontal direction and 4,300 feet vertically. Twenty-three percent of the area explored by underground workings was mined. Almost all mine workings are currently inaccessible.

Resources:

1. Big Croppings area of Chichagof fault: Based on reopening of underground workings, diamond drilling, trenching, and detailed sampling of mine-car loads of ore, Golden Sitka Resources estimated a tonnage and grade for the Big Croppings veins as follows (Golden Sitka Resources Inc., 1987):

Probable:	17,800 tons at 0.4 oz of gold per ton
Possible:	22,800 tons at 0.4 oz of gold per ton
Inferred:	36,000 tons at 0.4 oz of gold per ton
Total:	76,600 tons at 0.4 oz of gold per ton (30,640 oz of gold)

Inferred resources: (mining width ranging from 3 to 15 feet)

2. Unmined area explored by underground workings--Mine records and geologic inference suggest 155,000 tons at 0.30 oz of gold per ton (46,500 oz of gold) and 0.09 oz of silver per ton (13,950 oz of silver) above the main haulage level; 308,000 tons at 0.30 oz of gold per ton (92,400 oz of gold) and 0.09 oz of silver per ton (27,720 oz of silver) below the main haulage level.
3. Golden Gate #3--26 Bureau of Mines underground samples on 11 sample lines, with a 3-foot mining width, indicate 13,500 tons at 0.11 oz of gold per ton (1,485 oz of gold) and 0.04 oz of silver per ton (540 oz of silver).
4. Chichagof dump--38 Bureau of Mines surface samples on 4 lines (inadequate to estimate grade for whole dump) indicate approximately 200,000 tons having surface value of 0.04 oz of gold per ton and 0.012 oz of silver per ton.

Indicated resources:

Chichagof tailings--36 Bureau of Mines shelby-tube and shovel samples on 4 sample lines, mine records, company drill data, and resource calculations indicate 456,000 tons at 0.11 oz of gold per ton (50,160 oz of gold) and 0.03 oz of silver per ton (13,680 oz of silver).

Hypothetical resources:

Unexplored Chichagof claim area or very limited underground exploration--Mine records, geologic inference, and Bureau of Mines sampling of near-surface workings suggest 500,000 tons at 0.60 oz of gold per ton (300,000 oz of gold) and 0.18 oz of silver per ton (90,000 oz of silver).

In 1981, based on the above Bureau of Mines resource estimates, Exvenco, Inc. initiated environmental studies and conducted a sampling and exploration program at the mine. In 1983, Queenstake Resources, Ltd. and Exvenco, Inc., formed the Chichagof Joint Venture and obtained an option on the property. The joint venture began an ambitious program of exploration, rehabilitation, and development at the mine.

In 1985, the joint venture evaluated the reprocessing of mill tailings and explored extensions of five vein structures. About 2,000 feet of underground drifting and 2,500 feet of drilling tested the vein systems. Metallurgical testing began, environmental studies continued, and permit applications were submitted (Golden Sitka Resources Inc., 1987).

In 1986, the joint venture rehabilitated the No. 2 shaft on the main level. The venture also considered new mine designs, including a barge-mounted mill and plant that could be inexpensively moved to other properties in the area (Golden Sitka Resources Inc., 1987).

In 1987, only limited fieldwork was done due to ownership and financial restructuring. The two joint venture partners and Vector Mining Company formed Golden Sitka Resources Inc. and raised $2 million from an initial public offering on the Vancouver Stock Exchange (Golden Sitka Resources Inc., 1987).

In 1988, planned work, including a 5,250-foot drilling program, was halted after a fire destroyed the project's camp. The company had driven a bypass around an old production stope in the mine to access the face of the Golden Gate adit and planned to explore extensions of the vein systems by extending the adit and driving crosscuts. Golden Sitka Resources announced that operations at the project would be temporarily suspended.

Operations never resumed and the owners of the Chichagof property regained full control after Golden Sitka Resources' lease expired. The owners are considering options for permitting and operating the project (Coldwell, 1998).

Hirst-Chichagof Mine (P60)

The Hirst-Chichagof Mine is located on the south side of Kimshan Cove on the north side of Doolth Mountain. It is located along the Hirst fault, which is parallel to and approximately 0.8 miles northeast of the Chichagof fault (Fig. 6).

The mine was discovered in 1905. By 1918 the Hirst-Chichagof Mining Company had been formed and by 1920 three drifts had been started and mill equipment had been delivered to the mine (Reed and Coats, 1941). From 1922 to 1943 the mine produced 131,000 oz of gold and 33,000 oz of silver from over 140,000 tons of ore. The mine closed in 1943 because of shortages of men and equipment caused by World War II. An attempt was made to reopen the mine in 1950 but the low price of gold and the deteriorated condition of the mine and mill made the attempt unsuccessful. From 1950 to 1954, 124 oz of gold was recovered from a mill clean-up and from mine tailings (Still and Weir, 1981).

During 1978 and 1979 Bureau of Mines crews examined the surface and accessible underground workings and calculated resources (Still and Weir, 1981). The following mine description and resource estimates are based on that report:

> The Hirst fault is explored along 5,000 feet of strike, and up to 2,200 feet vertically. Mining reached a depth of 1,800 feet below sea level. Mine records indicate that less than 10% of the area explored by underground workings was mined. Almost all the of old workings are currently inaccessible. The mine and adjacent mineralized area are partially

covered by 12 patented claims. The deposit is similar to the Chichagof Mine; the major exception is that a high-grade ore shoot was found 1,600 feet along the Kay split (Fig. 6), a hanging wall split off the Hirst fault. At the Chichagof Mine, all ore shoots are situated along the main Chichagof fault. At least 5,500 feet of strike length on the main Hirst fault, in the vicinity of the underground workings, was not explored.

Inferred resources: (mining width exceeding three feet)

1. Continuation of Kay ore shoot (mining halted in 1943)--Mine records and geologic inference suggest 80,000 tons at 1.00 oz of gold per ton (80,000 oz of gold) and 0.25 oz of silver per ton (20,000 oz of silver).
2. Unmined area explored by underground workings--Mine records, limited Bureau of Mines underground and surface samples, and geologic inference suggest 70,000 tons at 0.25 oz of gold per ton (17,500 oz of gold) and 0.06 oz of silver per ton (4,200 oz of silver).
3. Hirst-Chichagof tailings--11 Bureau of Mines shelby-tube and shovel samples on 3 sample lines, mine records, and an assumption that at least 50% of original mine tailings are located in or near the tidal zone where potential recovery is possible, suggest 70,000 tons at 0.14 oz of gold per ton (9,800 oz of gold) and 0.03 oz of silver per ton (2,100 oz of silver).
4. Hirst-Chichagof dump--13 Bureau of Mines surface samples in 2 lines (inadequate to determine grade for whole dump) suggest approximately 70,000 tons having surface value of 0.04 oz of gold per ton and 0.01 oz of silver per ton.

Hypothetical resources:

Unexplored part of the Hirst fault in the mine area--Mine records and geologic inference suggest the possibility of 100,000 tons at 1.00 oz of gold per ton (100,000 oz of gold) and 0.25 oz of silver per ton (25,000 oz of silver).

In 1981, Enserch Inc. started work on the property. They continued exploration and work on reentry to the mine and evaluation of the tailings through 1983 (Coldwell, 1998).

In 1986, the Chichagof Joint Venture (Queenstake Resources, Ltd. and Exvenco, Inc.) started evaluation of the Kay ore shoot by driving a 160-foot crosscut into the main shear zone and establishing a drill station. By 1988, Golden Sitka Resources (Chichagof Joint Venture and Vector Mining Co.) had rehabilitated underground workings and had completed about 3,215 feet of core drilling to assess the possible extension of the Kay ore shoot below previously developed mine levels. Four of the six diamond drill holes intercepted a barren aplite dike with only minor quartz veining at the expected ore zone. The company dropped its option on the Hirst-Chichagof property in late 1988 (Golden Sitka Resources Inc., 1987).

The 1986 work on the Kay ore shoot and subsequent resource estimate by Golden Sitka Resources differs from the 1981 Bureau of Mines resource estimate. Golden Sitka Resources based its revised estimate on only a partial reopening of underground workings, but with detailed sampling. The revised estimated tonnage and grade for the Kay ore shoot is (Golden Sitka Resources Inc., 1987):

Probable:	380 tons at 1.5 oz of gold per ton
Possible:	12,000 tons at 1.0 oz of gold per ton
Inferred:	18,000 tons at 1.0 oz of gold per ton
Total:	30,380 tons at 1.0 oz of gold per ton (30,380 oz of gold)

Alaska Chichagof Mine (P71)

The Alaska Chichagof Mine is located near sea level on the west side of Klag Bay about half a mile southwest of the Chichagof fault (Fig. 6). It is located along a fault zone that can be traced for at least one mile. The setting and mineralization are similar to that of the nearby Chichagof Mine. The deposit was discovered in 1928 and by 1931 the Alaska Chichagof Mining Company was incorporated to develop the property. Their holdings consisted of 14 claims that crossed the Doolth Mountain peninsula (Reed and Coats, 1941; Still and Weir, 1981). About 510 feet of underground workings were developed from a portal near the beach (Reed and Coats, 1941), which is covered by a patented claim. In 1936 the property was optioned by the Chichagof Mining Company and 660 tons of ore were mined and processed at the Chichagof mill (Still and Weir, 1981). The next reported activity at the property was a reopening of the underground workings by Enserch Inc. during the early 1980's. There are insufficient data to determine resources for this property.

Jumbo Mine (P70)

The Jumbo Mine is located on the west side of Klag Bay about three quarters of a mile southwest of the Chichagof Mine (Fig. 6). It is located along a fault zone that can be traced for at least one mile. The deposit was discovered in 1909 (Reed and Coats, 1941) when 1,450 oz of gold were reportedly mined from a high grade pocket located in the intertidal zone (Still and Weir, 1981). Overbeck (1919) reported that some of the richest ore and finest gold specimens in the district were from the Jumbo Mine. From 1909 to 1931 a 400-foot shaft, 1,580 feet of drift off the shaft, and numerous pits and trenches were dug to expose mineralized rock in the fault zone (Reed and Coats, 1941).

Bureau of Mines examination during 1978 and 1979 revealed three flooded shafts, a 48-foot drift, and numerous trenches and pits that expose quartz along a fault zone for 3,000 feet. The highest-grade sample collected was 0.15 oz of gold per ton (Still and Weir, 1981). Maps and samples of the underground workings have never been published, so no resource estimates are available. Given the reports of spectacular gold, but little published information and markedly subeconomic Bureau of Mines surface samples (Still and Weir, 1981), questions remain regarding the resources at this property.

Land Use and Resource Issues

There are seven land use and resource issues identified in the Doolth Mountain KMDA. They relate to 1) a wilderness designation, 2) private land, 3) State land, 4) recreation areas, 5) recreation areas important to tourism, 6) Sitka black-tail deer hunting, and 7) anadromous fish streams.

All of the Federal land in the Doolth Mountain KMDA is located within the West Chichagof-Yakobi Wilderness. However, the area includes 39 patented mining claims, and State land in the intertidal zone. Most of the mineral resources are situated on private or State lands. Recreation areas, including areas important to tourism, are recognized along much of the shoreline in the area. There is a moderate level of deer hunting in the area. Some of the mineral occurrences are located near anadromous fish streams within the KMDA. Development of the resources at the Chichagof and Hirst-Chichagof Mines would be unlikely to impact the anadromous fish streams.

Mineral Development Potential

Significant past production, extensive gold quartz vein formation, and inferred/hypothetical resources totaling over 675,000 oz of gold and 195,000 oz of silver establish the Doolth Mountain area as having a high mineral development potential. The Doolth Mountain area is located within the West Chichagof-Yakobi Wilderness area where mining is prohibited, except on patented mining claims. Almost all the resources in the KMDA are from the Chichagof and Hirst-Chichagof Mines and are covered by patented claims or located within State intertidal lands where mining is allowed. The only exception is the resource at the Kay ore shoot, where the land status has a wilderness designation.

Based on the economic feasibility studies of the Chichagof-Baranof area by Coldwell (1998), the deposits in the Doolth Mountain KMDA are subeconomic. The Chichagof hard rock deposit would require an approximately 150% increase in the price of gold (1987-1996 average gold price of $441.98 used by Coldwell, 1998) to approach economic viability. Coldwell's calculations indicate that the Chichagof tailings are close to economic viability, but that the Hirst-Chichagof hard rock deposit would require an approximately 200% increase in the price of gold. Given the restrictions caused by land status in the area, the possibility of large increases in deposit size are unlikely.

West Coast Gold KMDA

Location / Access

A series of fault-controlled, vein gold deposits define the 8-mile wide by 28-mile long West Coast Gold KMDA, located 50 miles northwest of Sitka on the west coast of Chichagof Island (Plate 1, KMDA no. 6). The smaller, but more highly mineralized, Doolth Mountain KMDA is located at the center of the West Coast Gold area, but is not considered within it. The area topography rises from sea level to over 3,000 feet at the crest of Chichagof Island. Portlock Harbor, Khaz Bay, and Slocum Arm comprise the main waterways in the area. Numerous additional bays and inlets dot the area. Most of the area prospects are located near tidewater and are easily accessible by float plane or boat.

Geology

The West Coast Gold area is underlain by the Cretaceous Sitka Graywacke, the Cretaceous Kelp Bay Group, and the Triassic Whitestripe Marble. The Sitka Graywacke and the Kelp Bay Group are part of the Chugach tectonostratigraphic terrane and consist of weakly metamorphosed sandstone, siltstone, graywacke, and volcanics that generally strike northwest and dip steeply southwest (Johnson and Karl, 1985). The Whitestripe Marble forms part of the Wrangellia terrane (Plafker and others, 1976). Within the West Coast Gold area the rocks are cut by a series of northwesterly striking, steeply dipping faults. Sheared and deformed felsic dikes are found along these faults. Gold-bearing quartz veins were deposited along some of the fault zones. These vein gold deposits are similar in mode of formation and age to those at Doolth Mountain (Still and Weir, 1981, Johnson and others, 1982).

History / Production

Gold was discovered in the West Coast Gold area during the early part of the 20th century. The most significant mines and prospects are the Golden Hand Apex, New Chichagof Mining Syndicate, Falcon Arm, and Cobol Mine. Production from the area consists of 100 oz of gold from the Cobol Mine and a few oz of gold from the Golden Hand Apex Mine (Still and Weir, 1981).

Golden Hand Apex Mine (P51)

The Golden Hand Apex Mine was staked in 1921 along a northwest striking, quartz-bearing fault zone (Stewart, 1922). Workings, mostly completed in the 1920's, consist of a 150-foot sloughed trench, 140 feet of crosscut, and 85 feet of drift. A small amount of high-grade ore was produced in 1979 by Floyd Branson, the claim holder at the time (Still and Weir, 1981). A quartz vein exposed for 23 feet in two trenches averaged 0.34 oz of gold per ton (six sample lines) across a 3-foot mining width. A representative sample across a 0.2- by 3-foot high-grade zone in the footwall of the same vein assayed 187 oz of gold per ton, and a single select sample assayed 489 oz of gold per ton (Still and Weir, 1981). The active Golden Hand Apex claim covers this property and represents an inholding within the West Chichagof-Yakobi Wilderness area.

Cobol Mine (P91)

The Cobol Mine property was staked in 1925 (Stewart, 1932a) along gold-bearing quartz veins hosted in a north striking fault zone. Workings include 2,150 feet of drifts in 2 adits. Production is estimated at over 100 oz of gold. A 57-foot zone, exposed underground, averages 0.28 oz of gold per ton over a 3-foot mining width. A float sample below a reported 140-foot high-grade zone, now covered by a landslide, assayed 8.74 oz of gold per ton (Still and Weir, 1981). Activity on the property continued until 1986. Currently, there are no active mining claims in the area.

New Chichagof Mining Syndicate prospect (P49)

The New Chichagof Mining Syndicate prospect was discovered in 1933 along a northeast striking fault zone (Roehm, 1936e). Gold is found in a quartz-carbonate cemented, limestone breccia. Workings consist of almost 1,000 feet of adits and numerous surface cuts that intermittently expose mineralized rock along a strike length of over 500 feet. A 110-foot section of mineralized quartz vein exposed in the underground workings averages 0.24 oz of gold per ton across a 4-foot mining width (Still and Weir, 1981).

Falcon Arm prospect (P90)

The Falcon Arm prospect was staked in 1916 (Overbeck, 1919) along a northwest striking fault zone that extends over 5,000 feet. Gold is found in quartz veins that are hosted in mafic dikes and graywacke. Workings consist of 3,130 feet of adits. One adit crosscuts 3,010 feet and fails to intersect mineralized rock. The most significant mineralized rock was found in quartz rubblecrop with blocks up to 1.2 feet thick that assayed from 0.5 to 2.15 oz of gold per ton (Still and Weir, 1981).

Land Use and Resource Issues

There are five land use and resource issues identified in the West Coast Gold KMDA. They relate to 1) a wilderness designation; 2) recreation areas, 3) recreation areas important to tourism, 4) anadromous fish streams, and 5) Sitka black-tail deer hunting.

The West Coast Gold KMDA encompasses the Doolth Mountain KMDA, but does not include it. (See the "Land Use and Resource Issues" section on page 41 for a discussion of issues affecting the Doolth Mountain KMDA.) All of the West Coast Gold area is contained within a designated wilderness, except for a single active claim at the Golden Hand Apex property. There are anadromous fish streams within the KMDA and several mineral occurrences are located near these streams. The active claim is located along an anadromous fish stream as well. There is a moderate level of deer hunting in the area.

Mineral Development Potential

The four prospects described are the most significant within the West Coast Gold area. Numerous less significant gold prospects are found within the area as well. The extent and persistence of gold values in the four prospects and the proximity and similarity to the highly mineralized Doolth Mountain area suggest a medium mineral development potential for the West Coast Gold area. Except for the active claim at the Golden Hand Apex, all of the West Coast Gold area is located within the West Chichagof-Yakobi Wilderness area where mining is prohibited. This restrictive land status limits the likelihood of mineral development in the area.

Lisianski KMDA

Location / Access

Vein gold deposits define the 4-mile wide by 15-mile long Lisianski KMDA located on the northwest side of Chichagof Island and on the southeast end of Yakobi Island (Plate 1, KMDA no. 2). The area is 75 miles northwest of Sitka and 2 miles west of Pelican. Lisianski Inlet, Lisianski Strait, and Stag Bay comprise the area waterways. Steep-walled bays and inlets, and rugged mountains up to 3,613 feet in elevation characterize the area. The waterways can be reached by float plane or boat. The high elevation prospects (e.g., Apex and El Nido) can be reached by a steep, rugged climb from tidewater or by helicopter.

History / Production

Gold was discovered at the Bon Tara Mine on the east tip of Yakobi Island in 1887 (Overbeck, 1919). Between 1919 and 1923 gold was discovered at the Goldwin, Mine Mountain, and Apex and El Nido Mines. About 17,200 oz of gold and 2,400 oz of silver were produced from the Lisianski area prior to 1940. The Apex and El Nido Mines were the principal producers (Kimball, 1982).

Geology

Rocks in the Lisianski KMDA consist of late Paleozoic to Mesozoic volcanic and sedimentary rocks that have been metamorphosed to medium or high grade (Loney and others, 1975). These rocks are intruded by Jurassic to Cretaceous diorite, quartz diorite, and tonalite (Johnson and Karl, 1985). The structural grain of the area trends northwest-southeast.

Deposits in the area consist of low sulfide, gold-bearing, quartz veins that are controlled by northeast to east-west striking, steeply dipping, faults that are oriented at a high angle to the grain of the regional structures. Sulfides in the veins consist mainly of pyrite and arsenopyrite (Kimball, 1982).

Apex and El Nido Mines (P17)

The Apex and El Nido gold-bearing quartz veins were discovered in 1919 and 1920, respectively. They produced about 17,000 oz of gold and 2,400 oz of silver in the periods 1924-28, 1934-35 and 1937-39 (Holmes, 1941).

The deposits consist of one to four feet thick, steeply dipping, gold-bearing quartz veins emplaced in faults in diorite and amphibolite. Scheelite is erratically distributed in the veins. The main Apex vein strikes northeast and dips about 50° to the northwest; the El Nido vein strikes about 070° and dips 30° to 80° to the southeast. The two vein systems are separated by approximately 2,000 feet of country rock (Kimball, 1982).

Most of the gold production came from the Apex property. The condition of the underground workings during Bureau of Mines examination in 1978-1979 was such that, although both El Nido levels were sampled, only one of four Apex levels was accessible and no stope in either mine was safe to enter. Eighty-five measured surface samples were collected along a complex set of quartz veins over a strike length of 800 feet on the apparent up-dip projections of the Apex veins. The samples did not contain consistent gold values nor reasonable correlation with a 1929 company sampling program (Kimball, 1982). The 1929 company data (Holmes, 1941) indicated high gold values over a long strike length. Holmes (1941) implied that a resource of 26,600 tons having an average grade of nearly 1 ounce of gold per ton was present in 1941. Rossman (1959) stated that the resources at the Apex Mine are not large. Because of the lack of correlation of the surface samples, inaccessibility of underground workings, and the complex character of the vein system, Kimball (1982) was not able to calculate resources for the Apex and El Nido Mines. No additional information regarding resources was available for this report.

Bon Tara Mine (P12)

The Bon Tara Mine, discovered in 1887 (Overbeck, 1919), consists of gold-bearing quartz veins in shear zones hosted in diorite. The veins have been explored by open cuts and a 35-foot adit. The only reported production is $1,100 in gold (55 oz at @ $20/ounce) at the time of discovery (Overbeck, 1919). Sampling by the Bureau of Mines revealed low grade gold-bearing veins (Kimball, 1982).

Goldwin Mine (P13)

Located in 1920 (Buddington, 1925), the Goldwin Mine consists of quartz veins up to two feet wide hosted in diorite. The veins have been explored by a 240-foot adit (Kimball, 1982). Rossman (1959) reported an assay of 69 oz of gold per ton over a half-foot section of pyrite-rich vein. Three other representative samples collected nearby assayed from a trace to 0.11 oz of gold per ton (Kimball, 1982).

Mine Mountain Mine (P34)

The Mine Mountain Mine (also known as the Cobol or Cobol North Mine) was discovered in 1921 (Reed and Coats, 1941) and has had a reported production of approximately 100 to 150 oz of gold. It consists of gold-bearing quartz veins hosted in diorite and greenstone that were explored by an adit with 250 feet of crosscuts and drifts. Samples across a 0.2- to 1.2-foot-wide vein within a 70-foot stoped area assayed from nil to 2.45 oz of gold per ton. Other samples from an unstoped area, 120 feet long, across a 0.2- to 0.7-foot-wide vein yielded results of nil to 0.15 oz of gold per ton (Kimball, 1982). The Mine Mountain Mine is located in the West Chichagof-Yakobi Wilderness area.

Land Use and Resource Issues

There are seven land use and resource issues identified in the Lisianski KMDA. They relate to 1) a wilderness designation, 2) recreation areas, 3) recreation areas important to tourism, 4) a LUD II classification, 5) anadromous fish streams, 6) Sitka black-tail deer hunting, and 7) a minerals prescription designation.

The southern part of the Lisianski KMDA is included in the West Chichagof-Yakobi Wilderness. The rest of the area is designated for semi-primitive recreation, with corridors along the coastline recognized as recreation areas important to tourism. In the northern part of the KMDA, an area has been designated as LUD II. The Apex and El Nido Mines are north of the wilderness boundary and outside the LUD II and important tourism areas. The Mine Mountain Mine, on the other hand, is included within the wilderness area. There are three anadromous fish streams identified in the Lisianski KMDA. All are situated near the head of Stag Bay, where only the Cub Mountain occurrence is located. The areas most likely to be developed in the KMDA would not impact any of the identified streams. A small part of the northwest end of the KMDA (overlapping with the Bohemia Basin KMDA) has a minerals prescription designation, but no known prospects are situated in this area. There is a moderate level of deer hunting in the area.

Mineral Development Potential

There are insufficient data to determine resources in the Lisianski area. The only published resource calculation is for 26,600 oz of gold at the Apex Mine (Holmes, 1941), but that calculation was not validated by 1978-1979 Bureau of Mines sampling nor with the likely extent of the ore shoot in the underground workings (Kimball, 1982). The amount of historic production suggests the potential for a larger resource. Though the southern half of the Lisianski area is located within the West Chichagof-Yakobi Wilderness area where mining is prohibited, the Lisianski area as a whole has a medium mineral development potential.

Silver Bay KMDA[1]

Location / Access

The Silver Bay KMDA is located east-southeast of Sitka (Plate 1, KMDA no. 9). It includes historic mines, prospects, and mineral occurrences around Silver Bay as well as properties east of Sitka in the Indian River basin. Access to the properties near sea level is possible by small boat from Sitka and by float plane. The higher elevation sites are most easily accessed by helicopter. Access to the area is also possible via private road along the northeast shore of the bay, which serves the Green Lake hydro-power station and reservoir (see Fig. 12). Several trails in the area allow access by foot as well.

History / Production

The Silver Bay area includes numerous sites that have been prospected for their gold potential from the 1870's to the 1990's (Knopf, 1912, DeArmond, 1997a). The first mining activity in the Chichagof-Baranof area occurred in the Silver Bay area in the 1870's. The Stewart Mine was the first lode gold mine in Alaska (Alaska Yukon Mining Journal, 1901) and the first place a stamp mill was operated in the State (DeArmond, 1997a). The history of individual properties in the area is difficult to ascertain. Complicating the history are the numerous claims, numerous owners, and the very early start of mining activity in the area. DeArmond (1997a) gives a good picture of activity in Silver Bay in a series of articles published in the Daily Sitka Sentinel in 1997.

Despite the long history of mining activity in the Silver Bay area, little gold was produced. Stamp mills were erected at the Stewart and Lucky Chance Mines as well as at the Edgecumbe Exploration property. Arrastres may have been installed at other properties (DeArmond, 1997a). The Stewart mill, although the first in Alaska, only operated for one or two years (DeArmond, 1997a). Total production from the mill is unknown, but judging from the limited extent of tailings present, it was evidently minor. Production from the Lucky Chance Mine was also small. Roehm (1940) cites an earlier report that about 60 tons of ore had been processed by 1887. Total production from the mine is unknown, but an estimated 1,200 tons of ore were reportedly removed from stopes by 1940 (Roehm, 1940).

Geology / Deposit Type

Gold in the Silver Bay area is contained in quartz veins hosted in graywacke and argillite of the Cretaceous Sitka Graywacke (Johnson and Karl, 1985). The Sitka Graywacke is part of the Chugach terrane (Monger and Berg, 1987), which represents an accretionary complex of flysch and melange (Plafker and others, 1977; Plafker and Berg, 1994). The discontinuous quartz veins and lenses are up to 16 feet thick (e. g., Stewart), but are generally barren. They commonly include fragments and partings of graywacke and argillite, but very few sulfides. The sulfides present are pyrite, pyrrhotite, arsenopyrite, and rare galena. The veins and lenses are commonly parallel to the structure in the country rock, which is generally northwest trending and steeply dipping. Haeussler and others (1995) suggest the quartz veining and

[1]Additional information on the Silver Bay area, including maps, is provided in a special section of this report, p. 87.

mineralization in the Silver Bay area is related to an Eocene thermal event that is also responsible for the mineralization in the Doolth Mountain, West Coast Gold, and Lisianski KMDA's to the north.

Most Important Prospects

The BLM's MAS database catalogues 24 mineral locations in the Silver Bay area. The Lucky Chance (P135) and Stewart (P130) Mines are the only ones in the Silver Bay area with any reference to production. A mill was also erected on the Edgecumbe Exploration property (P125), but the BLM found no record of production. Adits, shafts, pits, and trenches mark other prospects in the area. BLM personnel examined many of these prospects including the Liberty (P121), Eureka (P126), Lower Ledge (P129), Bauer (P132), Wicked Fall (P133), and Free Gold (P134) prospects. The more important sites in the Silver Bay area are described in a special section on Silver Bay (p. 87).

Land Use and Resource Issues

There are eight land use and resource issues identified in the Silver Bay KMDA. They relate to 1) State and Municipal land, 2) enacted Municipal watershed, 3) private land, 4) recreation areas, 5) recreation developments, 6) recreation areas important to tourism, 7) anadromous fish streams, and 8) Sitka black-tail deer hunting.

Land management in the Silver Bay area is divided between Federal, State, and Municipal governments. The non-Federal lands include the power site corridor associated with the Green Lake hydroelectric facility, and a proposed corridor northeast from the head of Bear Cove. The Blue Lake and Indian River drainages are Municipal watershed areas. The most significant mineral occurrences known in the Silver Bay KMDA are on Federal land, with the exception of one patented claim at the Stewart Mine. The Federal land in the area is recognized for its recreation potential and includes recreation developments and recreation areas important to tourism. There are five anadromous fish streams in the area. Two of these streams, near the head of Silver Bay, drain areas with significant mineral occurrences. There is a moderate level of Sitka-black tail deer hunting in the area.

Mineral Development Potential

The Silver Bay area has a low mineral development potential. Although considerable exploration has been conducted in the area, particularly in the early years of mining in southeast Alaska, no significant discoveries have been made. The main reason for the lack of success is that the quartz veins in the area, though numerous, are discontinuous and contain spotty gold concentrations.

Magmatic Segregation

Five KMDA's in the study area are defined by magmatic segregation-type deposits that are hosted in mafic or ultramafic intrusives. These are the Bohemia Basin, Mirror Harbor, Snipe Bay, Red Bluff Bay, and Hill KMDA's. Resources of nickel-copper-cobalt-bearing rock have been determined at three of the KMDA's: Bohemia Basin - 24 million tons; Mirror Harbor - 1 million tons; and Snipe Bay - 94,000 tons.

No production has occurred from any of the occurrences.

The deposits in the Bohemia Basin KMDA have the highest likelihood of mineral development of any of the magmatic segregation deposits. The tonnages and grades calculated to date are marginally attractive and the land status allows for potential development. A wilderness designation covers about one quarter of the KMDA, but all of the resources defined in the area are located outside the wilderness and are included within nine patented mining claims.

Development of the deposits at the Mirror Harbor and Snipe Bay KMDA's is unlikely. Although Mirror Harbor has higher tonnages and grades than those at Snipe Bay, its inclusion in the West Chichagof-Yakobi Wilderness area reduces the possibility of its development. The South Baranof Wilderness covers about three quarters of the Snipe Bay KMDA, but excludes the Snipe Bay occurrence.

No economically significant resources have been identified to date at the Red Bluff Bay or Hill KMDA's. Both contain small amounts of chromium. And even though copper-mineralized rock with traces of platinum and palladium have been found in the Hill area, its relatively inaccessible location makes its development unlikely. Land status designations restrictive of mineral development also affect both areas. The South Baranof Wilderness covers all of the Red Bluff Bay KMDA, and about one quarter of the Hill KMDA. Because of the limited resources and restrictive land status, neither area is likely to attract mineral development interest.

Bohemia Basin KMDA

Location / Access

The Bohemia Basin nickel-copper-cobalt deposits define a three- by five-mile KMDA located on the southeast side of Yakobi Island (Plate 1, KMDA no. 1). It is located about 75 miles north-northwest of Sitka and about 8 miles west of Pelican. A four wheel drive road and trails extend between the deposits and tidewater at Lisianski Inlet, which is accessible by float plane or boat. Elevations in the area range from sea level to 2,400 feet with rolling hills and some steep cliffs. Resources at Bohemia Basin are contained in three deposits: the Basin, Takanis, and Flapjack deposits. The location of deposits and general geology in the Bohemia Basin area are shown on Figure 7.

History / Production

Exploration activity in the Bohemia Basin area has been extensive and has taken place over a period of 60 years. The first claims were located in 1920, the same year a 156-foot adit was driven on the southeast side of the Basin deposit. By 1940, there were 15 prospect trenches 15 to 30 feet long (Reed and Dorr, 1942). In 1942 and 1943 the Bureau of Mines and the USGS drilled 15 diamond drill holes, mapped the area, and trenched and sampled along the outcrops. The combined work of both agencies resulted in a Bureau of Mines War Minerals Report (Bureau of Mines, 1944a), which is summarized by Kennedy and Walton (1946b).

In the 1940's the property was obtained by S.H.P. Vevelstad who optioned the claims to

International Nickel Company (INCO) in the mid 1950's. INCO held the property for three years and completed 28 diamond drill holes on the Basin and Takanis deposits. INCO lost its option to the property after a lawsuit with Vevelstad. Aleco, Inc. acquired the property from Vevelstad in 1971 and optioned it to Inspiration Development Company (Inspiration) in 1972 (Kimball, 1982). Inspiration completed 94 drill holes, conducted extensive geological mapping, geochemical and geophysical surveys, conducted preliminary feasibility studies, including pit designs, did metallurgical testing, and acquired patents for Aleco on nine lode claims covering the Basin and Takanis deposits (Thornsberry and DeWilliam, 1982).

In 1982 Inspiration released the property back to Aleco because of economic factors within the company. The property was purchased by Galactic Resources, Ltd. and Cornucopia Resources, Ltd. of Portland, Oregon in 1983. In 1984, over 5,000 feet of diamond drilling was completed on the property (Still, 1988). The drilling data remain confidential and were unavailable for this report. No production has occurred from the property.

Between 1979 and 1981 the Bureau of Mines briefly examined the property (Kimball, 1982). A reexamination in 1982 determined that precious metals and PGM concentrations are very low, that they are confined to the nickel-copper occurrences, and that the highest values coincide with the highest nickel-copper values (Still, 1988). A bulk sample (approximately 200 pounds) from the Bohemia Basin adit was supplied to the Bureau of Mines Albany Research Center for metallurgical testing. The results of this testing concluded that gold, platinum, and palladium are concentrated with copper and that they could potentially be low grade metallurgical byproducts (Dahlin and others, 1981).

Geology

A northwest trending belt of Tertiary gabbroic plutons extends from the Fairweather Stock, located 75 miles northwest of Bohemia Basin in Glacier Bay National Park, to Snipe Bay, located on the southwest side of Baranof Island. Within the Chichagof-Baranof study area, this belt hosts the Bohemia Basin, Mirror Harbor and Snipe Bay deposits. The plutons intrude older metamorphosed alkalic rocks, amphibolites, hornfels, and metagraywackes. Two of these plutons, the Fairweather and the Crillon stocks, exhibit well-defined layering that varyies in composition from diorite to pyroxenite or dunite. The Crillon Stock, located northwest of the Chichagof-Baranof study area, contains the Brady Glacier nickel-copper deposit. That deposit has 180 million tons of indicated and inferred resources averaging 0.53% nickel, 0.33% copper, 0.03% cobalt, and by-product PGM (Brew and others, 1978; Still, 1988). The Brady Glacier resource serves to illustrate the size of potential magmatic segregation deposits in this belt of plutons.

A Tertiary composite stock comprises about one-third of the land area of Yakobi Island. Rock types include tonalite, quartz diorite, diorite, gabbro, gabbronorite, and norite (Himmelberg and others, 1987). These rocks grade into each other and in places can only be identified microscopically. In general, the gabbronorite, which hosts the mineralized rock, occurs as discrete irregular bodies within or bordering the tonalite. The Yakobi Island stock, although much smaller in size, is similar in mode of occurrence to the layered Fairweather and Crillon stocks (Thornsberry and DeWilliam, 1982).

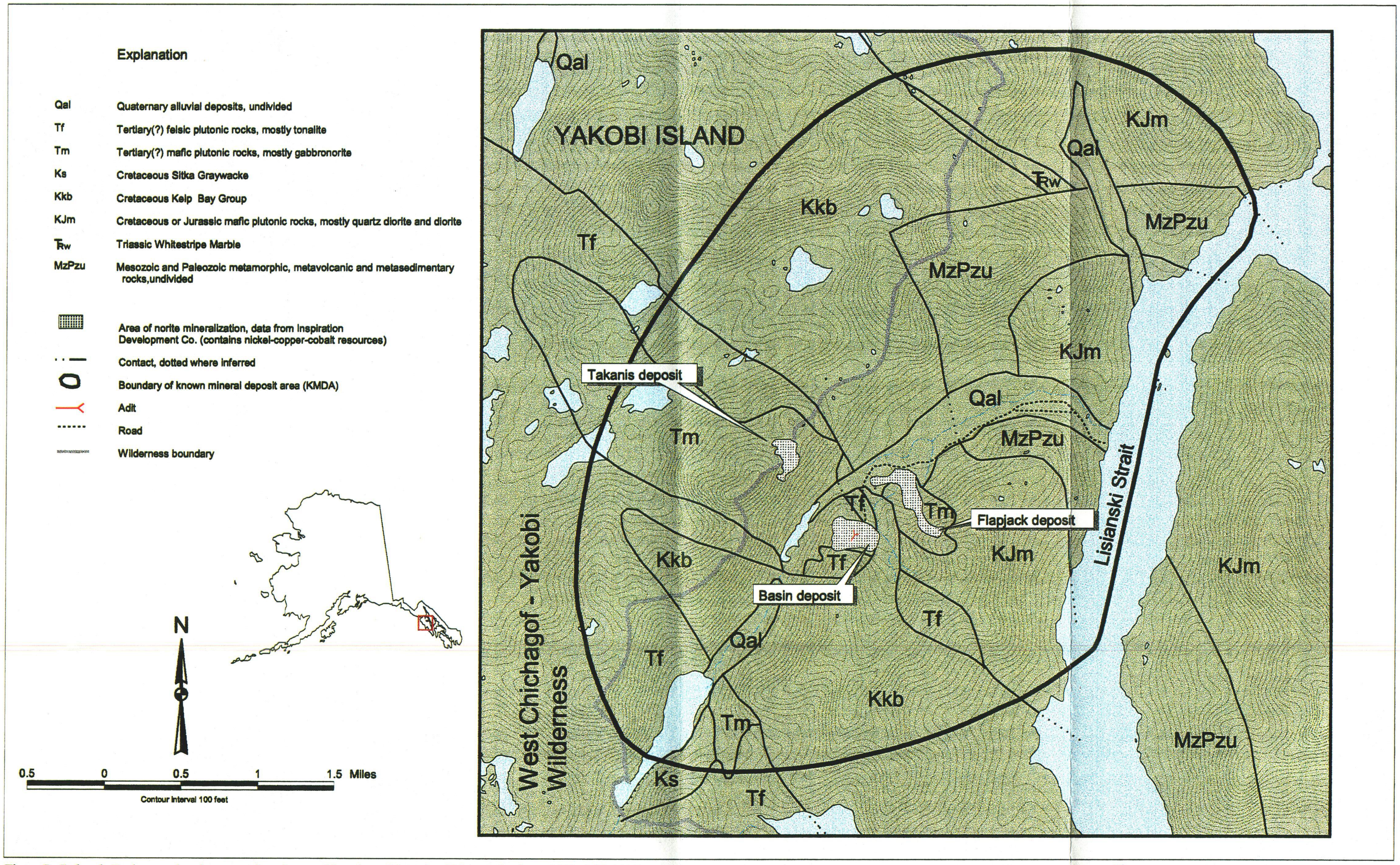


Figure 7: Bohemia Basin area showing general geology and location of deposits (Johnson & others, 1982; Still, 1988).

Mineralization at the three Bohemia Basin deposits is similar. Sulfide mineralization includes pentlandite, chalcopyrite, pyrrhotite, and pyrite as disseminated grains, blebs, interstitial networks, and massive aggregates. The nickel-copper-cobalt-bearing mineralized rock is generally restricted to the gabbronorite and all evidence points to concentration of sulfides by segregation within a cooling magma (Himmelberg and others, 1987). Variations within the gabbronorite can be abrupt or gradational with igneous layering a common feature. Generally, the mineralized units are pyroxenite within gabbronorite bodies. At the Basin deposit the mineralized rock occupies the basal zone; however, this is not necessarily the case with the other deposits (Thornsberry and DeWilliam, 1982).

The Basin deposit is contained within an elliptically-shaped gabbronorite plug, 1,200 to 1,400 feet in diameter. The plug is bounded on the east and southwest by barren diorite and pyrrhotite-rich amphibole schist, and on the north and west by the main gabbroic complex. The gabbronorite body is layered, with composition ranging from anorthosite to pyroxenite. The compositional variations are arranged concentrically in a funnel-like shape around the core of the gabbronorite plug. The main mineralized zone is a basal pyroxenite unit, 50 to 150 feet thick, with smaller, usually lower-grade zones, 5 to 20 feet thick, parallel to the main zone (Thornsberry and DeWilliam, 1982).

The Takanis deposit contains at least three separate gabbronorite intrusions with many variations in rock types. It is intruded by a later diorite phase and siliceous to mafic dikes. The mineralized host rock is a dark gray to brown, medium-grained, equigranular gabbronorite, grading to peridotite and pyroxenite. The latter characteristically contains hypersthene and actinolite, and is usually moderately altered. The Takanis ore body dips steeply and is tabular in shape, striking approximately 050° and dipping 70° to the southeast. It is approximately 900 feet long by 200 feet wide (Thornsberry and DeWilliam, 1982).

The Flapjack deposit is more poorly delineated than the Basin and Takanis deposits. It is thought to contain a sill-like gabbronorite body within a layered intrusion. The gabbronorite contains tabular-shaped mineralized horizons similar to those in the Takanis deposit (Thornsberry and DeWilliam, 1982).

Resources

Identified resources for the Bohemia Basin deposits reported by Thornsberry and DeWilliam (1982) are as follows:

> Basin deposit: (based on 73 diamond drill holes) 16,186,000 tons, which average 0.31% nickel, 0.18% copper, and 0.02% cobalt.
>
> Takanis deposit: (based on 47 diamond drill holes) 3,971,500 tons, which average 0.29% nickel, 0.18% copper, and 0.02% cobalt.
>
> Together, the Basin and Takanis deposits have proven resources accessible by open-pit mining of 15.1 million tons grading 0.37% nickel, 0.22% copper, and 0.02% cobalt at a 2.5:1 stripping ratio.
>
> Flapjack deposit: (based on 4 diamond drill holes) 4,000,000 tons inferred, which average 0.21% nickel and 0.12% copper.

Based on Bureau of Mines beneficiation tests, small amounts of gold, platinum, and palladium are recoverable from these deposits (Dahlin and others, 1981). However there are insufficient data to estimate specific resources for these commodities (Still, 1988).

Land Use and Resource Issues

There are eight land use and resource issues identified in the Bohemia Basin KMDA. They relate to 1) private property, 2) a wilderness designation, 3) a LUD II classification, 4), recreation areas, 5) recreation areas important to tourism, 6) minerals prescription designation, 7) anadromous fish streams, and 8) Sitka black-tail deer hunting.

The main mineral deposits at Bohemia Basin are covered by nine patented mining claims. Outside the patented claims, are wilderness, LUD II, and recreation lands. The wilderness boundary abuts the Takanis deposit and may affect its potential development. The LUD II designated area is to the northeast of the known deposits and is therefore a less significant issue. The recreation designation includes areas important for tourism and encompasses the patented claims and the known deposits. Most of the KMDA, outside the wilderness and LUD II areas, falls under a minerals prescription designation. Bohemia Creek is an anadromous fish stream that drains the valley containing the deposits. There is a moderate level of Sitka black-tail deer hunting in the area.

Mineral Development Potential

Based on economic feasibility studies of the Chichagof-Baranof area by Coldwell (1998), the 24-million ton Bohemia Basin deposit would require twice the current total metal values of nickel, copper, and cobalt to approach economic viability. The deposit would also approach economic viability if about twice the tonnage was developed with the current average grade of 0.29% nickel, 0.17% copper, and 0.017% cobalt. The possibility of open-pit mining and the close proximity to tidewater enhance the development potential of the Bohemia Basin area. So although the deposit is subeconomic at present, the area is likely to continue to attract mineral development interest in the future.

Mirror Harbor KMDA

Location / Access

Nickel-copper-cobalt deposits define the 2- by 3-mile Mirror Harbor KMDA, located 65 miles north-northwest of Sitka and 14 miles south of the Bohemia Basin deposit. Plate 1 shows the location of the KMDA on the northwest side of Chichagof Island (KMDA no. 3). Elevations in the area extend from sea level to under 300 feet; the area is flat lying, brushy and covered with timber. Many small waterways between Bertha Bay and Little Bay cut the Mirror Harbor area. Access can be made by float plane or boat from Sitka and by foot to the mineral occurrences.

History / Production

Nickel-copper-cobalt occurrences were discovered near Mirror Harbor in 1911. In 1915, a 175-foot shaft was sunk with crosscuts at 75 feet and 175 feet below the surface (Pecora, 1942). This shaft is now flooded. During World War II the Bureau of Mines and the USGS mapped, trenched, and drilled the property (U. S. Bureau of Mines, 1944b; Traver, 1948). Inspiration Development Company conducted extensive mapping, sampling, and geochemical and geophysical surveys at the property from 1972 to 1982. In 1982 Inspiration dropped the property (Still 1988). There are no active claims in the Mirror Harbor area, which is now part of the West Chichagof-Yakobi Wilderness. No production has occurred from the area.

Geology

The Mirror Harbor area is underlain by Cretaceous Kelp Bay sedimentary and volcanic rocks, and the Cretaceous Sitka Graywacke. These are intruded by Tertiary tonalite and gabbronorite (Johnson and Karl, 1985). The gabbronorite hosts nickel-copper-cobalt magmatic segregation deposits that contain masses and disseminations of pyrrhotite, pentlandite, and chalcopyrite (Still, 1988). The geologic setting and deposit type are similar to those at Bohemia Basin, described above.

Resources

Three deposits have been delineated within the Mirror Harbor area; two consist of massive sulfides and one of disseminated sulfides. A high-grade massive sulfide body, on which the shaft was driven, contains 7,300 tons averaging 1.60% nickel and 0.90% copper. A massive sulfide body on the south side of Davison Bay contains a few tons with a slightly lower grade than that at the shaft. A disseminated deposit located between Mirror Harbor and Davison Bay contains 1,000,000 tons averaging 0.32% nickel and 0.12% copper (Still, 1988).

Land Use and Resource Issues

There are seven land use and resource issues identified in the Mirror Harbor KMDA. They relate to 1) a wilderness designation, 2) State land, 3) recreation areas, 5) recreation areas important to tourism, 5) a recreation development, 6) anadromous fish streams, and 7) Sitka black-tail deer hunting.

The Mirror Harbor KMDA is located within the West Chichagof-Yakobi Wilderness area. In addition, the area is designated for recreation and as important for tourism. A Forest Service recreation cabin at White Sulphur Springs is located in the area. The known occurrence in the Mirror Harbor area is located in flat-lying terrain, much of it in, or near, State intertidal lands. Although there are at least two anadromous fish streams within the KMDA, they are situated on the north side of the KMDA. Development of the known occurrence would not impact either of the streams. There is a moderate level of deer hunting recognized in the area.

Mineral Development Potential

The Mirror Harbor deposits are of sufficient size and grade to attract mineral development interests. Though the deposits are relatively small, they are more attractive for development due to the location of similar deposits at Bohemia Basin to the north. A mill facility at Bohemia Basin could potentially process ore extracted from the Mirror Harbor deposits. The land status of the Mirror Harbor KMDA within the West Chichagof-Yakobi Wilderness, detracts from its mineral development potential.

Location / Access

Mineralized rock bearing nickel, copper, and cobalt defines the Snipe Bay KMDA. It is located 45 miles southeast of Sitka on the west side of Baranof Island, on the north side of Snipe Bay (Plate 1, KMDA no. 13). Topography in the area is fairly rugged, with steep cliffs rising from sea level to over 500 feet in elevation. The area is densely forested and brushy. The surge of waves from the open ocean to the west prevents safe access to the area by float plane. Boat access can be made to Snipe Bay, where landing by skiff in relatively calm seas is practical, but more reliable access can be had via helicopter. A steep trail provides access to the deposits from tidewater.

History / Production

The Snipe Bay deposit was discovered in 1922 (Buddington, 1925). From 1922 to 1942, work on the deposit was limited to trenching. The USGS examined the property in 1929 and 1941 (Reed and Gates, 1942). The Bureau of Mines examined it in 1963 (Pittman, 1963). In 1973 the Inspiration Development Company acquired the property and explored the deposit with 21 diamond drill holes. Claims on the deposit lapsed in 1979 (Roberts, 1983). Bureau of Mines personnel collected metallurgical test samples at the property in 1981 and 1988 (Foley, 1989). There has been no production from the area.

Geology / Resources

The Snipe Bay area is underlain by Cretaceous Sitka Graywacke, which has been intruded by Tertiary gabbro and norite (Reed and Gates, 1942; Foley, 1989). The magmatic segregation nickel-copper-cobalt deposit occurs in the gabbro. Two mineralized zones are exposed in trenches and have been tested by 21 diamond drill holes. The zones are located in a steep gully at elevations between 480 and 550 feet, and 170 and 320 feet. The ore minerals are nickeliferous pyrrhotite, pentlandite, and chalcopyrite. The zones form a deposit with an indicated resource of 94,000 tons of 0.97% copper and 0.33% nickel (Roberts, 1983; Foley, 1989).

The known mineralized zones at Snipe Bay were not re-examined during this study, because of recent work by other Bureau of Mines workers (e.g., Foley, 1989). In 1995 a Bureau of Mines crew collected stream sediment samples in Snipe Bay and examined iron-stained zones in the sea cliffs near the mouth of the bay (Plate 2; Map nos. 338-340, 342-344). Additional mineralized rock was not found and the stream sediment samples had low metal values (Maas and others, 1996).

Land Use and Resource Issues

There are three land use and resource issues identified in the Snipe Bay area. They relate to 1) a wilderness designation, 2) anadromous fish streams, and 3) Sitka black-tail deer hunting.

The northern part of the Snipe Bay KMDA is located within the South Baranof Wilderness area. However, the occurrence is located just south of the wilderness boundary. Development of the known occurrence may not be affected by this designation, but the potential for future exploration and development in the area is limited by the adjacent wilderness. There is one anadromous fish stream within the KMDA that is located north of the mineralized bodies, in the wilderness area. It is unlikely that development would affect the anadromous fish stream. Deer hunting pressure in the south Baranof Island area is listed as moderate, but is likely to be low in the Snipe Bay area itself.

Mineral Development Potential

Although small, the Snipe Bay deposit is of sufficient size and grade to be given a medium mineral development potential. A medium development designation takes into consideration the presence of similar deposits to the north at Bohemia Basin and Mirror Harbor. Milling requirements could potentially be handled by a facility at Bohemia Basin. The South Baranof Wilderness area borders the Snipe Bay deposit on the north, which limits the possibility of additional exploration in the area.

Red Bluff Bay KMDA

Location / Access

The Red Bluff Bay deposit, which defines the KMDA, is located on the northeast side of Red Bluff Bay, about 25 miles southeast of Sitka (Plate 1, KMDA no. 11). The bay takes its name from the bare reddish-brown weathered surface of chromite-bearing ultramafic rocks that underlie 1.25 square miles on a long ridge north and east of the bay. Moderate to steep slopes rise from tidewater to a ridge crest that ranges in elevation from 520 to 1,200 feet. Access is by float plane or boat to Red Bluff Bay and then by foot to the deposit.

History / Production

Chromite was first recognized in the Red Bluff Bay area in 1933 when 28 claims were staked (Guild and Balsley, 1942). During the 1940's the Alaska Juneau Mining Company held the claims (Carnes, 1980). The USGS mapped and sampled the deposit in 1939 and 1941 (Guild and Balsley, 1942). The Territorial Department of Mines conducted a magnetic survey over the deposit in 1953 (Holdsworth and Williams, 1953). No production has occurred from this property.

Geology

The Red Bluff Bay ultramafic complex consists of partly serpentinized dunite and pyroxenite. Pyroxenite predominates in the northwestern half of the area where it crops out in large irregular masses. The pyroxenite is commonly altered to amphibolite. The dunite predominates in the eastern and southern parts of the complex. The dunite includes bands of pyroxenite-rich layers that strike north and dip steeply. In places, the pyroxenite and dunite are finely interlayered. Chromite is found disseminated in the dunite, and in richer layers and bands within the dunite that are parallel to the pyroxenite bands. Zones containing disseminations and small lenses of chromite are up to 30 feet wide and several hundred feet long. Chromite lenses up to 3 feet wide and 40 feet long have been found. The chromite lenses probably formed as magmatic segregations during cooling of the intrusive mass (Guild and Balsley, 1942). Greenschist and phyllite surround the Red Bluff Bay intrusive. The complex is bounded by faults, leading to the suggestion that it may have been tectonically emplaced (Loney and others, 1975).

Two pan concentrate samples were taken during this study to determine the presence of platinum-group metals (PGM) in the deposit (Plate 2; Map nos. 160, 162; samples 2036, 2037). Although chromium values were high, only trace amounts of PGM were detected.

Resources

Eight areas of chromium mineralization scattered over a 6,000-foot-long area have been identified by previous workers. These areas contain from 5% to 50% Cr_2O_3 and a 30,000-ton inferred resource of 12% Cr_2O_3 has been identified. The chromite to iron ratio of the deposit is low, somewhere below the desired threshold of 3:1 (Guild and Balsley, 1942).

Land Use and Resource Issues

There are five land use and resource issues identified in the Red Bluff KMDA. They relate to 1) a wilderness designation, 2) a recreation area, 3) a recreation area important to tourism 4) an anadromous fish stream, and 5) Sitka black-tail deer hunting.

The entire Red Bluff Bay KMDA is included in the South Baranof Wilderness area. The area is also designated for recreation and is recognized as important for tourism. There is an anadromous fish stream within the KMDA and the known occurrence is located just to the east of it. Mineral development in the area would likely require mitigation for impacts to the stream. There is a moderate level of deer hunting identified in the area.

Mineral Development Potential

The mineral development potential of the Red Bluff Bay area is low. The chromium deposit is small and low grade, and contains an insufficient chromium to iron ratio to attract serious development interest. In addition, there are no PGM associated with the deposit. The style of mineralization and characteristics of the intrusive body at Red Bluff Bay are similar to those found at the Hill prospect (see below), but not typical of a zoned, Alaska-type ultramafic body (Taylor, 1967; Foley and others, 1997) common in southeast Alaska, which may hold a higher potential for hosting an economic ore body. The area is also within the South Baranof Wilderness where mining is prohibited.

Hill KMDA

Location / Access

The Hill KMDA, defined by chromite-bearing ultramafic rocks, is located 15 miles southeast of Sitka along the rugged crest of Baranof Island (Plate 1, KMDA no. 10). The area consists of rugged, glacier-clad mountains that rise to an elevation of over 4,000 feet. Access is by helicopter.

History / Production

Chromite was first discovered in the Hill area about 1935 (Guild and Balsley, 1942). Claims were staked, but were abandoned by 1942. There are brief references to the prospect in Guild and Balsley (1942), Kennedy and Walton (1946), and Berg and Cobb, (1967). Each report states that the grade and extent of mineralized rock is insufficient to constitute ore. There has been no production from the area.

Geology

The chromite-bearing mafic/ultramafic rocks at the Hill prospect are similar to those at Red Bluff Bay, described above. They consist predominately of pyroxenite and dunite. The dunite contains whisps and disseminations of chromite. Disseminated chalcopyrite, pyrite, and pyrrhotite are found within the pyroxenite.

During 1996, the BLM sampled exposures of sulfide-bearing pyroxenite for their copper, nickel, and PGM potential. The samples contained from 12 to 3,050 ppm copper and from 7 to 1,100 ppm nickel (Plate 2, Map nos. 237, 238; samples 1409, 1410, 1456, 1457). The sample with the highest copper value (sample 1409) also contained the highest PGM value of 55 ppb platinum and 68 ppb palladium. The remaining samples contained up to 5 ppb platinum and 10 ppb palladium. (Bittenbender and Still, 1997).

Land Use and Resource Issues

There are two land use and resource issues identified in the Hill KMDA. They relate to 1) a wilderness designation, and 2) Sitka black-tail deer hunting.

The southern part of the Hill KMDA, which includes the Hill prospect itself, is included in the South Baranof Wilderness area. The northern part of the KMDA, where there is potential, but no known mineralized rock, is open to mineral entry. Given the remote setting of the Hill KMDA, deer hunting pressure is low, even though the area as a whole is listed with a low to moderate level of deer hunting. There are no anadromous fish streams within the boundaries of the KMDA. However, there are anadromous fish streams, both to the east and west of the area. Mineral development may require some mitigation measures to protect these streams.

Mineral Development Potential

The mineral development potential of the Hill prospect area is low. The size and extent of chromium mineralization at the occurrence is too low to present a serious exploration target. Concentrations of nickel, copper, and PGM that might make the prospect more attractive were not revealed by this study. In addition, the remoteness of the site and the land use restriction on mineral development lowers the area's development potential.

Porphyry

Two of the study area's KMDA's are defined by porphyry occurrences. They are the Warm Springs Bay and Slocum Arm KMDA's shown on Plate 1.

Rock mineralized with molybdenum extends across several miles at Warm Springs Bay, but is mainly low grade. It is hosted in Eocene tonalite (Loney and others, 1975). Although surface sampling has revealed a limited occurrence to date, the broad extent of the mineralized rock might attract subsurface exploration. The land status at Warm Springs Bay allows for mineral development.

The molybdenum occurrence at Slocum Arm extends over one square mile and is hosted in Triassic greenstone and Tertiary granodiorite (Loney and others, 1975). Although widespread, the occurrence is low grade. There are insufficient data to establish a tonnage and grade at the site. The low grade of the occurrence and the fact that the area is covered by a wilderness designation, lowers the potential of exploration interest in the area.

Warm Springs Bay KMDA

Location / Access

Porphyry copper-molybdenum and associated mineralization defines the Warm Springs Bay KMDA. It is located 27 miles due east of Sitka, on the east side of Baranof Island (Plate 1, KMDA no. 8). The Warm Springs Bay KMDA extends for several miles, from the north side of Warm Springs Bay to Chatham Strait. The topography of the area ranges from sea level to over 2,200 feet in elevation. Brush and timber dominate the lower elevations, whereas the upper elevations are alpine and cliffy. Access is possible by float plane, boat, or helicopter.

History / Production

Mineralized rock at Warm Springs Bay was discovered by El Paso Natural Gas Company in 1973. They staked a block of claims that extended from the north side of Warm Springs Bay to Chatham Strait, a distance of two and a half miles (unpublished BLM records). Results of the company's work have not been released. No production has occurred from this property.

Geology

The Warm Springs Bay area consists of Eocene hornblende-biotite tonalite and hornblende-biotite granodiorite that contain septa and inclusions of Triassic biotite schist, gneiss, amphibolite, and phyllite (Loney and others, 1975). Examination revealed copper-molybdenum mineralization scattered across a one square-mile area, stretching from the abandoned townsite of Manleyville, east to Chatham Strait, and one mile to the north, along the shoreline. The mineralized rock is found at sea level and extends to over 1,700 feet in elevation. A hornfels zone containing zinc and copper was identified in the contact area adjacent to the intrusion. The contact is exposed at the north edge of the KMDA.

The most extensive zone of copper-molybdenum mineralized rock is exposed along the north shore of Warm Springs Bay. Pyrite, chalcopyrite, and molybdenite are disseminated in silicified tonalite, along the edges of granodiorite inclusions, and in fracture-controlled quartz stringers. Exposures of tonalite west of Manleyville contain up to five percent pyrite with little chalcopyrite or molybdenite. East of Manleyville, a 300-foot-long exposure in the intertidal zone contains more abundant chalcopyrite and molybdenite. Twenty chip samples were taken to evaluate this exposure. Sample results averaged 600 ppm copper and 85 ppm molybdenum. The highest values were found in a 10-foot chip sample that contained 1,550 ppm copper and 600 ppm molybdenum (Plate 2, Map no. 203, sample 2718). A select sample across a 1.5-foot-thick quartz lens contained 5,300 ppm copper and 925 ppm molybdenum (Plate 2, Map no. 203, sample 2725). No samples from this mineralized zone had appreciable precious metal values.

Small amounts of molybdenite and sphalerite were found in narrow quartz stringers hosted in granodiorite about three quarters of a mile east of Manleyville. Samples of the stringers contained up to 1,650 ppm molybdenum and 1,100 ppm zinc (Plate 2, Map nos.199, 200; samples 2579, 2749). Samples collected from quartz stringers and tonalite located north of the 300-foot-long showing contained up to 6,000 ppm copper and 415 ppm molybdenum (Plate 2, Map nos. 201, 203; samples 2577, 2545-47). Seven stream sediment samples collected to the east and west of Manleyville did not contain significant metal values.

Examination along the ridge crest, half to three quarters of a mile north of Manleyville, revealed significantly less silica alteration and pyrite in the tonalite. Samples collected from this area contained variable amounts of chalcopyrite, molybdenite, and sphalerite (Plate 2, Map nos. 193-195). Analyses revealed up to 7,200 ppm zinc (Plate 2, Map no. 193, sample 2753), 1,900 ppm copper (Plate 2, Map no. 194, sample 2587), and 550 ppm molybdenum (Plate 2, Map no. 195, sample 2754). The highest gold value from all samples collected in the Warm Springs Bay area, 170 ppb (Plate 2, Map no. 193, sample 2585), came from this area.

Much of the mineralized rock observed in the Warm Springs Bay area was found along or near a steeply dipping fault zone that extends about one and a half miles from Manleyville northeast to Chatham Strait. This zone contains boulders of quartz and silicified tonalite, and a quartz vein containing pyrite, chalcopyrite, and sphalerite (Plate 2, Map no. 189). Three samples were taken that contained up to 1,750 ppm copper (sample 2751), 544 ppm bismuth, and 2,750 ppm zinc (sample 2584). Zinc values increase and molybdenum values decrease to the north-northeast along the fault zone.

Land Use and Resource Issues

There are six land use and resource issues identified in the Warm Springs Bay KMDA. They relate to 1) private land, 2) a recreation area, 3) a recreation area important to tourism, 4) State land, 5) Sitka black-tail deer hunting, and 6) anadromous fish streams.

The Federal land in the Warm Springs Bay area is open to mineral development. There are, however, several issues that would most likely need to be addressed prior to resource development. The community of Baranof is situated near the center of the KMDA and includes a significant amount of private land. The Warm Springs Bay area is the site of numerous hot mineral springs that attract tourists and other recreational users to the area. The Baranof townsite and hot springs are near the head of Warm Springs Bay, whereas the known occurrence is closer to the mouth of the bay. The valley to the southwest of Warm Springs Bay is the site of a proposed road and power transmission corridor, so the State has some interest in the land management of the area. The deer hunting level in the area is low and is unlikely to be an issue. At least two anadromous fish streams cut through the KMDA, but development in the area of the known occurrence would be unlikely to affect the streams.

Mineral Development Potential

The discontinuous nature of the mineralized rock and the low metal values in the rocks sampled at Warm Springs Bay discourage additional surface examination of the deposit. A further detraction is the low precious metal values in the samples collected. However, the broad extent of the mineralized rock means the potential for a large, low-grade deposit still exists, and might encourage subsurface exploration of the area. Subsurface exploration may include geophysics, detailed soil sampling, or eventually, drilling. The Warm Springs Bay KMDA is given a medium mineral development potential.

Slocum Arm KMDA

Location / Access

The Slocum Arm KMDA is defined by rock mineralized with molybdenum found in dikes, quartz veins, and greenstone. The 2- by 6-mile area is located on Chichagof Island, 35 miles northwest of Sitka and 1.5 miles east of Hidden Cove, near the head of Slocum Arm (Plate 1, KMDA no. 7). Most of the area is above timberline, except for the southern part, which consists of steep brushy gullies. Access to the area can be obtained by float plane or boat to Hidden Cove. From Hidden Cove, foot access through heavy brush is required to reach the mineralized area. The area can also be accessed by helicopter.

History / Production

Molybdenum was discovered in the Slocum Arm area in 1943, but there is no evidence of claim staking or development work at that time (unpublished BLM records). By 1952 claims had been staked and the Bureau of Mines examined the property (Thorne, 1952). In 1968 John Ballard, a claim holder, reported on the geology and mineral potential of the area (Ballard, 1968). The prospect was examined again in 1978 by Bureau of Mines personnel (Still and Weir, 1981). No production is known to have occurred from the property.

Geology

Rocks in the prospect area include Triassic Goondip Greenstone that has been intruded by Tertiary granodiorite (Johnson and Karl, 1985). Molybdenum is found scattered in quartz stringers and in felsic to intermediate dikes along a 50-foot wide fault zone cutting the greenstone that strikes 020°, and dips up to 55° to the southeast or northwest. The fault can be traced for 8,500 feet from elevations of 500 to 2,400 feet. A series of north-northwest striking, felsic to intermediate dikes and sills are hosted in greenstone about 1,000 feet east of the fault zone. West striking, steeply dipping quartz veins up to half a foot thick are also hosted in the greenstone at this location (Still and Weir, 1981).

Mineralized rock at the Slocum Arm prospect is hosted in a variety of settings: in quartz veins, in a shear zone with quartz stringers, in fault gouge, in an assortment of dikes, in greenstone, and in the Tertiary granodiorite. The mineralized rock is spread across an area greater than one square mile (Still and Weir, 1981). The following analytical data, taken from the 1981 study, illustrate the grade of the molybdenum mineralization: Samples from the dikes contained up to 190 ppm molybdenum; samples from a diorite sill contained 280 ppm molybdenum; samples from the greenstone contained up to 32 ppm molybdenum; and samples from the quartz veins contained up to 5,400 ppm molybdenum. The quartz sample contained the highest molybdenum value found on the property.

BLM workers attempted to define additional molybdenum occurrences to the east and north of the main prospect during this study. A 0.7-mile traverse was made along a prominent ridge to the east. Samples were collected of granodiorite, greenstone, and quartz veins hosted in greenstone and granodiorite (Plate 2, Map nos. 146-151). They contained up to 6 ppm molybdenum. A traverse was also made 1,500 feet to the north of the known occurrence. Examination revealed quartz stringers hosted in greenstone and intermediate dikes and sills in greenstone. A sample of quartz in greenstone contained 5 ppm molybdenum and 570 ppm copper (Plate 2, Map no. 147, sample 2772). Analysis of dike samples did not reveal significant metal values. Although similar geology was identified north and east of the Slocum Arm molybdenum deposit, sampling failed to reveal additional mineralized rock.

Land Use and Resource Issues

There are three land use and resource issues identified in the Slocum Arm KMDA. They relate to 1) a wilderness designation, 2) a timber harvest designation, and 3) Sitka black-tail deer hunting.

Most of the Slocum Arm KMDA is designated as wilderness. The wilderness designation precludes mineral entry and there are no pre-existing active mining claims present in the area that might allow for mineral development in a wilderness. The northeast side of the KMDA is designated as a timber harvest area, which would be open for mineral development. This part of the KMDA, however, has no known mineral occurrences. There is a moderate level of deer hunting recognized in the area, but given the remote setting of the occurrence, mineral development would unlikely effect hunting.

Mineral Development Potential

The Slocum Arm KMDA is assigned a low mineral development potential. Even though the mineralized rock is scattered over a large area, it is relatively low grade. In addition, the mining claims in the area are no longer active, so the area has reverted to a wilderness designation where mining is prohibited.

Volcanic-Related Massive Sulfide

Two KMDA's located in the study area contain volcanic-related copper occurrences. They are the Mt. Baker and Mt. Muravief KMDA's shown on Plate 1.

The copper occurrence at Mt. Baker is hosted in Triassic Goondip Greenstone (Johnson and Karl, 1985) and extends over an area of about two by three miles. Although some areas of high grade mineralized rock have been found, most of the area contains low grade concentrations. The broad extent of mineralized rock at the site would encourage further evaluation, but the wilderness designation that covers the property makes further exploration unlikely.

At Mt. Muravief, copper-zinc mineralization is hosted in greenstone and in the surrounding schist of the Cretaceous Sitka Graywacke. Investigations to date have established a correlation between the occurrence of greenstone and the copper mineralization. The limited extent of greenstone in the area therefore suggests a limited potential for additional copper mineralization discoveries. Although the land status of the Mt. Muravief KMDA allows for mineral development, the potential for further development is low.

Mt. Baker KMDA

Location / Access

Rock mineralized with copper defines the 2- by 3-mile Mt. Baker area, located 65 miles northwest of Sitka (Plate 1, KMDA no. 4). The area ranges from sea level, at Goulding Harbor, to the summit of Mt. Baker, at an elevation of over 2,000 feet . Treeline in the area is at about 1,500 feet. Above treeline, the terrain is rugged and has alpine vegetation. Below the treeline, the area is covered with dense brush and timber.

History / Production

Copper was discovered near the summit of Mt. Baker in 1910. By 1917 over 300 feet of underground workings had been driven and numerous trenches dug. The workings exposed mineralized rock between elevations of 1,300 and 2,000 feet (Overbeck, 1919). The Bureau of Mines examined the property in 1952 and 1953 and conducted detailed rock and soil sampling (Thorne, 1960). Geo-Recon Inc. completed magnetic and self-potential surveys in the area in 1962 (Bush and Kenly, 1962). In 1971, an extensive soil sampling survey was conducted by Moerlein (1971) covering an area 1,000 feet wide and 1,400 feet long. No production has occurred from this property.

Geology

The Mt. Baker copper occurrence is hosted in greenstone and consists of disseminations and localized masses of chalcopyrite and pyrite. It is classified as a basaltic copper deposit by Berg (1984). Aplite dikes intrude the greenstone, and according to Berg (1984), the adjacent basaltic wallrock is altered and both dikes and wallrock locally contain disseminations and small masses of pyrite and chalcopyrite. The largest concentration of copper is hosted in a northwest striking, vertical, altered zone, 400 feet long. Samples taken from a trench at the southeast end of the zone contained 2.0% copper across 13 feet. A shallow shaft at the northwest end of the zone exposes 7.5% copper across 2 feet. Other smaller mineralized sections are exposed within the altered zone as well. Geochemical and geophysical studies indicate a possible three-mile extension of the zone (Kimball, 1982).

Land Use and Resource Issues

There are five land use and resource issues identified in the Mt. Baker KMDA. They relate to 1) a wilderness designation, 2) a recreation area, 3) a recreation area important to tourism, 4) anadromous fish streams, and 5) Sitka black-tail deer hunting.

The entire Mt. Baker KMDA is included in the West Chichagof-Yakobi Wilderness. Along the southeast edge of the KMDA is an area designated for recreation and is recognized as important for tourism. This area includes the course of a major drainage, which is an anadromous fish stream. There is at least one other anadromous fish stream that drains the area of known mineralization. There is a moderate level of deer hunting recognized in the area.

Mineral Development Potential

The possible three-mile extent of mineralized rock, as indicated by geophysics and geochemistry, encourage continued exploration of this deposit. However, the evident lack of continuity of the copper mineralization warrants a medium mineral development potential for the area. The mining claims associated with this property are no longer active, so the area has reverted to a wilderness designation where mineral development is not allowed.

Mt. Muravief KMDA[2]

Location / Access

Mt. Muravief is located on the southeast side of Baranof Island, north of Port Herbert and just south of Deep Cove, which is near Patterson Bay (Plate 1, KMDA no. 12). The three mineralized areas on Mt. Muravief are located between 2,400 and 3,000 feet elevation, above the local treeline. The area is marked by rugged topography with Mt. Muravief standing at 3,330 feet. The general area may be accessed by boat. Cliff Lake to the north and Deer Lake to the south are suitable for float plane landing. However the high elevation of the occurrences makes helicopter access preferable (see Fig. 8).

History / Production

Donald MacDonald, now of Pelican, Alaska, reportedly brought pieces of copper-bearing rock to the Bureau of Mines in Juneau for identification sometime around 1969. Copper had originally been discovered in the area in the 1930's when a 'Vevelstad' held claims there (D. MacDonald, personal communication). A petrographic report, generated by MacDonald's request for sulfide identification (Gnagy, 1969), was discovered by BLM personnel during the current study. Examination of the area in the fall of 1996 resulted in the location of three mineralized occurrences on Mt. Muravief. Only one of the occurrences shows evidence of development, which includes minor stripping and a small opencut. No production has occurred from the property.

Geology

The copper occurrence at Mt. Muravief is associated with greenstone lenses hosted in Cretaceous Sitka Graywacke. The mineralized rock is commonly concentrated along the greenstone-graywacke contacts and occurs in both lithologies. The association between the copper mineralization and greenstones is unclear, although the secondary nature of mineralization is apparent. A specific deposit type has not been determined for the occurrence.

BLM personnel located copper-mineralized rock in three main areas on the slopes of Mt. Muravief; 1) in a cirque on the southwest side of the mountain, 2) on a ridge extending from the peak to the west, and 3) on the north face of the mountain (see Fig. 8). In each of these areas the copper minerals are associated with lenses of greenstone within the surrounding

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[2]Additional information on the South Baranof area including Mt. Muravief is provided in the "BLM Work in 1997" section of this report (p. 73).

metasedimentary rocks. The lenses are up to 100 feet wide and extend up to 1,000 feet along strike. Overall, the lenses strike generally to the northwest and dip steeply to the southwest.

Copper minerals in the area occur disseminated in greenstone and graywacke, in massive sulfide lenses, and associated with a volcaniclastic breccia. The sulfides, mainly pyrrhotite and chalcopyrite, occur in seams parallel to the foliation and in patches that cut across the foliation. The greenstone and graywacke hosting the disseminated minerals are commonly iron-stained and schistose.

BLM personnel collected 32 samples from the 3 mineralized areas on Mt. Muravief. The samples indicate copper grades up to 6.33% (Plate 2, Map no. 301, sample 1473), gold to 600 ppb (Plate 2, Map no. 302, sample 1433), silver to 14.5 ppm (Plate 2, Map no. 301, sample 1474), and zinc to 2,200 ppm (Plate 2, Map no. 301, sample 1474). A sample across 18 feet of the mineralized, altered schist on the west ridge returned 1.63% copper, 3.6 ppm silver, and 560 ppm zinc (Plate 2, Map no. 301, sample 1427).

Two hundred and twenty stream sediment samples were collected from Baranof Island, south of the South Baranof Wilderness area, in an attempt to locate additional copper occurrences. Copper-, zinc-, gold-, and silver-anomalous samples were present in the sample set (see Fig. 10) and follow-up traverses were made to locate sources, however, no significant occurrences were discovered.

Copper-mineralized rock was examined in several locations in the Mt. Muravief area. However, the location of the occurrence described by Gnagy (1969) that led the BLM to the area may not have been located. The petrographic report describes stringers of massive chalcocite; no such occurrence was discovered during the field examination.

Land Use and Resource Issues

There are three land use and resource issues identified in the Mt. Muravief KMDA. They relate to 1) a recreation area, 2) anadromous fish streams, and 3) Sitka black-tail deer hunting.

The primitive recreation designation covering the Mt. Muravief KMDA does not specifically preclude mineral development. Development, however, would have to include mitigation measures to protect the anadromous fish streams in the area. At least one anadromous fish stream drains the area with the known occurrence on the north side of Mt. Muravief itself. There is a moderate level of deer hunting recognized in the area as a whole, but hunting pressure is likely to be low in the immediate Mt. Muravief vicinity.

Mineral Development Potential

The Mt. Muravief area has a low mineral development potential. The style of mineralization present is not common elsewhere in southeast Alaska, and is not known in deposits with historic development. In addition, the greenstones with which the mineralization is associated are limited in occurrence on southern Baranof Island. The geochemical stream sediment sampling program carried out by the BLM did not locate significant mineralized rock.

The Mt. Muravief area deserves further examination, however. The "massive chalcocite from stringers" mentioned in a petrographic report from the area (Gnagy, 1969) was not located by the BLM during the present study. Although the development potential remains low, the possibility of additional mineral occurrences in the area may be investigated.

OTHER MINES, PROSPECTS, OR MINERAL OCCURRENCES

Kaiser Gypsum Mine

The Kaiser Gypsum Mine is located on eastern Chichagof Island at Iyoukeen Cove, about 35 miles southwest of Juneau (Plate 1, Prospect no. P21). The deposit and mine workings are located about one mile up Gypsum Creek, north of Iyoukeen Cove.

Gypsum was first discovered at Iyoukeen Cove in 1902. Soon after, the Pacific Coast Gypsum Company began developing the deposit. Workings consisted of two shafts, a raise, and up to 3,500 feet of drifts. The deepest workings were 300 feet below the surface. Pacific Coast Gypsum produced 500,000 tons of gypsum from 1906 to 1923. Flooding by a creek that cuts across the property was an ongoing problem at the mine, and pumps were necessary to keep the underground workings open (Stewart, 1932b; Flint and Cobb, 1953). In 1923 the mine flooded and was closed. The mine's closure may have been due to the flooding or lack of adequate reserves (Flint and Cobb, 1953). The Bureau of Mines drilled the deposit in the early 1960's, but drilling difficulties prevented the calculation of resources. Six claims covering the deposit were patented in 1915 (MS647). The patented claims apparently became delinquent for tax reasons and were acquired by the Kaiser Gypsum Company in the late 1950's (unpublished BLM records).

The Kaiser Gypsum deposit is hosted in the limestone and shaley limestone of the Mississippian Iyoukeen Formation. It consists of translucent gypsum, mostly pure white in color with irregular narrow gray bands. A limestone breccia that may be a fault breccia or an intraformational breccia at the top of the limestone is in contact with the gypsum. The limestone is cut by irregular lamprophyric dikes. Whether the deposit is sedimentary or hydrothermal in origin has not been established (Flint and Cobb, 1953; Loney and others, 1963). A petrographic examination of samples from Iyoukeen Cove led Gnagy (1962) to suggest the gypsum to be tectonically mobilized and of sedimentary origin.

Resources at the Kaiser Gypsum Mine have not been determined. It is possible that the Pacific Coast Gypsum Company ceased operations in 1923 because of flooding and not because of a lack of adequate reserves. In 1924 the Standard Gypsum Company acquired the property and tried unsuccessfully to resume operations. The fact that this company attempted to reactivate the mine suggests that they may have had some knowledge of additional reserves (Flint and Cobb, 1953). On the other hand, the Standard Gypsum Company also acquired the nearby Camel Gypsum property in 1924, and may have tried to begin commercial operations there (Redman, 1989). They may have had no knowledge of additional reserves at the Kaiser Gypsum Mine. BLM records mention a possible 4.5 million-ton reserve of gypsum remaining in the Kaiser deposit. This figure was apparently derived from descriptions of the underground workings of the mine at the time of closure and was mentioned by J. Cole, of the Kaiser Gypsum Company (unpublished BLM records).

Camel Gypsum

The Camel Gypsum deposit is located on the east side of Chichagof Island at Iyoukeen Cove, about 35 miles southwest of Juneau (Plate 1, Prospect no. P20). The gypsum deposit and workings are located near the beach and are accessible by boat or float plane.

Gypsum was discovered at the Kaiser Gypsum property (p. 67) near Iyoukeen Cove in 1902 (Flint and Cobb, 1953). In 1910, a second deposit was discovered at the Camel Gypsum property, about 1.2 miles to the east. By 1942 the Camel Gypsum deposit had been developed by 5 adits, 3 winzes, and a sublevel drift with a total length of 1,060 feet (Jermain and Rutledge, 1952). In 1946, Fir-Tex Insulation Board Company of Oregon optioned the property (Flint and Cobb, 1953). In 1948, Bureau of Mines engineers cleaned and pumped out the winzes and adits, mapped and sampled the property, and drilled two holes (Jermain and Rutledge, 1950, 1952). In 1962 the Bureau of Mines conducted further development work, drilling an additional four holes (U. S. Bureau of Mines, 1962).

The gypsum deposit is hosted in the limestone and shaley limestone of the Mississippian Iyoukeen Formation (Loney and others, 1963). It consists of gypsum, mostly pure white in color, which in places grades to light bluish gray. The gypsum is fine grained and translucent, and approaches alabaster in grade (Jermain and Rutledge, 1952). It is associated with cream or buff limestone breccia and dark-gray cherty limestone. The origin of the deposit has not been determined. Whereas the proximity of a quartz monzonite intrusive supports a hydrothermal origin, the deposit's restriction to the highest part of the Iyoukeen Formation suggests a sedimentary origin (Loney and others, 1963). Gnagy (1962) suggests a tectonically mobilized deposit of sedimentary origin, based on petrographic examination of gypsum samples.

According to unpublished information generated by the 1948 Bureau of Mines examination, "the Camel Gypsum deposit is of small economic importance." Based on sampling and drilling of the deposit, the Bureau of Mines estimated an indicated and inferred resource of 92,500 tons of gypsum (Jermain and Rutledge, 1950).

Sealion Cove

Narrow quartz veins are exposed in the intertidal zone near Sealion Cove, on the northwest end of Kruzof Island (Plate 2, Map no. 173). BLM personnel examined the area in 1995 and 1996 (Maas and others, 1996; Bittenbender and Still, 1997). Quartz veins in the area were originally reported by Loney and others (1963) as containing molybdenum and minor copper. BLM sampling revealed low copper and molybdenum values, but anomalous gold concentrations.

The Sealion Cove quartz veins are from a quarter to a half foot in width, and are oriented from about 300° to 070° and have steep dips. They commonly pinch and swell, and anastomose along strike. The veins are exposed for up to 100 feet along strike, between tidewater and inland vegetation. They crop out for about 200 feet along the shoreline. The veins are hosted by hornfelsed graywacke and generally crosscut felsic dikes that intrude the area. Bedding in the graywacke is oriented about 310°. A brecciated zone in the hosting hornfels includes graywacke clasts and quartz stringers. The zone contains minor pyrrhotite that locally comprises up to one to two percent of the rock. There is no obvious structural control to the veining in the area. Small northerly trending faults, with offsets of one to two feet, cut the veins in some places.

The quartz veins contain minor amounts of sulfides including pyrrhotite, arsenopyrite, and chalcopyrite. Vein samples revealed gold values up to 2,450 ppb (Map no. 173, sample 2769). One sample of the graywacke hornfels adjacent to the vein contained 2,360 ppb gold and 6,900 ppm arsenic (Map no. 173, sample 1460). Higher gold values are commonly associated with the higher arsenic values. Samples of the brecciated zone in the hornfels contained very low precious metal values (Map no. 173, samples 1462, 1463).

Big Ledge

The Big Ledge prospect (Plate 2, Map no. 106) is situated at an elevation of 500 feet, on the north side of Tenakee Inlet, about 8 miles east of Tenakee Springs and 1.6 miles west-southwest of East Point. The prospect consists of a nickel-copper bearing dike exposed in a small gully. The site was discovered sometime prior to 1923, when it was examined by Buddington (1925). Claims covering the prospect were staked and maintained between 1955 and 1957, otherwise no activity or development has been recorded (unpublished BLM records).

BLM personnel examined the Big Ledge occurrence in 1995. The occurrence consists of sulfides hosted in a mafic dike. The dike is oriented north-south and vertical to steeply eastward dipping. It is exposed for about 100 feet on the east bank of a steep gully and is about 40 feet thick at one end and about 10 feet thick at the other. Whether the wedge shape is due to incomplete exposure or a fault that cuts the dike has not been determined. Gouge along the western edge of the dike indicates fault movement, but heavy vegetative cover prevents definitive determination. The dike is cut off along strike by a fault in the creek that forms a gully to the south and is covered by vegetation to the north. About 40 feet north and above the dike is a 25-foot trench, 2 feet wide that is sloughed and overgrown. Only conglomerate rubble was found in the bottom of the trench. The dike is hosted by a conglomerate member of the Silurian to Devonian Kennel Creek Limestone (Loney and others, 1975). Prominent iron staining marks weathered surfaces of the mafic dike.

Sulfides in the dike at Big Ledge include pyrrhotite, chalcopyrite, pyrite, and pentlandite, and occur as stringers, knots, and disseminations. The stringers are commonly parallel to the margins of the dike and average about one eighth inch thick. One stringer ranged up to half an inch thick and 2.8 feet long. Shearing of the dike is evident parallel to the stringers. The knots of sulfides are up to six inches across.

Samples collected by BLM personnel reveal moderate grades of copper and nickel with some zinc, cobalt, gold, and silver. The weighted average of two samples returned 0.84% nickel and 0.91% copper over 40 feet (Map no. 106, sample nos. 2051, 2052). Another measured sample contained 0.96% nickel, 2.25% copper, 8.8 ppm silver, and 502 ppb gold over 4 feet (Map no. 106, sample no. 2120). A select sample contained 4.4% nickel, 7.02% copper, 1,066 ppm zinc, 910 ppm cobalt, and 22 ppm silver (Map no. 106, sample no. 2121).

East Point Pit

A rock pit located on the south side of a road above East Point (north of Tenakee Inlet) was examined during this study (Plate 2, Map no. 104). The pit is about nine miles east of Tenakee Springs and eight tenths of a mile due east of East Point. The pit contains float boulders with massive sphalerite and associated galena and chalcopyrite. Limestone of the Silurian to Devonian Kennel Creek Formation (Loney and others, 1975) is the dominant rock type in the pit, although a mafic dike trending 015° and dipping 60° northwest cuts through the pit. The dike may be related to the sulfide mineralization. A few of the sulfide-rich boulders contain pieces of dike material. Other dikes found in the pit contain pyrite and/or pyrrhotite, but no other sulfides were found.

The sphalerite is reddish-black and yellow in color and occurs as large clots up to three inches across, and as wisps, tubes, and disseminations. It appears to have selectively replaced parts of the limestone, and does not appear to be structurally controlled. Galena and chalcopyrite are found in lower concentrations within the sphalerite. Much of the limestone outcrop near the dikes contains ankerite or siderite, but no sulfides were found. High-grade samples contained up to 52 ppm silver, 26.4% zinc, 1.74% lead, and 460 ppm copper (Map no. 104, samples 2048, 2119).

Gypsum Creek

BLM geologists examined rock exposures along a logging road on the north side of Gypsum Creek (Plate 2, Map nos. 57-66). Skarn mineralization is exposed in two rock pits and several road cuts, and occurs on both sides of the contact between fossiliferous cherty limestone and granodiorite. The limestone is part of the Mississippian Iyoukeen Formation and the intrusive has been mapped as hornblende-biotite adamellite (Loney and others, 1975).

The easternmost pit is the larger of the two pits and exposes a zone of sheared hornfels and endoskarn up to 60 feet wide. This zone locally contains abundant pyrite, pyrrhotite, and minor chalcopyrite. Garnet, epidote, diopside, and calcite are evident in the endoskarn. A sample of massive pyrrhotite with small stringers of chalcopyrite contained 116 ppm copper and 310 ppm nickel (Map no. 57, sample 2076). No precious metal values were found in the sample. Pyrite seams up to half an inch thick are found in the limestone.

The west pit is located about two and a half miles to the west and exposes similar, but less extensive skarn minerals. A two-foot-wide zone of gossanous, mineralized hornfels containing chalcopyrite and pyrrhotite was sampled and contained 2,210 ppm copper (Map no. 64, sample 2080). Two samples taken from rubble in the pit (Map no. 65, samples 2139-2140) contained up to 1,950 ppm copper, 28 ppm molybdenum, 300 ppm cobalt, 0.4 ppm silver, and 50 ppb gold. Although the metal values in the skarn are low, the presence of this type of mineralization is noteworthy. These exposures broaden the extent of skarn-type deposit potential on the east side of Chichagof Island.

BLM WORK IN 1997

Mt. Muravief

A copper occurrence in the Mt. Muravief area (Plate 2, Map nos. 301-305) on southern Baranof Island was apparently discovered in the 1930's. At that time, claims in the area were reportedly held by 'Vevelstad.' Donald MacDonald, a prospector, found additional mineralized rock in the area and brought samples to the Bureau of Mines office in Juneau for sulfide mineral identification (D. MacDonald, personal communication). A subsequent petrographic report indicated the presence of chalcocite and bornite in the samples. The report described "massive chalcocite from stringers" and other outcrops of copper-bearing rocks on the slopes of Mt. Muravief (Gnagy, 1969). Following up on the report, BLM workers located copper minerals in the area in the fall of 1996. During 1997, workers mapped and sampled the occurrence. In an effort to locate additional mineralized rock in the area, a stream sediment geochemical sampling plan was carried out. Anomalous sample results were investigated without finding significant additional occurrences.

The Mt. Muravief area is located within the Chugach terrane (Monger and Berg, 1987). On southern Baranof Island, the terrane is composed of the Sitka Graywacke (Loney and others, 1975), which represents a Cretaceous accretionary wedge complex of flysch and melange (Plafker and Berg, 1994). The area was mapped by Loney and others (1975) as lineated, schistose graywacke and slate, where the Sitka Graywacke has undergone dynamothermal metamorphism.

The country rock in the Mt. Muravief area consists of interlayered graywacke and argillite, with minor greenstone (Fig. 8). In places the layering of the graywacke and argillite is distinct; in others, ductile deformation has transposed bedding such that stretched, rounded clasts and boudins of graywacke are surrounded by argillite. The rock is well foliated with foliation generally striking to the northwest and dipping steeply to the southwest. Tight to open folds, defined by folded foliation surfaces and compositional layering, have axes that plunge about 30° to the southeast. Iron staining is common on weathered surfaces. The staining is probably derived from oxidation of pyrrhotite that commonly occurs in elongate lenses parallel to the foliation.

Several sets of brittle faults cut the rocks in the Mt. Muravief area and postdate the metamorphic fabric and folding. The faults shown in Figure 8 were determined from air photo lineations and from ground observation. The northwest and east-west trending faults appear to be the youngest and crosscut the more predominant northeast trending faults. Only small offsets were observed on any of the faults in the area. Indicators of sense-of-movement were not definitive.

BLM personnel located copper-mineralized rock in three main areas on the slopes of Mt. Muravief; 1) in a cirque on the southwest side of the mountain, 2) on a ridge extending from the peak to the west, and 3) on the north face of the mountain (Fig. 8). In each of these areas the copper minerals are associated with lenses of greenstone within the surrounding metasedimentary rocks. The lenses are up to 100 feet wide and extend up to 1,000 feet along strike. Overall, the lenses strike generally to the northwest and dip steeply to the southwest. They are elongate parallel to the foliation in the metasediments. The contacts between greenstone and metasediments appear to be depositional or intrusive and predate the metamorphic fabric. The lenses are tightly folded, with fold axes plunging 15° to 40° to the southeast (Fig. 9). The folds are commonly asymmetric, which in places are consistent with parasitic folds on larger fold structures. The greenstone lenses show some evidence of brittle deformation, whereas the surrounding country rock shows evidence of more ductile deformation. In places, tension gashes filled with quartz are limited to the greenstone.

The greenstone is dark greenish gray, fine- to medium-grained, and commonly well foliated (greenschist). It is made up predominantly of plagioclase, biotite, chlorite, and calcite with minor amphibole and epidote. The amphibole commonly forms porphyroblasts that crosscut the metamorphic foliation. The calcite occurs in lenses and pods that when weathered, causes the greenstone to have a pitted surface.

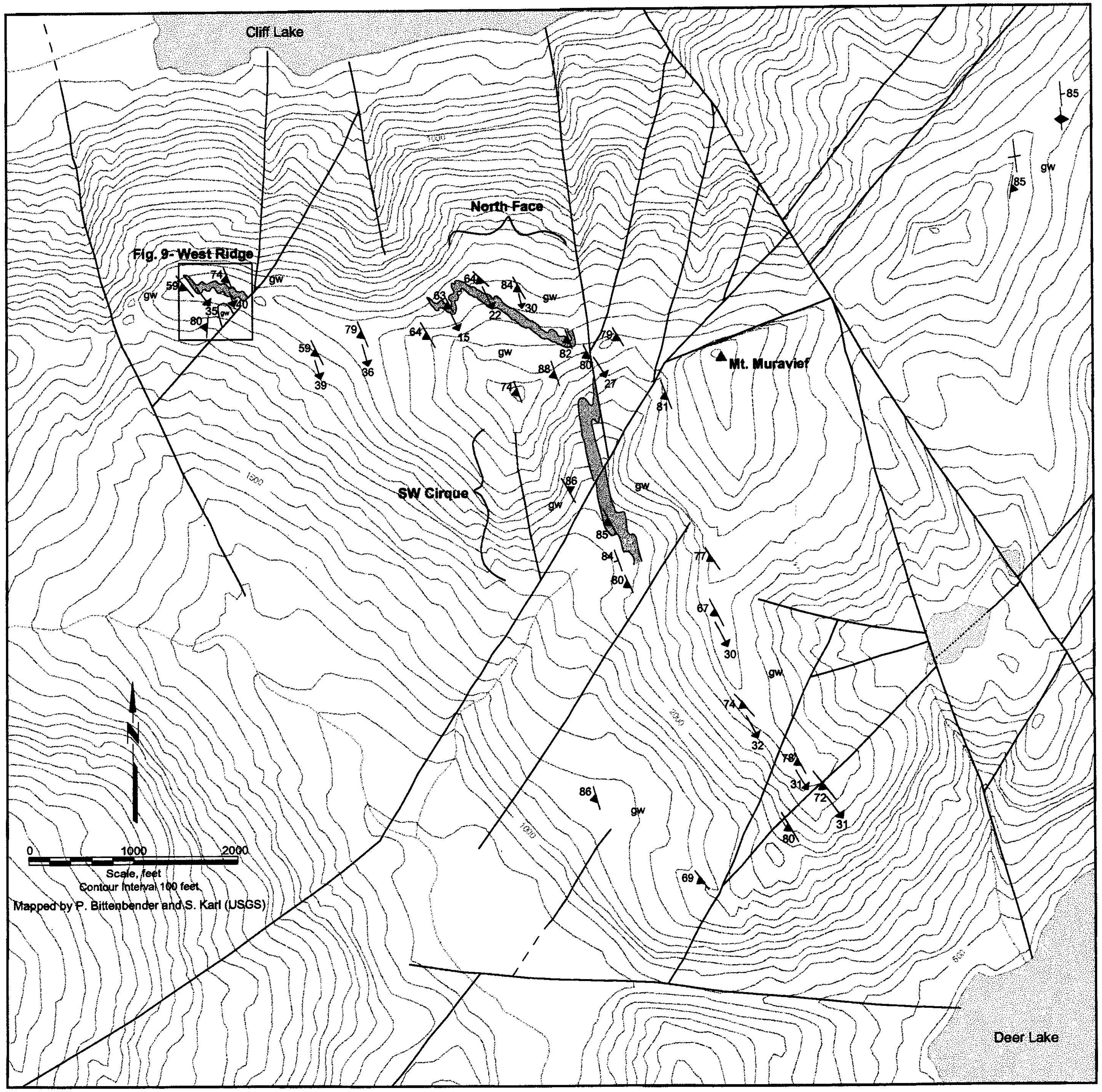
The copper minerals in the area occur disseminated in greenstone and graywacke, in massive sulfide lenses, and associated with a volcaniclastic breccia. At the West Ridge (Fig. 9), North Face, and SW Cirque occurrences, disseminated copper minerals are associated with an iron-stained, schistose part of the greenstone. This altered zone is commonly concentrated near the greenstone-graywacke contact and occurs on both sides of the contact. The associated schists contain biotite, chlorite, plagioclase, and amphibole, plus sulfides. The sulfides, mainly pyrrhotite and chalcopyrite, occur in seams parallel to the foliation and in patches that cut across the foliation.

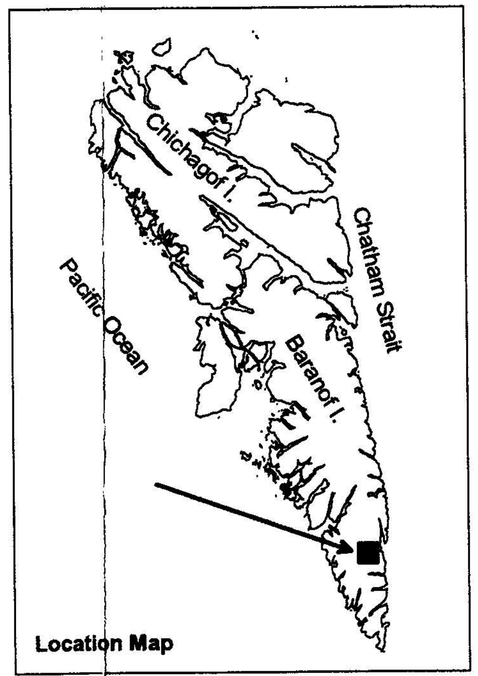
Along the west ridge of Mt. Muravief, massive lenses of sulfide occur within the band of altered schists. The lenses are up to 3 feet wide and extend up to 10 feet along strike. The lenses are parallel to the surrounding foliation; they strike about 315° and dip about 60° to the southwest. Sulfides include pyrrhotite, chalcopyrite, sphalerite, and bornite. A few small specks of native copper were also found within a massive sulfide lens.

Copper minerals in float were found below the greenstone lens in the southwest cirque of Mt. Muravief. BLM personnel found a 12-foot by 8-foot by 3-foot boulder composed of metamorphosed volcaniclastic breccia in which coarse-grained chalcopyrite and pyrrhotite is found in the matrix. Chalcopyrite is also disseminated in the fine- to very fine-grained metavolcanic clasts in the breccia. The breccia exhibits evidence of high strain with elongated clasts and a matrix that has flowed around the clasts. Small isoclinal folding of the clasts is also common.

In several locations on the north face of Mt. Muravief malachite stains greenstone surfaces. The source of the copper stain is chalcopyrite that is disseminated in the greenstone, concentrated along fracture surfaces, and forming patches and seams parallel to the foliation. One sample of this copper-bearing greenstone contained up to 3,900 ppm copper and 110 ppb gold (Map no. 303, sample 1444).

BLM personnel collected 32 samples from the 3 mineralized areas on Mt. Muravief. The samples indicate copper grades up to 6.33% (Map no. 301, sample 1473), gold to 600 ppb (Map no. 302, sample 1433), silver to 14.5 ppm (Map no. 301, sample 1474), and zinc to 2,200 ppm (Map no. 301, sample 1474). A sample across 18 feet of the mineralized altered schist on the West Ridge returned 1.63% copper, 3.6 ppm silver,





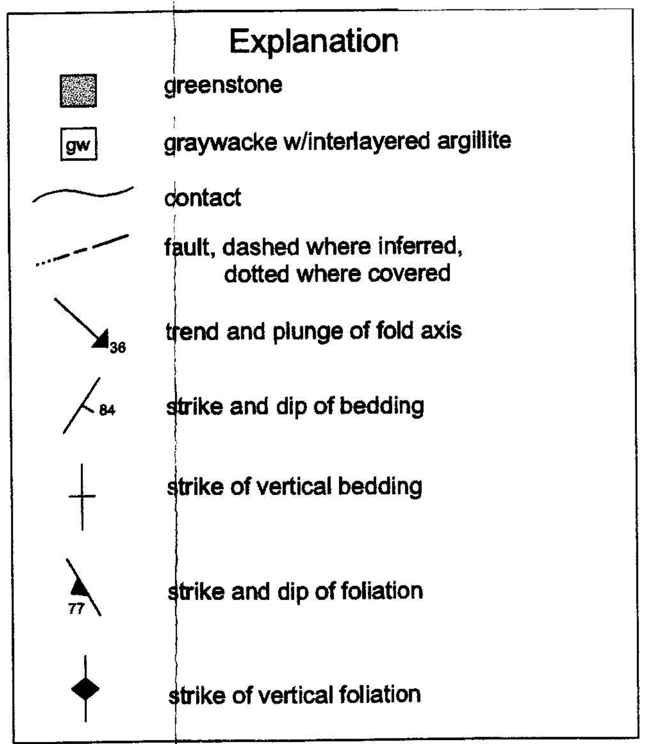


Figure 8. - General geologic map of the Mt. Muravief area.

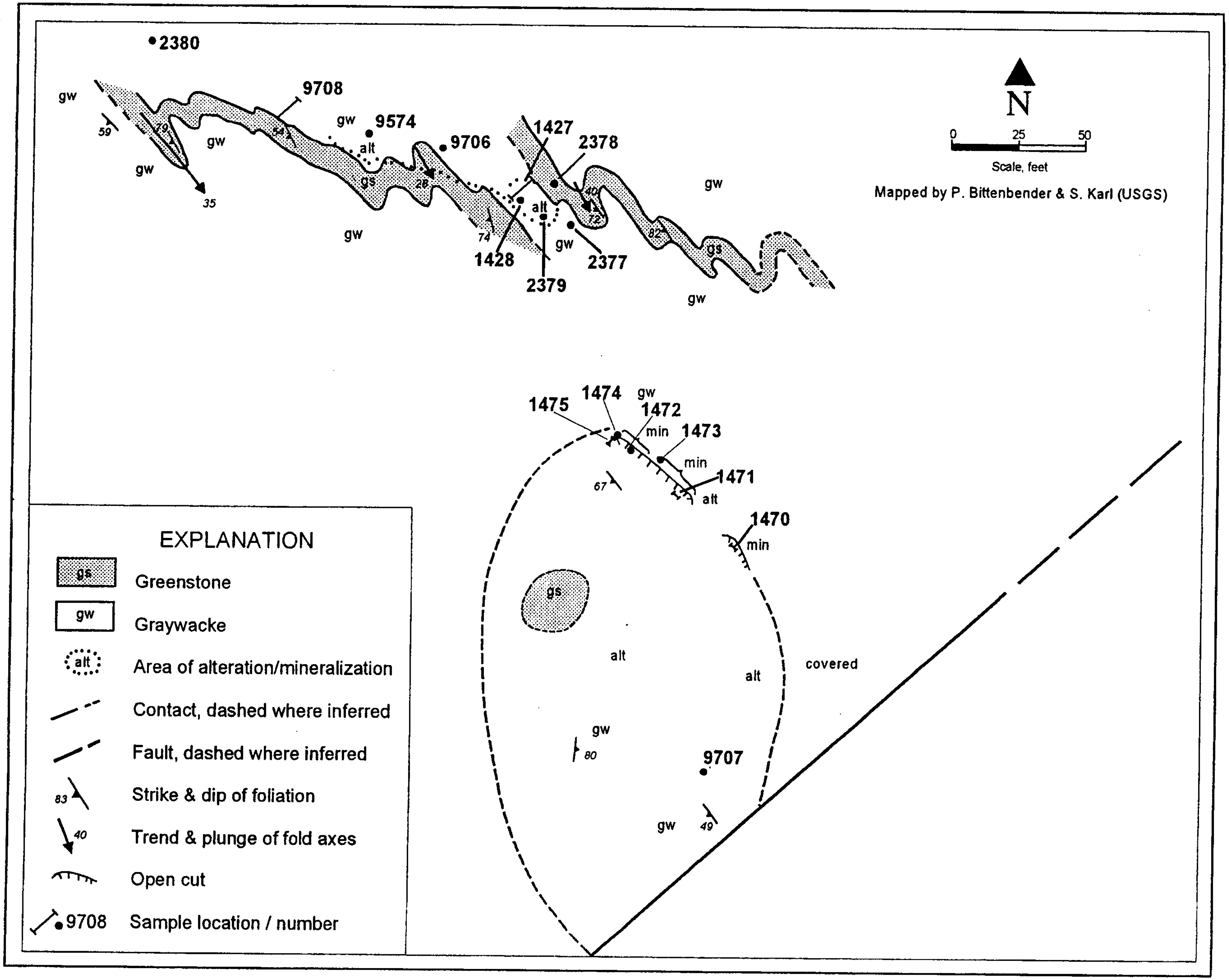


Figure 9. Geologic map of the Mt. Muravief, West Ridge exposure (Plate 2, Map no. 301).

and 560 ppm zinc (Map no. 301, sample 1427). The copper grades indicated by the sampling are lower than would be expected from examination of the massive sulfide lenses. However, closer examination indicates that the predominant mineral is pyrrhotite and that the chalcopyrite in the samples is mottled, with more than 50% made up of very fine-grained inclusions of an unidentified material.

Two miles west-southwest of Mt. Muravief, BLM personnel located another lens of foliated greenstone that is about 100 feet wide and extends about 400 feet up the slope of a mountain. Within the predominantly greenstone lens are sections of interlayered greenstone and argillite/graywacke with layers about 5 to 10 feet thick. In the interlayered sections the greenstone is silicified and iron stained, and contains minor chalcopyrite. One sample of the altered greenstone contained 1,300 ppm copper (Plate 2, Map no. 296, sample 1512).

Two hundred and twenty stream sediment samples were collected from Baranof Island, south of the South Baranof Wilderness area, in an attempt to locate additional copper occurrences. Copper-, zinc-, gold-, and silver-anomalous samples were present in the sample set and follow-up traverses were made to locate sources. No significant occurrences were discovered. Figure 10 shows the localities of the samples collected and highlights the anomalous samples. Anomalous values were assigned by natural breaks in the sample sets that in each case were above the 95th percentile and/or 2 standard deviations above the mean. Anomalous value thresholds for copper, zinc, gold, and silver are shown in Figure 10. Analytical results from the stream sediment samples are presented in Appendix Table B-1 (between Map nos. 260 and 487, marked with an "SS" sample type).

The copper mineralization at Mt. Muravief appears to be epigenetic. It has been found only where greenstone lenses occur, but it cuts across greenstone-graywacke contacts. The association of copper mineralization and greenstone may be because the greenstone was the source for the copper. However, even though the quantities of copper are small, it far exceeds the quantity expected in the small amount of greenstone exposed. An alternate explanation for the association is that the competency contrast between the greenstone and graywacke may have provided avenues for fluid migration during deformation.

Copper-mineralized rock was examined in several locations in the Mt. Muravief area. However, the location of the occurrence described by Gnagy (1969) that led the BLM to the area may not have been located. The petrographic report describes stringers of massive chalcocite; no such occurrence was discovered during the field examination.

Freshwater Bay

In 1997, BLM personnel examined a molybdenite and skarn occurrence located in a rock pit on Kennel Creek near Freshwater Bay on the east side of Chichagof Island (Plate 2, Map no. 87). Jim McDonald, an equipment operator on contract to the Forest Service, brought a piece of rock containing molybdenite into the BLM office in Juneau. Subsequent examination of the pit included sketch mapping and sampling.

The Freshwater Bay occurrence consists of molybdenite associated with a felsic intrusive that has intruded, migmatized, and hornfelsed the host sedimentary rock. A skarn mineral assemblage with minor sulfides occurs in the country rock and likely accompanied the intrusion (Fig. 11).

The country rock in the rock pit area is a metamorphosed conglomerate and banded hornfels. These rocks are probably part of the Silurian Point Augusta Formation (Loney and others, 1975). The conglomerate commonly contains pebble- to cobble-sized, rounded fragments of felsic and mafic intrusive rocks. Elongated fragments and mineral lineations define a crude foliation in the conglomerate. The conglomerate matrix is a siliceous, dark green-gray, fine-grained hornfels. Intrusive fragments in the conglomerate in places appear to be migmatized and have scalloped to wavy edges. Some originally rounded fragments are not only flattened, but also stretched. Alteration in the conglomerate includes chloritization and the formation of skarn minerals.

Skarn minerals occur in pods and veins that cut across the foliation of the conglomerate. The pods are up to two feet across and three feet long, but, along with the veins, are generally only one to two inches across. Skarn minerals include garnet, epidote, chlorite, and minor wollastonite or tremolite. The pods are commonly zoned with calcite and wollastonite/tremolite in the middle, surrounded by garnet, then epidote, then chlorite. Minor sulfides are found in patches and seams, mainly in the matrix of the conglomerate. Sulfides include pyrrhotite and pyrite, plus a little chalcopyrite.

A leucocratic felsic intrusive crops out in several places in the rock pit. It is very light-colored, fine- to medium-grained, and includes minor mafic enclaves. It is made up predominantly of feldspar and quartz with less than five percent mafic minerals, mainly hornblende. Loney and others (1963, 1975) have mapped a Jurassic pluton of varying composition in the area. The intrusive in the pit likely corresponds to their mapped biotite alaskite or hornblende adamellite (Loney and others, 1975).

Molybdenite associated with the intrusive appears to be typical of porphyry-type occurrences. It commonly occurs as thin coatings on planar surfaces, in patches, and finely disseminated. In places the coatings are up to several tenths of an inch thick. Molybdenite is also associated with thin siliceous veinlets that commonly cut the intrusive and extend into the surrounding country rock. Patches and disseminations of pyrrhotite also occur in the intrusive.

Molybdenite is also associated with a mottled, dark grayish-green to dark gray, fine- to medium-grained migmatite. Mafic enclaves appear as breccia fragments in the altered, porphyritic melt fraction of the migmatite. In places the melt portion includes coarse, subhedral, phenocrysts of amphibole. The migmatite is cut by numerous siliceous veinlets and is commonly chloritized. Molybdenite occurs most commonly as surface coatings or seams, but also with the siliceous veinlets, in small patches, and finely disseminated. Pyrrhotite is the only other sulfide seen in the migmatite.

BLM personnel collected 10 samples from the rock pit to assess the molybdenite mineralization (Table 4). No mineralized rock was seen in outcrop; most molybdenite was seen in the pit rubble. Several select samples of migmatized rock from the contact zone were collected from

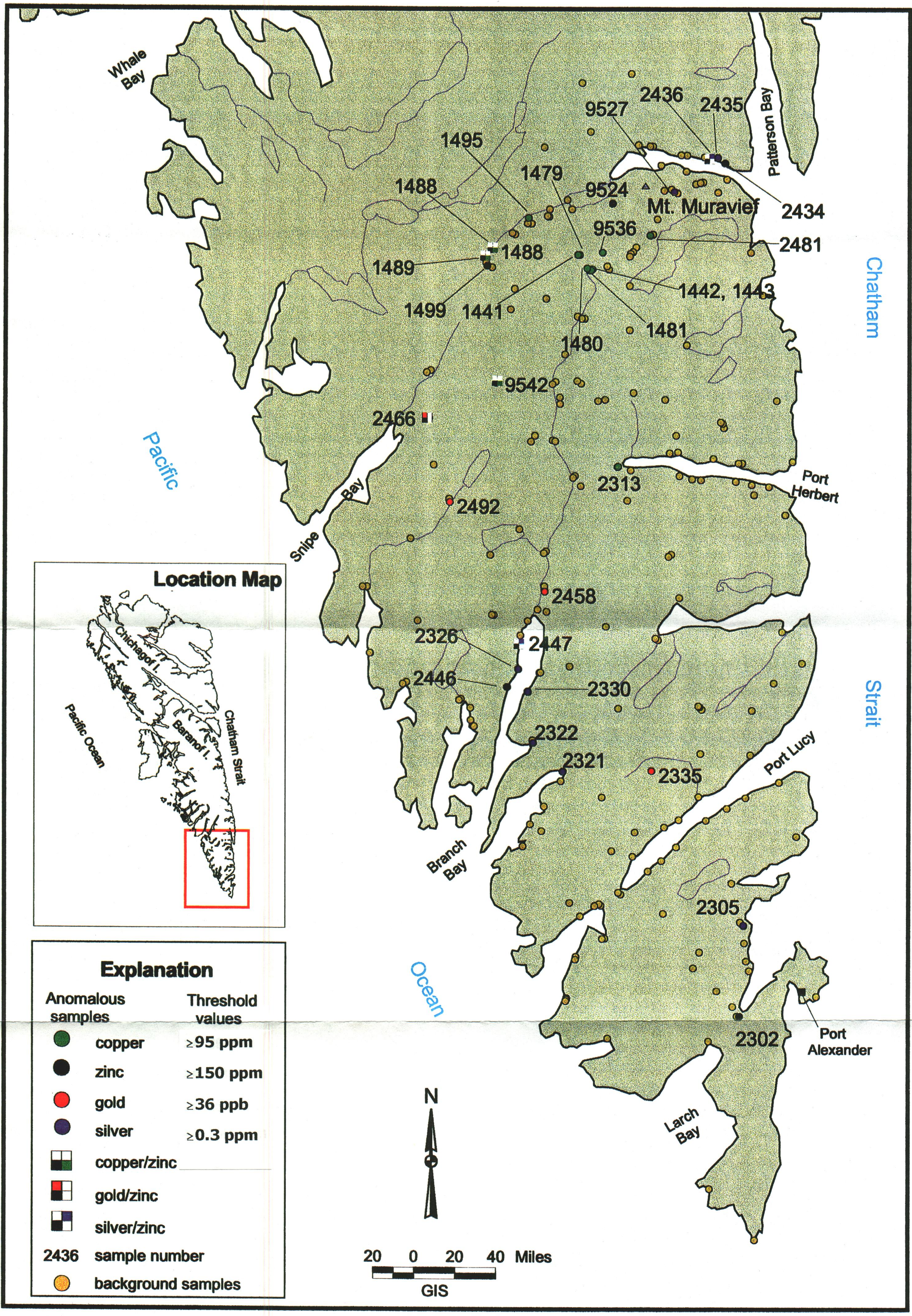


Figure 10. - Anomalous stream-sediment-sample sites, S. Baranof Island.

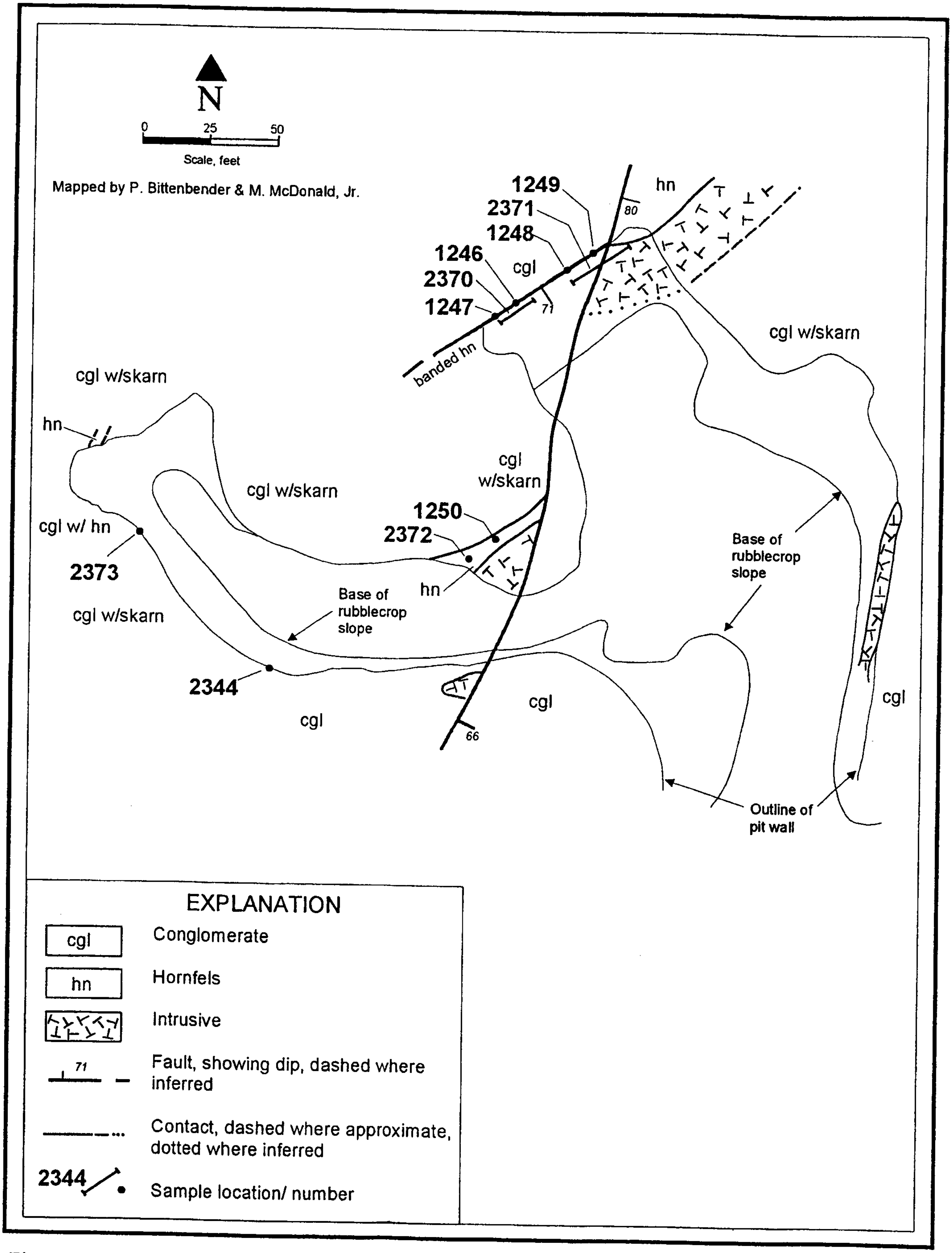


Figure 11. Geologic map of rock pit at Freshwater Bay molybdenum occurrence (Map no. 87).

pit rubble that contained up to 2,030 ppm molybdenum (sample 1248). Analyzed samples from the pit walls above the mineralized rubble failed to detect the molybdenum mineralization (samples 2370-71). No significant amounts of molybdenum were associated with the skarn assemblages.

The Freshwater Bay occurrence represents the intrusion of a molybdenum-bearing, felsic intrusive rock into metasedimentary country rocks. Migmatization and minor skarn mineral formation accompanied the intrusion. Porphyry-style molybdenum mineralization is associated with the intrusion itself as well as with the migmatized country rock and represents the later stages of intrusion. Additional work in the area should focus on the porphyry potential associated with the intrusion. No economic significance is indicated by the skarn occurrence at this location itself. However, additional small skarn occurrences have been identified in the area, particularly along Gypsum Creek, across Freshwater Bay to the northeast, and at East Point, to the southeast. The East Point Pit skarn and Gypsum Creek occurrences are described on page 70 of this report.

Table 4. Description and selected analytical results of samples collected at the Freshwater Bay rock pit. Sample locations are shown on Fig. 11. Abbreviation descriptions and additional analytical results can be found in Appendix B (p. 175)

Sam no.	Sam type	Sam size (ft)	Sam site	Sample description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Mo ppm	Fe %
1246	S		RC	Contact zone	<5	<0.1	73	5	12	409	2.24
1247	S		RC	Banded hornfels w/ quartz veins & blebs	<5	<0.1	134	11	11	611	3.03
1248	S	1.5	RC	Banded green/black hornfels w/in a pebble conglomerate	<5	<0.1	57	4	23	2030	2.04
1249	S		RC	Quartz-rich granodiorite at contact, minor banded hornfels	<5	<0.1	66	3	9	822	2.0
1250	S		RC	Dark garnet hornfels	<5	0.2	168	5	82	1566	6.66
2370	SC	15	TP	Fault surface in skarnified hornfels	<5	<0.1	75	8	30	76	2.89
2371	SC	25	TP	Felsic intrusive w/ minor pyrrhotite & pyrite	<5	<0.1	50	6	19	70	1.6
2372	RC		RC	Heavily iron-stained hornfels w/ disseminated pyrrhotite	<5	<0.1	116	6	97	54	6.28
2373	Rep	3	TP	Dark gray hornfels w/ disseminated pyrrhotite & trace pyrite	<5	<0.1	68	5	109	49	4.98
2344	G	0.5	TP	Iron-stained hornfels w/ fine-grained disseminated pyrite & pyrrhotite	<5	<0.1	65	5	26	46	2.35

SPECIAL SECTION: SILVER BAY AREA

Introduction

Mining activity in the Silver Bay area influenced the history of Sitka and of southeast Alaska. Joe Juneau and Richard Harris, the prospectors credited with the announcement of gold on which Juneau was founded, were grubstaked by George Pilz, who came to Alaska to develop Silver Bay mining properties (DeArmond, 1997a). Though the Silver Bay properties contributed little to Alaska's mining industry, they represent several firsts in the industry. The State's first developed lode gold mine and the first stamp mill were in the Silver Bay area. The gold occurrences in Silver Bay may have more historical than geological significance, however.

This section provides an overview of the Silver Bay area. It briefly discusses the area's general history and mineral production. The geologic setting and a model for vein formation is provided. More detailed history and site specific maps for selected properties are presented in the individual property summaries (beginning on p. 91). The summaries also discuss the work done by BLM personnel during the present study and the significant results of that work. Figure 12 shows the location of the various prospects in Silver Bay. Complete analytical results are available in Appendix B (p. 175). The "Map nos." listed with each property in the text refer to Figure 12 and Plate 2. The analytical table in Appendix B is ordered by these map numbers.

Location and Access

The Silver Bay area is located southeast of Sitka (Fig. 12). It includes historic mines, prospects, and mineral occurrences around Silver Bay itself as well as properties east of Sitka in the Indian River basin. Access to the properties near sea level is possible by small boat from Sitka and by floatplane. The higher elevation sites are most easily accessed by helicopter. Access to the area is also possible via private road along the northeast shore of the bay, which serves the Green Lake hydro-power station and reservoir. Several trails in the area allow access by foot as well.

History / Production

Mining activity in the Silver Bay area represents some of the first of its kind in Alaska. Prospecting for gold in the area began around 1871. The first gold reportedly discovered in the Sitka area was by an ex-soldier, Edward Doyle, who found gold-bearing float in the Indian River east of Sitka. Prospecting at the head of Silver Bay soon followed. Edward Doyle, Frank Mahoney, and William Dunlap are credited as the first gold prospectors in the Silver Bay area in about 1871 (DeArmond, 1997a). Initial development of the Stewart Mine in 1872 (Knopf, 1912) represents the earliest lode gold mining in Alaska (Alaska Yukon Mining Journal, 1901). The Stewart's stamp mill, which first operated in 1879, was the first to operate in Alaska. The first claims were recorded in 1874 for the Francis Lode, in the Lucky Chance Mine area (DeArmond, 1997a). The early interest in the Silver Bay area was curtailed by the exodus of miners to the new gold discoveries around Juneau in 1880-81. The Klondike Rush of 1897 also drew the interest of miners away from the area. Nonetheless, the Silver Bay area has seen continued prospecting even to the 1990's. From 1981 to 1993, Phillips Petroleum held a block of up to 184 claims in the Silver Bay area. Over 100 years of activity has left behind a complex history of claim names, owners, and prospect development.

Despite the early start of mining in the area, Silver Bay produced only minor amounts of gold. The two most prominent properties, the Stewart and Lucky Chance Mines, boasted 10-stamp mills, but officially recorded no production. Newspaper accounts record the activity at the mines (DeArmond, 1997a) and, along with evidence from the properties themselves (e.g., stopes and tailings), indicate that only minor production occurred. The Stewart mill operated for one or two years and some of its production reportedly came from rock hauled in from other Silver Bay prospects (DeArmond, 1997a). Roehm (1940) cites an earlier report that about 60 tons of ore had been processed at the Lucky Chance mill by 1887. He also estimated that about 1,200 tons of ore were removed from the stopes at the mine (Roehm, 1940). The only other mill known in the area was at the Edgecumbe Exploration Company's Bonanza Nos. 21 & 22 claims on the southwest side of Silver Bay. This mill was apparently active in the 1940's, and may also have milled rock from other prospects in the area (J. Burgess, personal communication). No production figures are available, but evidence suggests that any production that occurred was minor.

Geology

Gold in the Silver Bay area is hosted in quartz veins in graywacke and argillite of the Cretaceous Sitka Graywacke. The Sitka Graywacke is part of the Chugach terrane (Monger and Berg, 1987) which represents an accretionary complex of flysch and melange (Plafker and Berg, 1994). The discontinuous quartz veins and lenses are up to 16 feet thick (e.g., Stewart), but are generally barren. They commonly include fragments and partings of graywacke and argillite, but very few sulfides. The sulfides present are pyrite, pyrrhotite, arsenopyrite, and rare galena. The veins and lenses are commonly parallel to the structure in the country rock, which is generally northwest trending and steeply dipping.

Recent work by the USGS has correlated Eocene magmatism related to subduction off the coast of Chichagof and Baranof Islands with vein formation in Silver Bay (Haeussler and others, 1995). They relate the thermal event responsible for the magmatism and mineralization to subduction of a slab window beneath the overlying accretionary complex. An age of 49.4 Ma, from white mica in quartz veins from the Lucky Chance Mine, correlates to subduction of the Kula-Farallon spreading ridge beneath the North American plate. The quartz veins in Silver Bay were emplaced along fractures that may have propagated during subduction of the topographic high related to the spreading ridge (Haeussler and others, 1995). Alternatively, the veins may have been controlled by preexisting faults such as those of the Sitka fault zone (Loney and others, 1975; Brew, 1997).

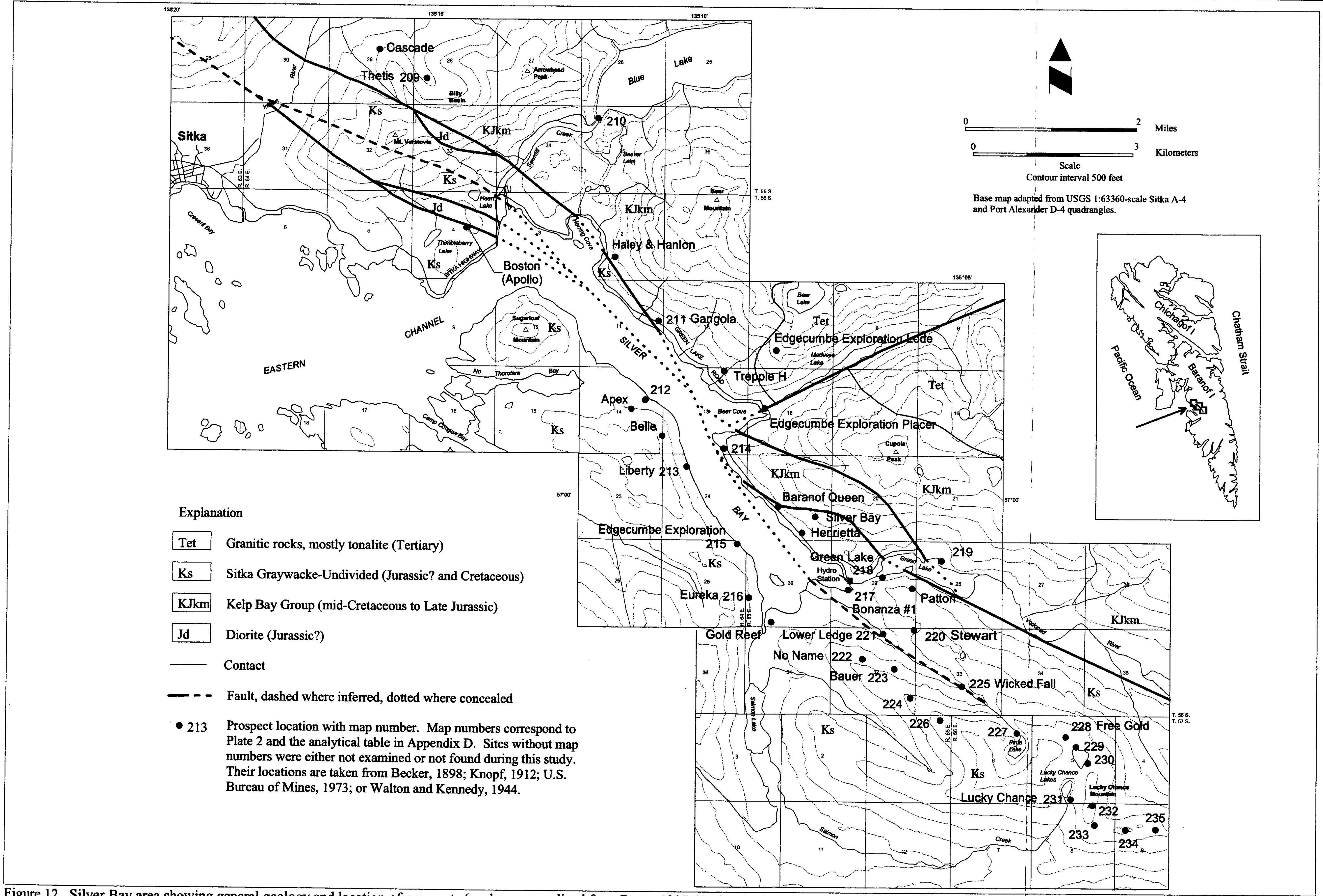


Figure 12. Silver Bay area showing general geology and location of prospects (geology generalized from Brew, 1997; Karl and others, 1990; Loney and others, 1975).

Selected Mines and Prospects

THETIS (Fig. 12, Map no. 209)

The Thetis prospect is located in an area known as Billy Basin, on the east fork of the Indian River, northeast of Sitka. The Thetis claim was one of four claims staked in the area by William Millmore in 1888 (DeArmond, 1997a). Reference is made to the property in Becker (1898) and Wright and Wright (1905). These publications report two adits in the area as well as a sawmill and two "prospecting mills." Becker describes the occurrence as two and a half feet of quartz with calcite, pyrrhotite, and galena. He reports a mill test as yielding seven dollars worth of gold and one dollar of silver in 1898 (Becker, 1898). Based on a gold price of $20 an ounce, this gold grade equals 0.35 oz per ton, a value significantly higher than that found in most places in the Silver Bay area.

BLM personnel located, mapped, and sampled one adit in the Thetis area (Fig. 13). The 28-foot adit cuts graywacke with discontinuous quartz stringers. A quartz vein adjacent to a north trending fault in the adit was sampled along with a sample of the quartz stringers. Gold values were below analytical detection limits (sample nos. 1450-53).

GANGOLA (Fig. 12, Map no. 211)

Joseph Gangola, a Sitka prospector, staked a tungsten claim in 1970 on the northeast side of Silver Bay between Herring Cove and Bear Cove. BLM workers examined the area and found a quartz vein exposed in the bed of a small stream and two additional quartz veins located 130 and 145 feet to the southeast. The veins are hosted in Kelp Bay greenstone. They strike 035° to 070°, dip steeply, and are up to 1.5 feet thick along a 15-foot strike length. Scheelite, chalcopyrite, and pyrrhotite were found in the veins. The southernmost vein is exposed at an elevation of 260 feet by a small open cut measuring 5 feet wide. This vein contained the most sulfides and highest metal values. A 1.5-foot-long chip sample taken across the vein at the cut contained 80 ppb gold, 375 ppm copper, and 380 ppm tungsten (sample 2570). A sample of sulfide-bearing, iron-stained greenstone on either side of the vein contained 570 ppb gold, 960 ppm copper, and 1,100 ppm tungsten (sample 2572). A select dump sample of sulfide-bearing quartz contained 85 ppb gold, 260 ppm copper, and 760 ppm tungsten (sample 2573). Samples of the remaining quartz veins contained up to 450 ppb gold, 169 ppm copper, and 180 ppm tungsten (sample 2575).

APEX (Fig. 12, Map no. 212)

The Apex prospect is located on the west side of Silver Bay, northwest of the Liberty prospect. Historical reference to this property is limited to Knopf (1912). BLM geologists examined the Apex area and found abundant quartz float in a small creek, a quartz-breccia vein cropping out in a fault zone, and an eight-foot adit. The vein strikes 330°, dips 75° southwest, and is up to 1.7 feet wide. Arsenopyrite and trace chalcopyrite were found in the vein and associated gouge zone. A sample across the vein (sample 2018) contained 270 ppm copper, 44 ppm arsenic, and 0.2 ppm silver. A select sample of quartz float found in a nearby creek contained 920 ppm copper and 1.0 ppm silver (sample 2017). The highest gold value from the area was only 40 ppb (sample 2107).

LIBERTY (Fig. 12, Map no. 213)

The Liberty property is mentioned in a report on mining in Alaska during 1896 and 1897 (Becker, 1898). Its discovery date is unknown. The property includes 2 adits that are 30 feet and 300 feet in length (Fig. 14). The adits are adjacent to each other and are found within 10 feet of high-tide line on the west side of Silver Bay. The adits cut graywacke, graywacke and phyllite, and slate. In the longer adit, a discontinuous quartz vein is exposed for about 100 feet and is up to 5 feet wide. It is a continuation of a vein that is exposed in a creek 80 feet above the adit. The vein is situated along a fault zone between slate on the footwall, and graywacke and phyllite on the hanging wall, and in places forms the matrix of a fault breccia. The quartz contains minor amounts of sulfides, mainly pyrite. Analytical results revealed low precious metal values. The highest gold value was 60 ppb across 3 feet (sample 2236). Most of the samples had elevated arsenic values and two samples contained more than 2 ppm mercury (2235, 2236).

EDGECUMBE EXPLORATION, BONANZA NOS. 21 & 22 CLAIMS (Fig. 12, Map no. 215)

The Bonanza Nos. 21 & 22 claims were held by the Edgecumbe Exploration Company that was founded in Sitka in 1930. Charlotte Taylor, President of the company, had control over many of the mining claims in the Silver Bay area in the 1930's and 1940's (Plate 3; DeArmond, 1997a). The history of the Bonanza Nos. 21 & 22 claims themselves is sketchy. A mill was erected on the property, probably in 1941. It was reportedly installed to process ore from the adjacent workings as well as from other claims in Silver Bay (DeArmond, 1997a). Developments include a 120-foot adit with a winze, and a raise to the surface. Much of the mill itself was recently removed from the property (J. Burgess, personal communication).

BLM personnel mapped and sampled the adit on the Bonanza claims (Fig. 15). The adit was driven in graywacke to undercut a four-foot-wide quartz vein that crops out near the top of the raise. The vein is emplaced along a fault zone. Underground, the quartz reaches a width of five feet, but pinches and swells along strike. The vein is oriented about 320° and dips 60° to 85° to the southwest. It pinches out to the southeast and is cut off by a fault to the northwest. Subhorizontal fault movement after vein emplacement is evident by lineations on the vein's margins. Much of the vein is made up of barren milky quartz, but graphitic ribbon texture is also present. Pyrite and arsenopyrite are present as disseminations as well as localized adjacent to the ribbons in the vein. Analytical results indicate relatively low precious metal values. The highest assays were 1,810 ppb gold in a select sample (sample 2162) and 1,170 ppb gold across 0.7 feet (sample 2161). As commonly found elsewhere in the Silver Bay area, high arsenic and elevated mercury values are associated with the higher gold values.

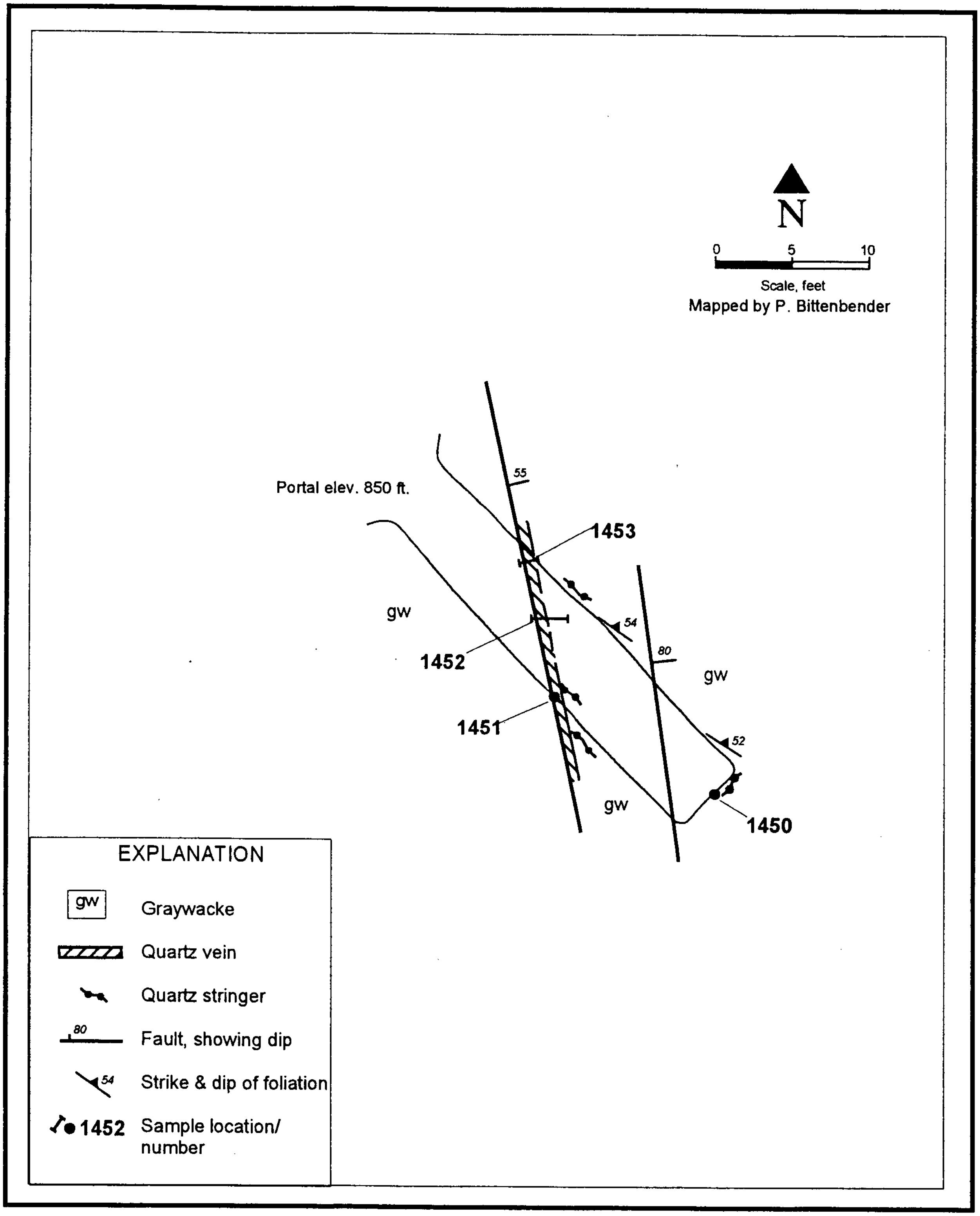


Figure 13.- Thetis prospect adit (Fig. 12, Map no. 209).

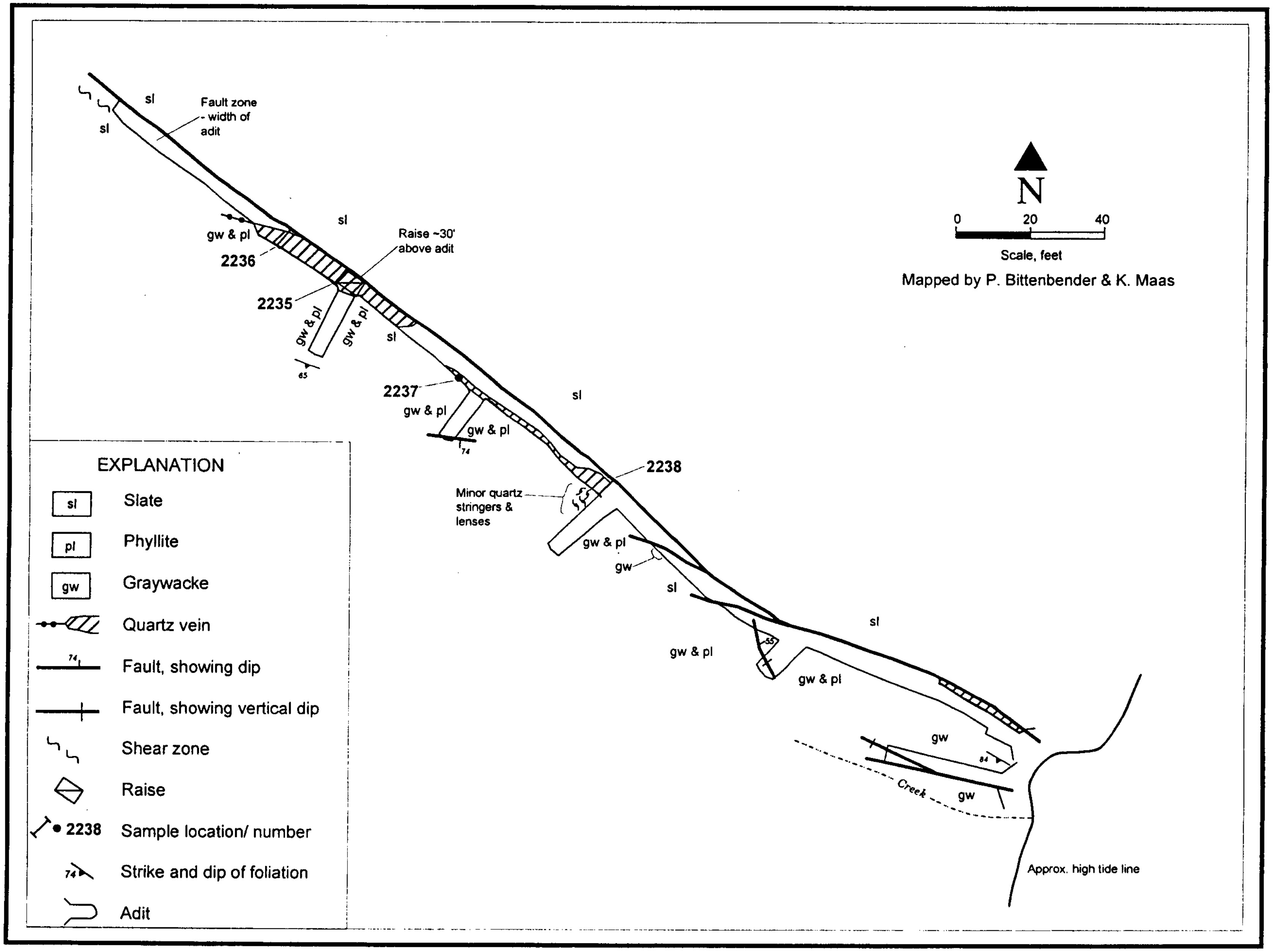


Figure 14. Liberty prospect adits (Fig. 12, Map no. 213).

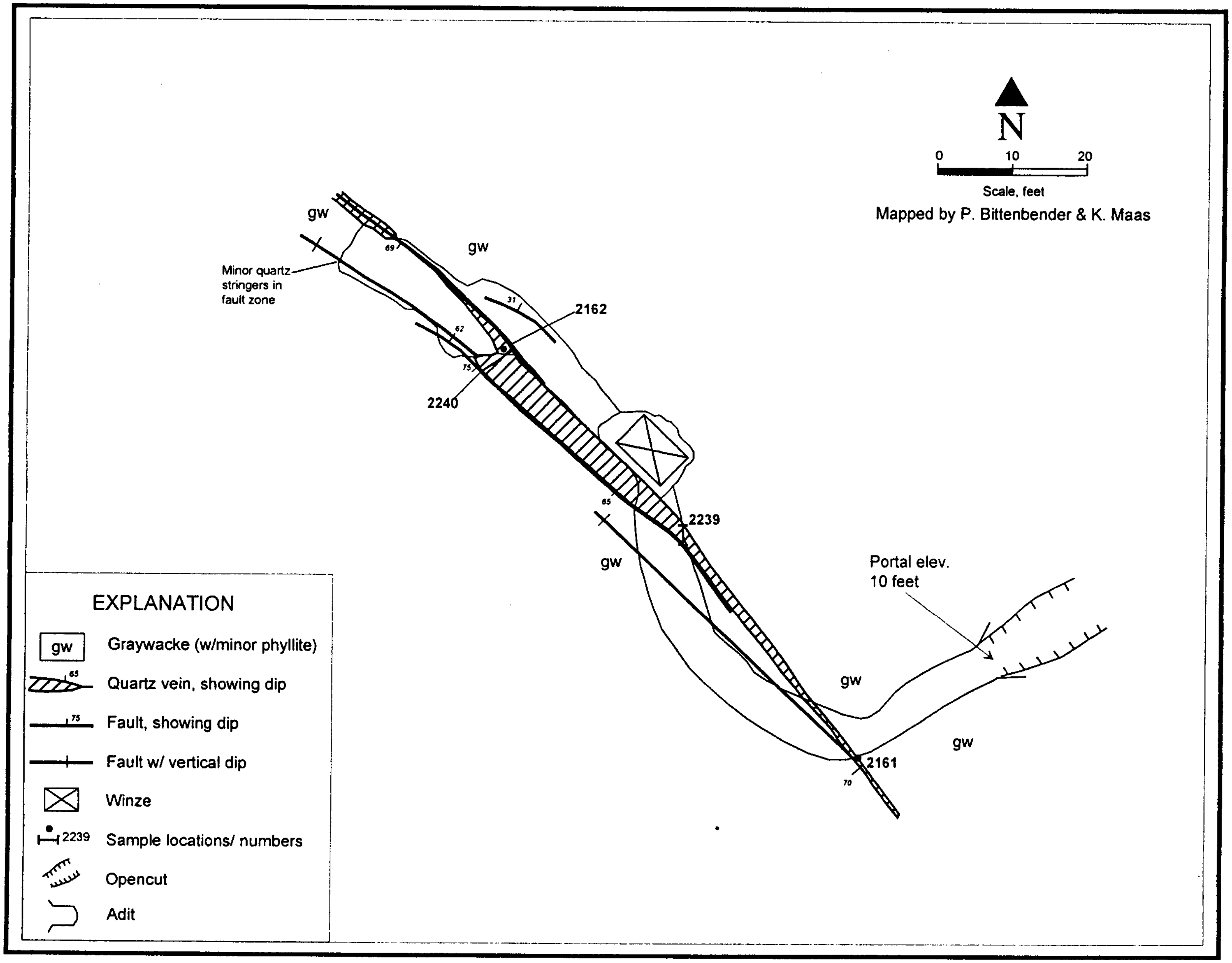


Figure 15. Workings on Edgecumbe Exploration Company's Bonanza #'s 21 & 22 claims (Fig. 12, Map no. 215).

EUREKA (Fig. 12, Map no. 216)

The Eureka prospect is located on the west side of the head of Silver Bay, at an elevation of 210 to 300 feet. Historical information on this prospect is limited to a general map location provided by Knopf (1912). BLM geologists found an 85-foot adit at an elevation of 210 feet, and a caved adit to the north at 300 feet elevation. The adit exposes a two-inch-thick quartz vein in a fault zone that is localized along a slate-graywacke contact (Fig. 16). The fault zone strikes 310° and dips 75° southwest. A sample taken across the vein contained 27.5 ppm gold, 3.2 ppm silver, and 4,060 ppm arsenic (sample 2245). Samples of quartz float taken from a creek below the caved adit contained up to 30 ppb gold and nil silver (sample 2243, 2244).

BONANZA NO. 1 (Fig. 12, Map no. 217)

Little is known of the history of the Bonanza No.1 prospect. It is shown on the Edgecumbe Exploration Company's map of the 1940's (Plate 3). A 105-foot adit comprises the only development on the property (Fig. 17). The adit was driven along a shear in black slate with minor graywacke. Scattered quartz stringers are present in the sheared slate. BLM sampling revealed only minor metal values. One sample, however, had over 11 ppm mercury (sample no. 1404).

STEWART MINE (Fig. 12, Map no. 220)

Gold-bearing quartz veins were discovered at the Stewart Mine around 1872 (Knopf, 1912) or 1873 (DeArmond, 1997a). Mining began in 1877 (Kaufman, 1958) and included the driving of three adits. In 1879, a 10-stamp mill began to process ore (Knopf, 1912). By 1880, the mine was closed and in the following years was the subject of litigation (Alaska Yukon Mining Journal, 1901). T. C. Doran of Sitka acquired the property in 1892 and renamed it the Cash Mine. His attempts to put the mine into production failed and no further work is reported on the property after 1893 (DeArmond, 1997a). One claim was patented in 1904 (MS567). The current owner is believed to be the Sheldon Jackson College in Sitka (DeArmond, 1997a).

BLM geologists mapped and sampled underground workings and surface exposures at the Stewart property (Fig's. 18-21). The quartz vein at the Stewart is exposed in outcrop and by the 3 adits over a horizontal distance of 200 feet and vertical distance of 120 feet. The vein appears to be fault-bounded on both ends and in places is offset by east-northeast trending faults. The vein reaches a maximum width of over 16 feet, but averages about 5 to 6 feet in width. The quartz locally contains inclusions and partings of graywacke, which hosts the vein. Pyrite is the only visible sulfide present and is concentrated near the inclusions or partings. Analytical results revealed the presence of arsenopyrite as well. Samples of the vein generally contained low gold values. The highest values from BLM sampling were 3,130 ppb gold over a 3- by 5-foot area (sample 2202) and 2,780 ppb gold across 5 feet (sample 2201;

Fig. 20). A sample of mill concentrate contained 57.9 ppm gold, 2,000 ppm lead, greater than 1% arsenic, and greater than 0.1% mercury (sample 2222; Fig. 21).

LOWER LEDGE (Fig. 12, Map no. 221)

The Lower Ledge prospect was one of the first prospects to be staked and developed in the Silver Bay area (DeArmond, 1997a). Its history however is obscure, mainly due to the numerous names by which it has been recorded. It is mentioned in Becker's report of 1898, the first published report on the area, as the "Haley and Rogers."

BLM personnel located and mapped a 63-foot adit and flooded shaft near the Silver Bay trail at the head of Silver Bay (Fig's. 22-24). These workings most closely fit the location of the Lower Ledge prospect given by Knopf (1912) and the Edgecumbe Exploration claim map (Plate 3). The adit was driven on a one and a half-foot-wide shear zone in Sitka Graywacke and contains quartz stringers up to half an inch wide. The shear is oriented 290° and is vertical to steeply southwest dipping. Samples taken from the adit contained no visible sulfides and had no detectable precious metal values. Samples of quartz from the dump near the shaft contained minor pyrite, arsenopyrite, and a trace of galena. Most of the dump samples had very low precious metal values. One select sample of float from the creek near the shaft contained 2,350 ppb gold (sample 2518; Fig. 24).

NO NAME (Fig. 12, Map no. 222)

BLM personnel located an adit half a mile northwest of the Bauer prospect whose name and history is unknown. The adit crosscuts graywacke, and graywacke with interbedded phyllite (Fig. 25). Two hundred forty feet from the portal, a 24-foot drift follows a silicified, brecciated zone in graywacke at a contact with greenstone. The brecciated shear zone is oriented 295° and is steeply dipping. Thin quartz stringers are found at a high angle to the shear. The greenstone southwest of the shear contains minor pyrite on fracture surfaces. Samples from the adit contained very low precious metal values. The highest grade sample contained 60 ppb gold across 3.5 feet (sample 2223). All samples had elevated arsenic values, up to 632 ppm (sample 2223) and two contained 1.6 and 1.9 ppm mercury (samples 2225 and 2223 respectively). The high mercury values correlate with higher gold values here, as they commonly do elsewhere in Silver Bay.

BAUER (Fig. 12, Map no. 223)

The Bauer property was reportedly staked in 1895. Development of the claim occurred intermittently from 1896 through 1923 (DeArmond, 1997a). By 1904, at least 900 feet of workings had been completed (Wright and Wright, 1904). By 1912, a 150-foot drift had been added to the workings (Knopf, 1912). BLM personnel mapped and sampled the Bauer adit (Fig. 26). The adit crosscuts graywacke and lesser phyllite, and drifts along a zone of fine-

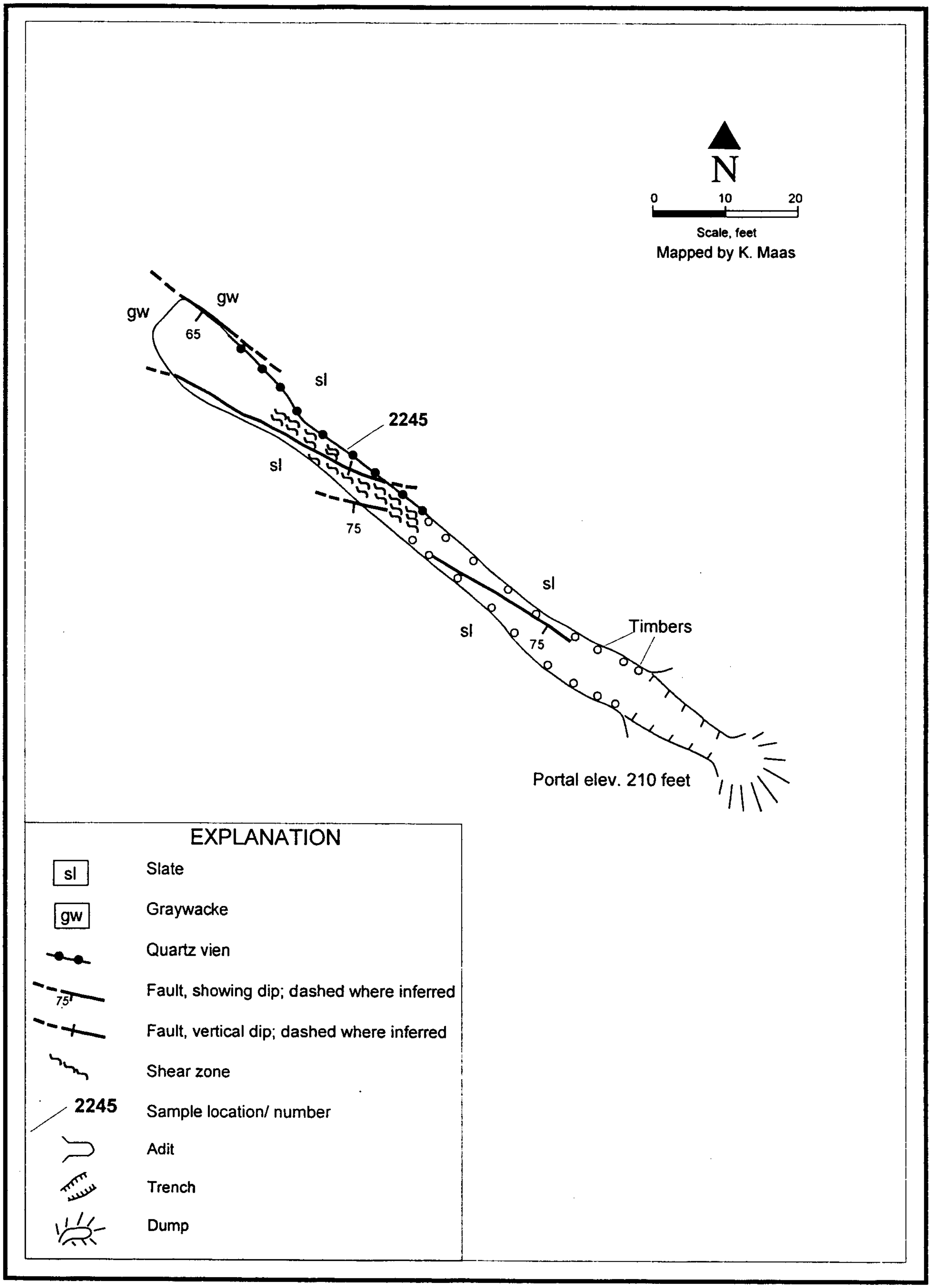


Figure 16. Eureka prospect adit (Fig. 12, Map no. 216).

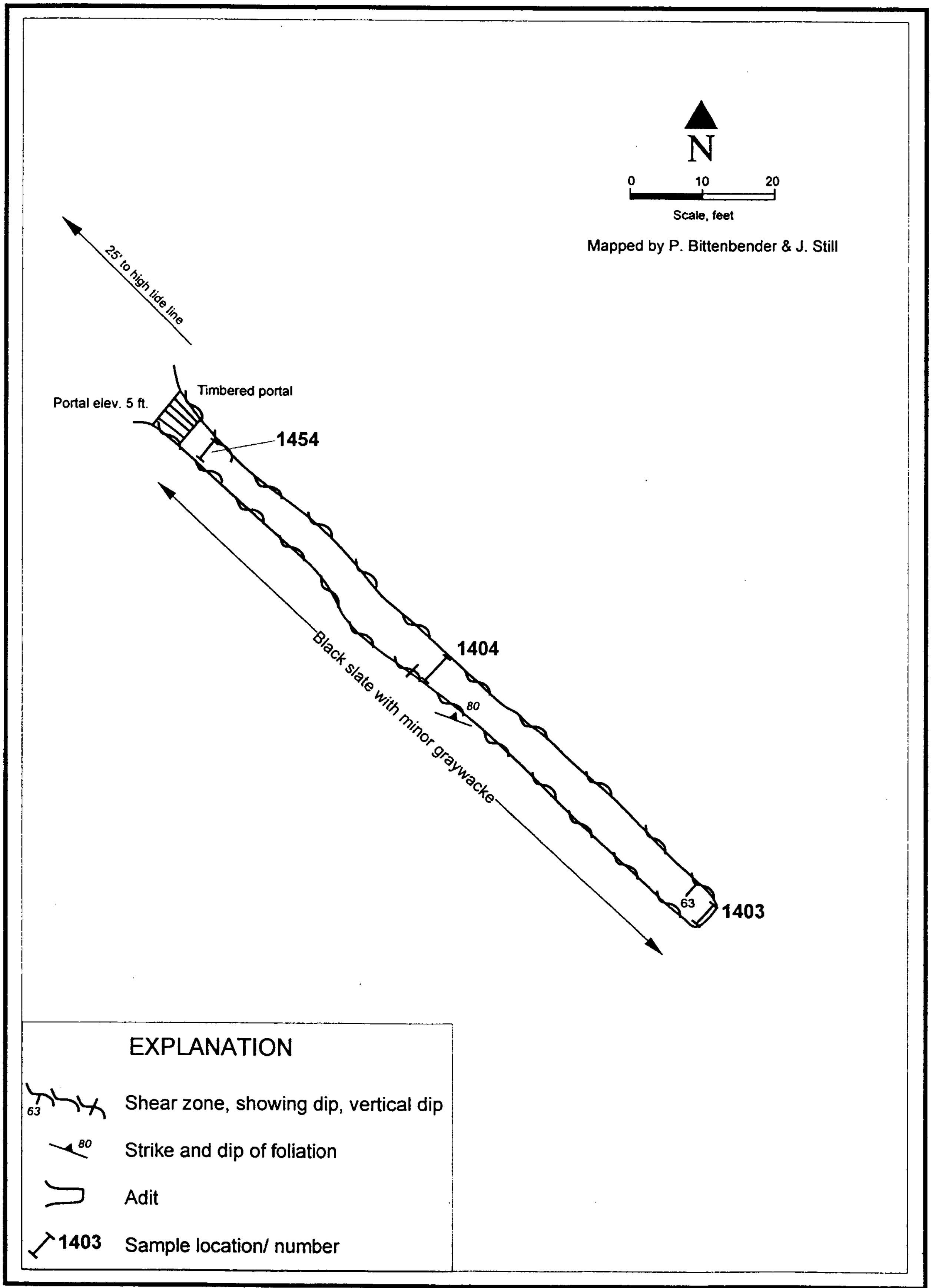


Figure 17. Bonanza No. 1 adit (Fig. 12, Map no. 217).

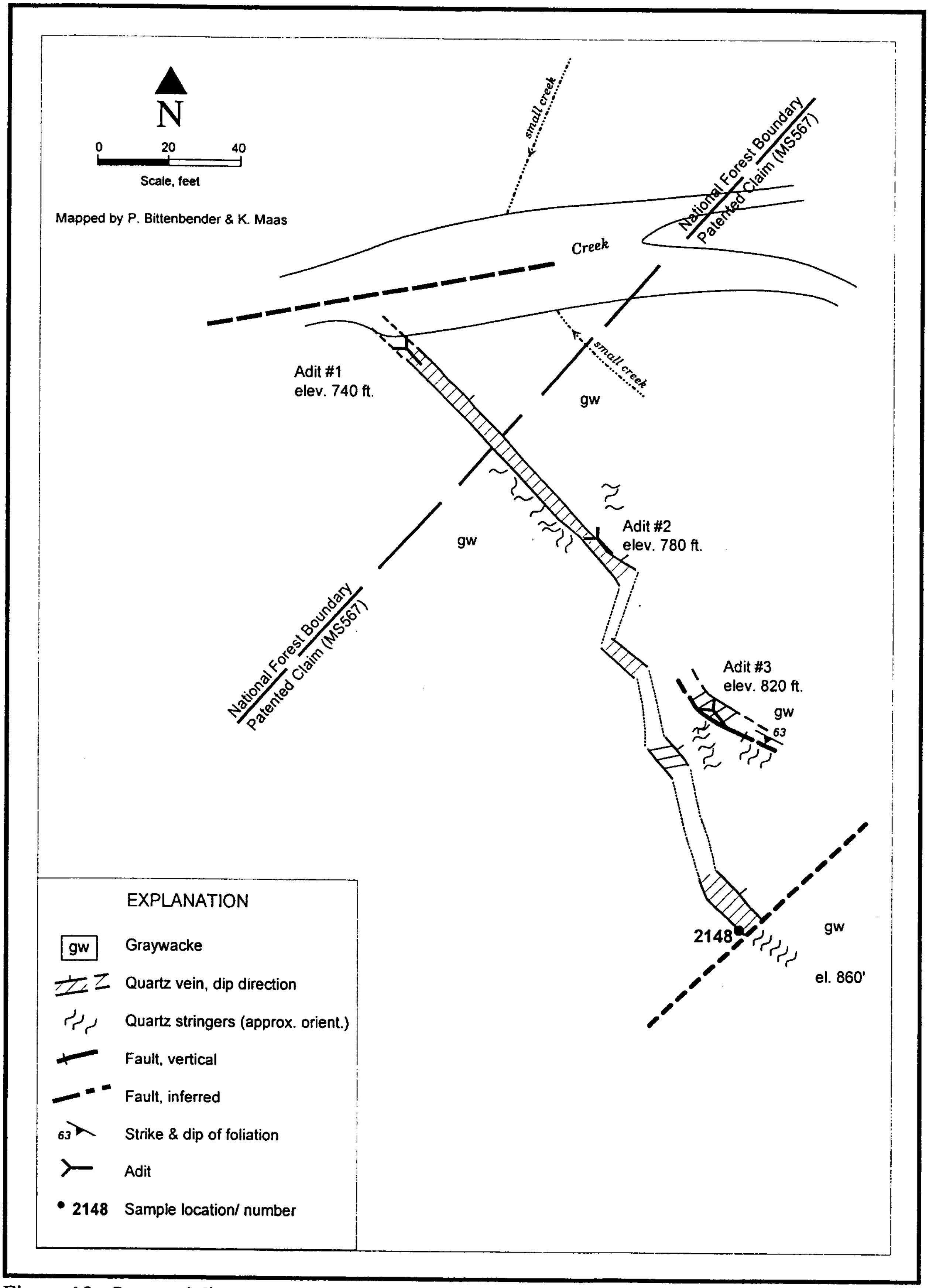


Figure 18. Stewart Mine area showing location of workings and land boundaries (Fig. 12, Map no. 220).

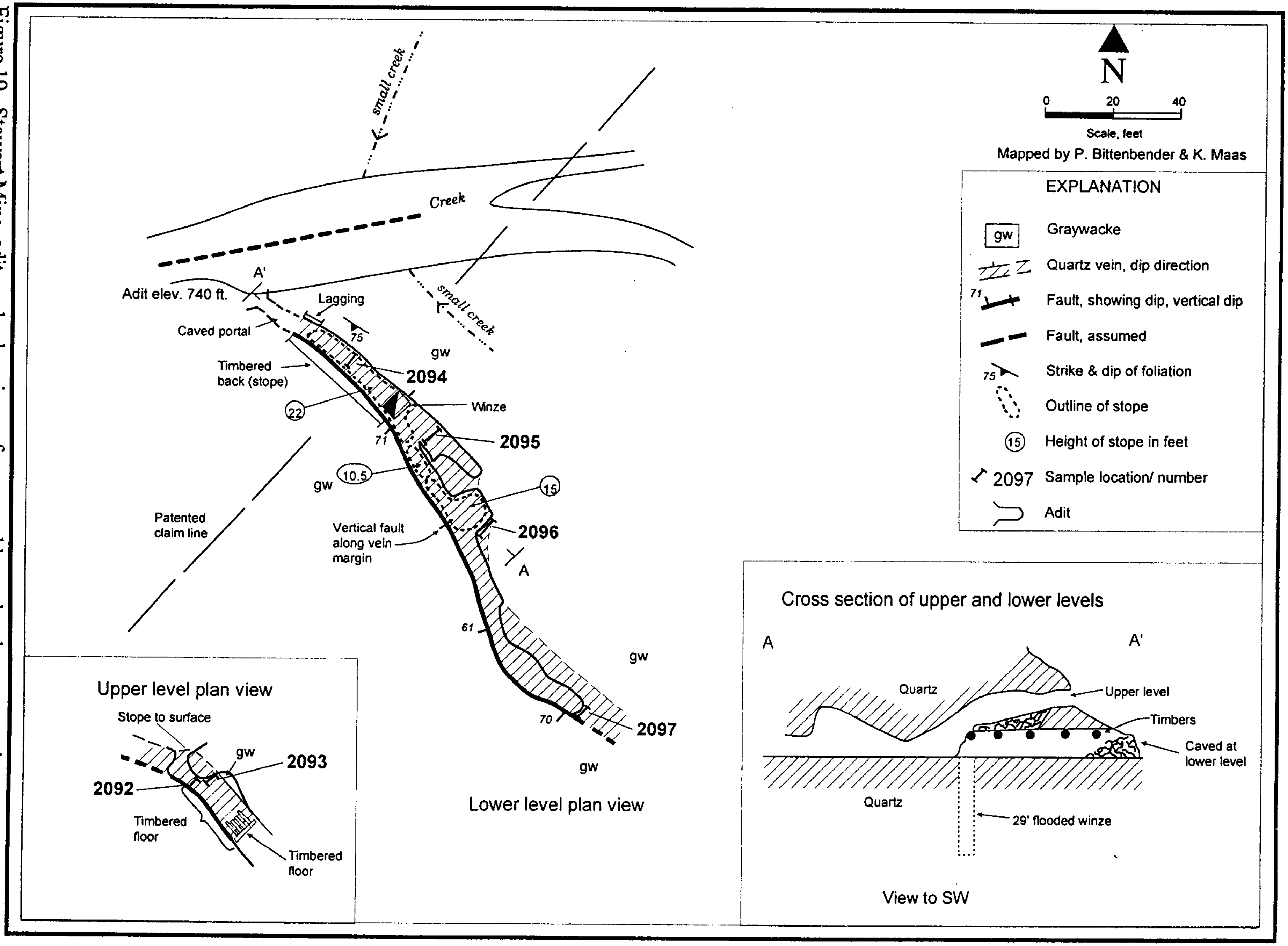


Figure 19. Stewart Mine, adit no. 1, plan views of upper and lower levels, cross section (Fig. 12, Map no. 220).

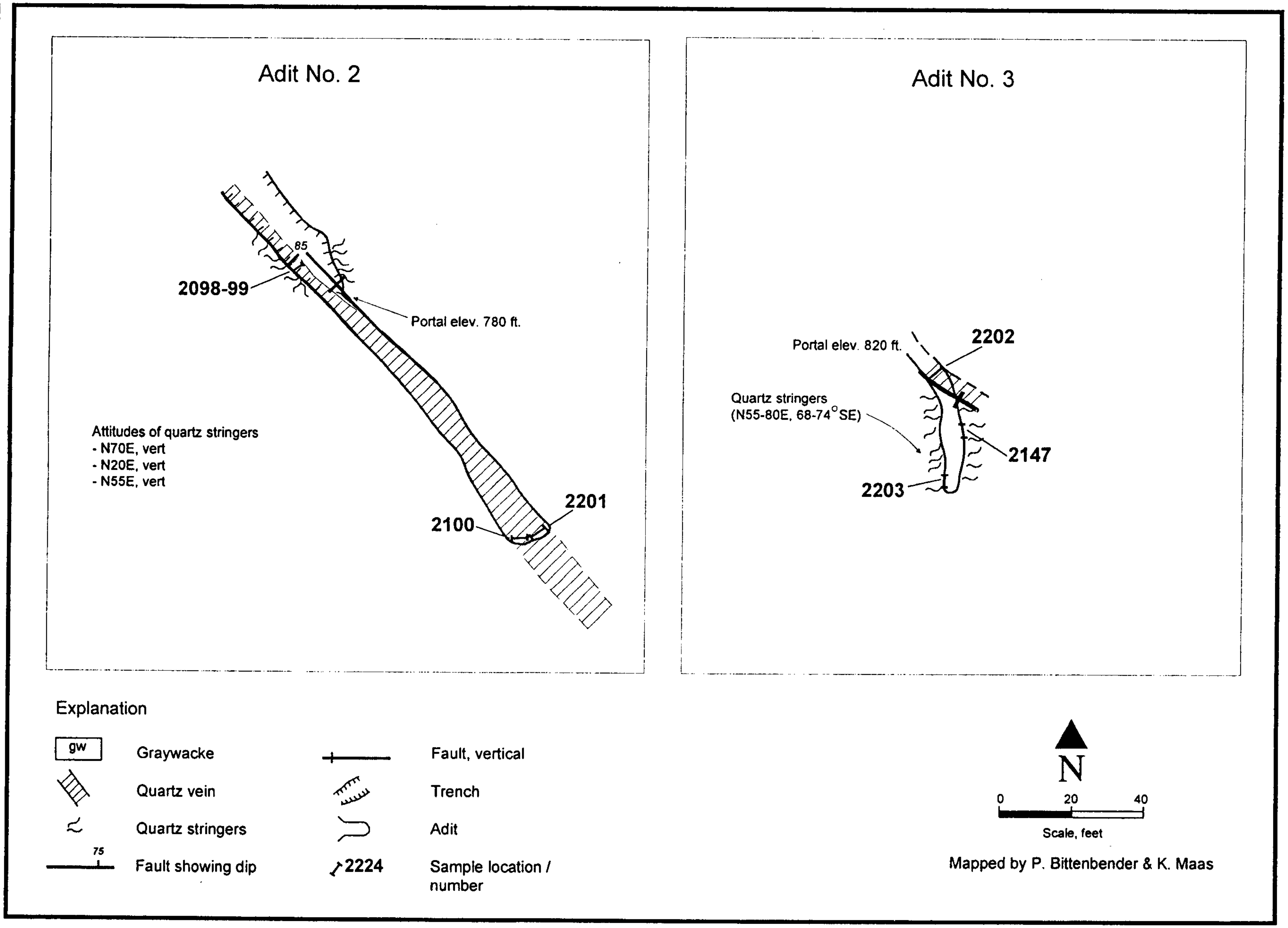


Figure 20. Stewart Mine, adits no.2 and no.3 (Fig. 12, Map no. 220).

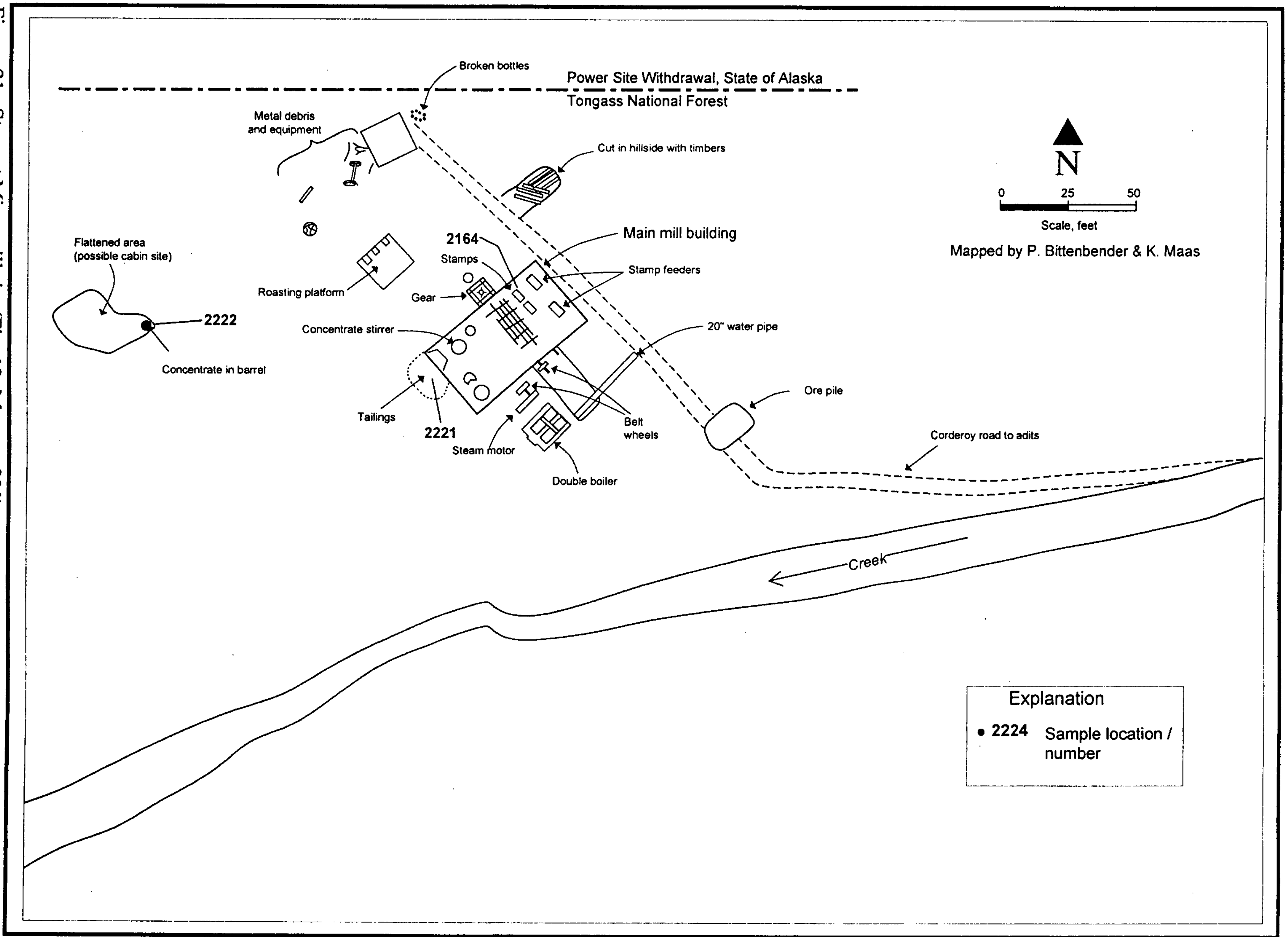


Figure 21. Stewart Mine mill site (Fig. 12, Map no. 220).

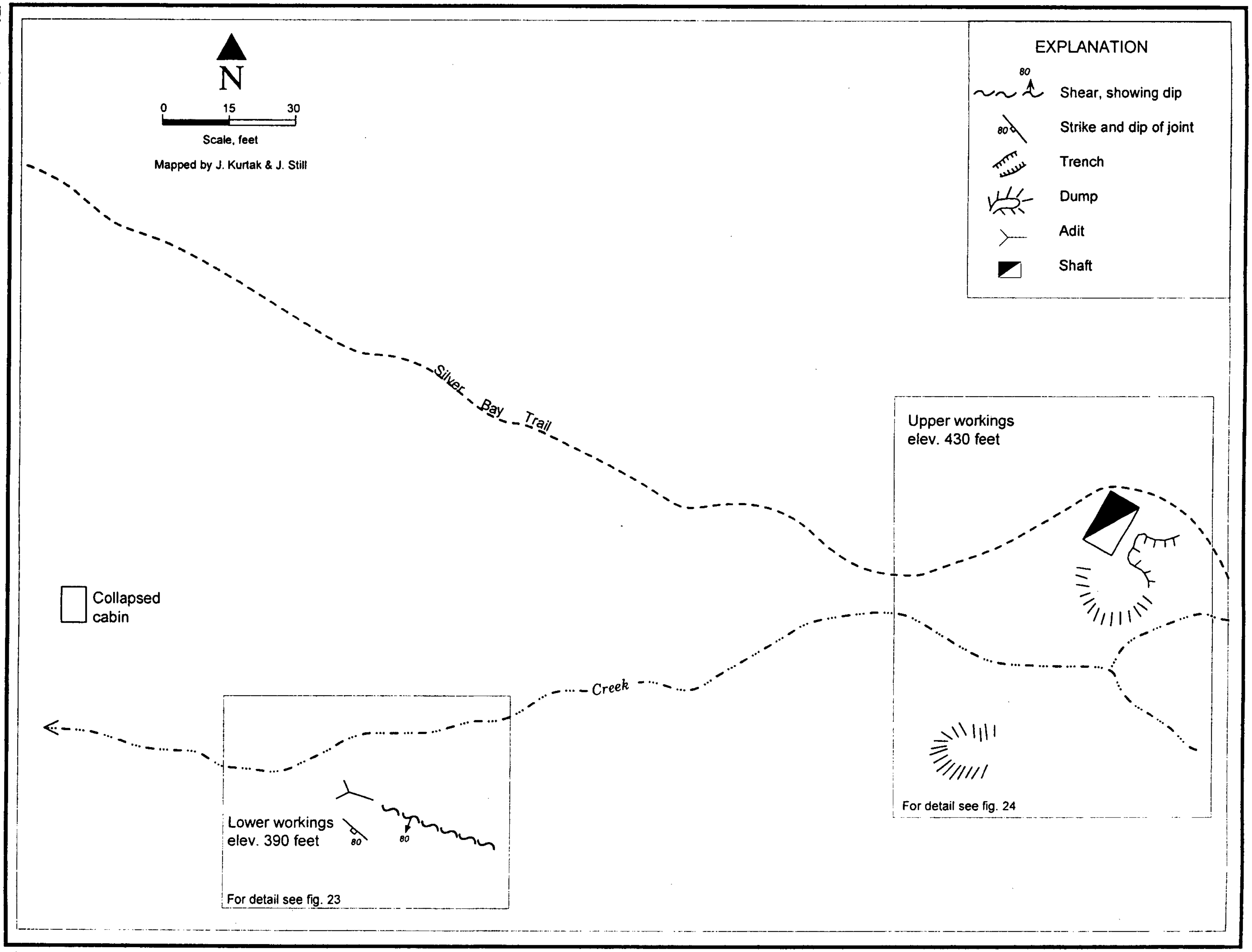


Figure 22. Lower Ledge prospect, area map (Fig. 12, Map no. 221).

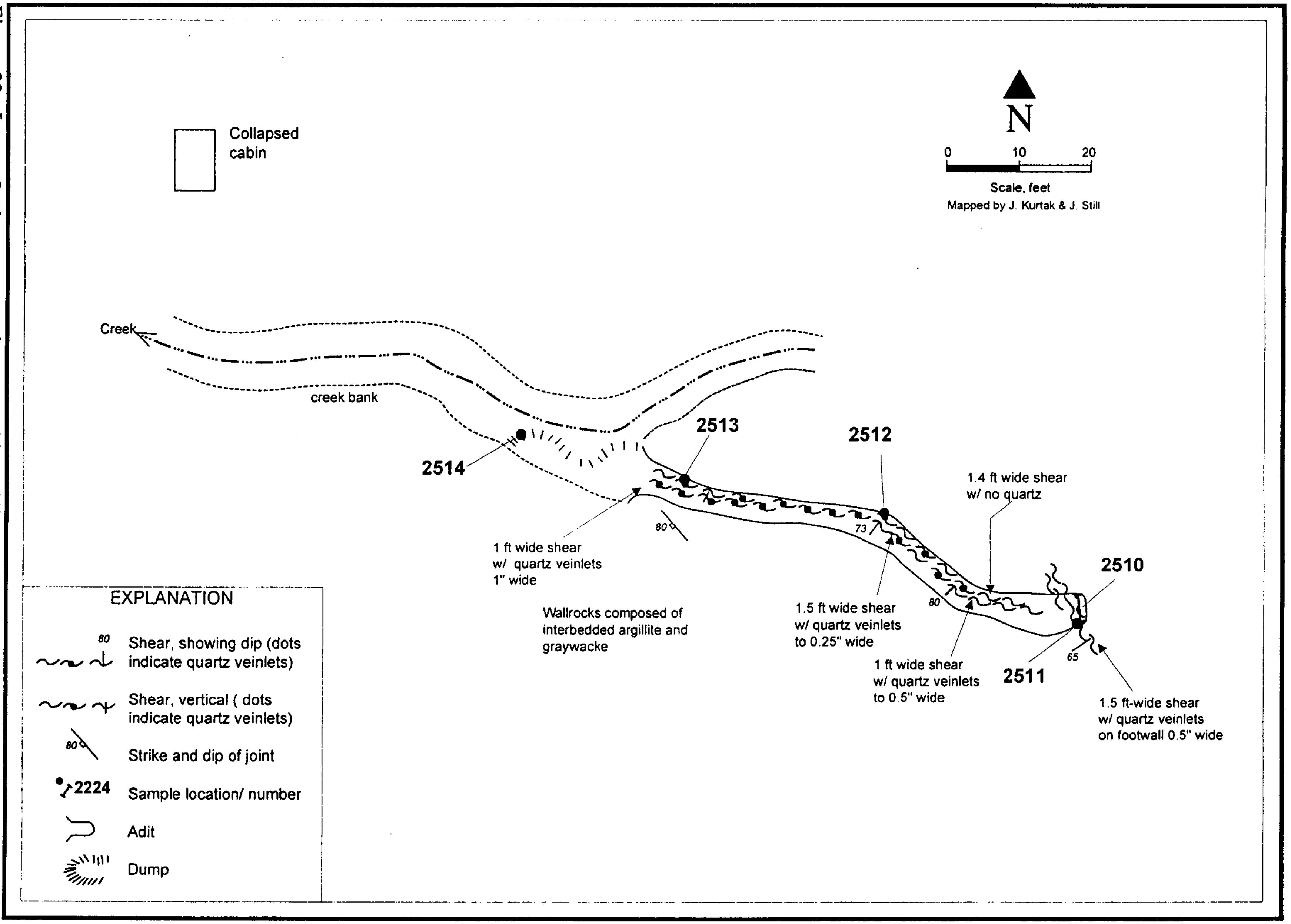


Figure 23. Lower Ledge prospect, lower workings (Fig. 12, Map no. 221).

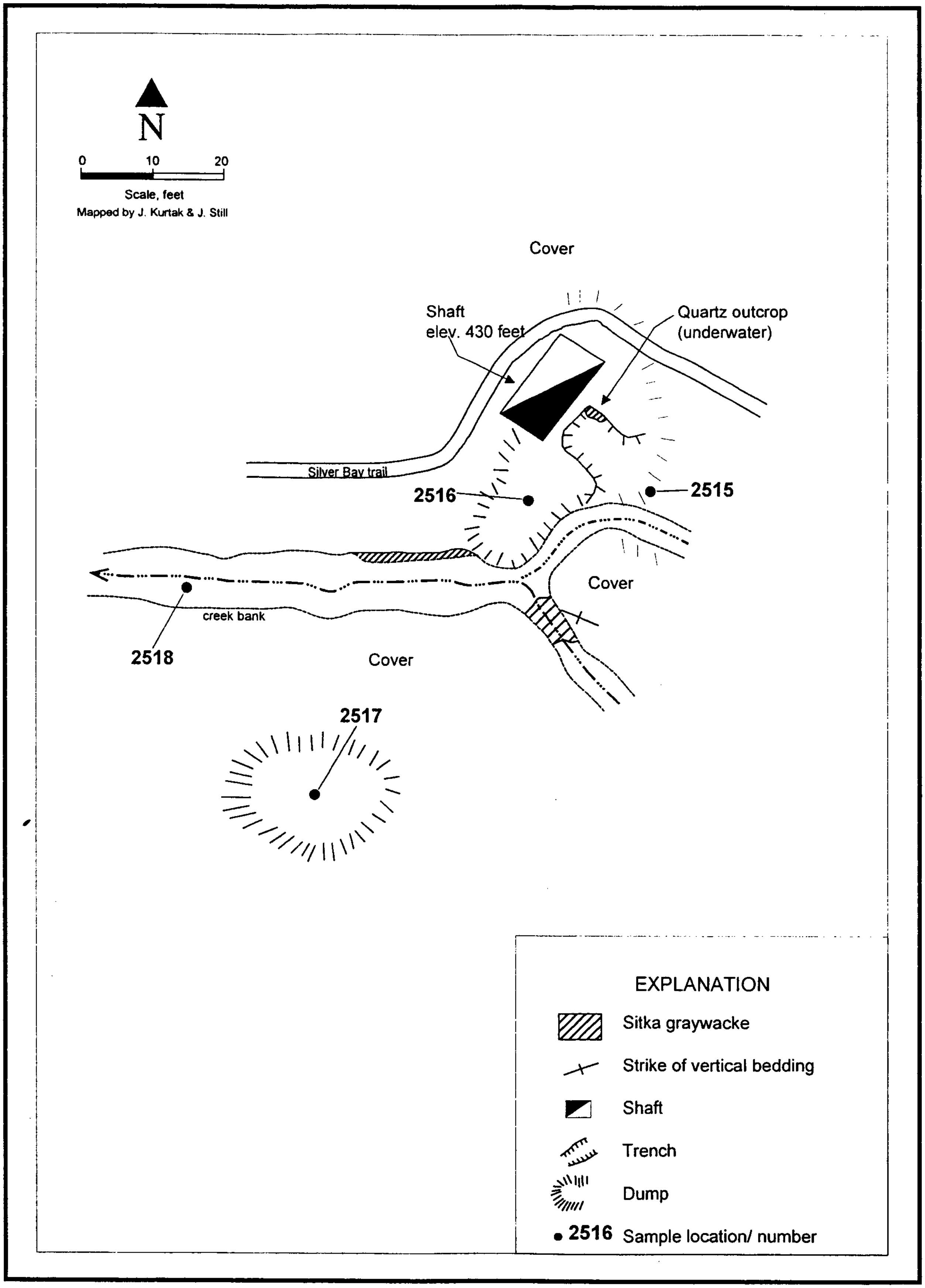


Figure 24. Lower Ledge prospect, upper workings (Fig. 12, Map no. 221).

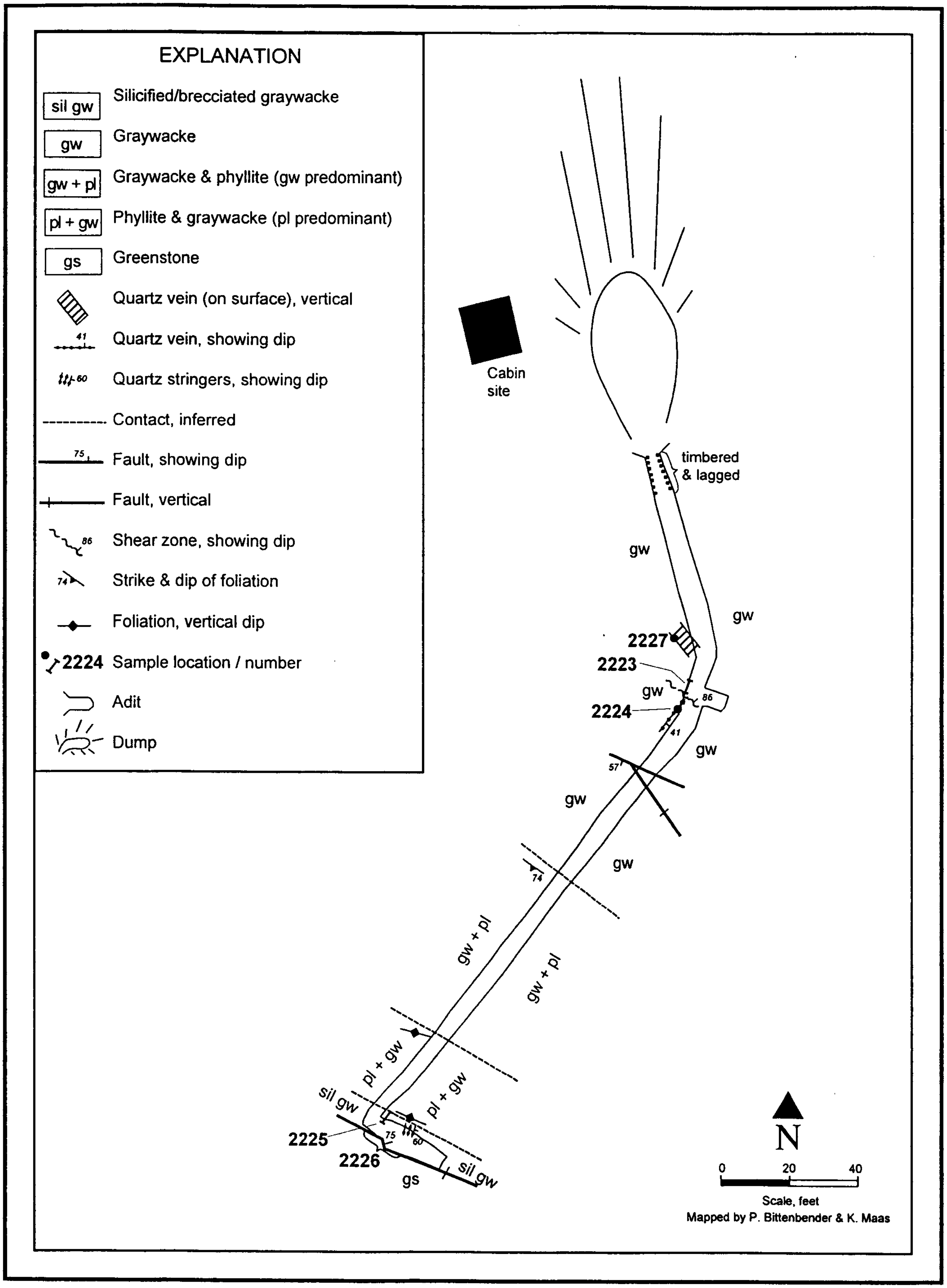


Figure 25. No Name prospect adit (Fig. 12, Map no. 222).

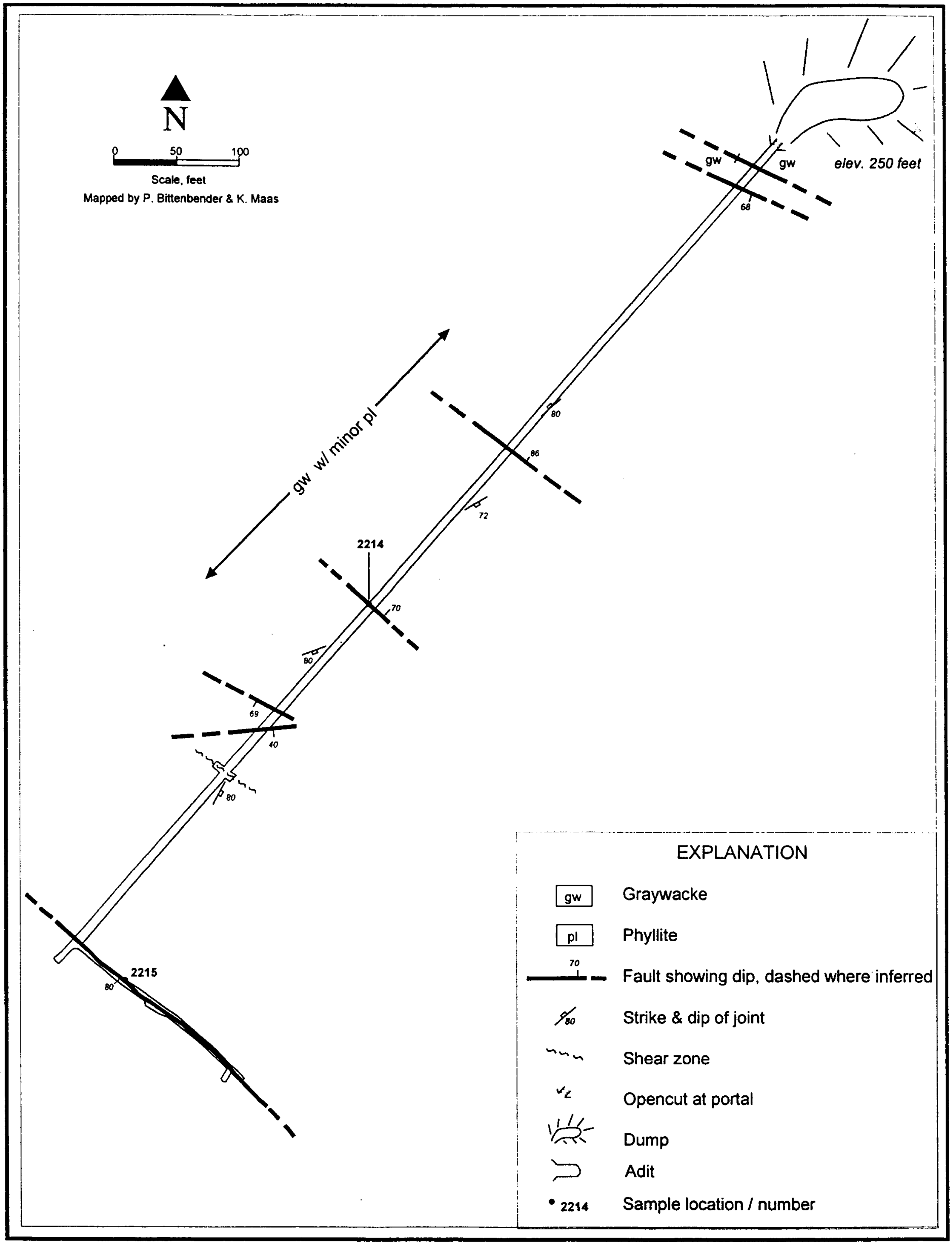


Figure 26. Bauer prospect adit (Fig. 12, Map no. 223).

grained quartz and quartz stringers containing minor amounts of pyrite and pyrrhotite. The quartz-rich zone is localized on a northwest trending fault, similar to other properties in the Silver Bay area. Analytical results indicate low precious metal values. Sample 2214, taken across 1.5 feet, contained 280 ppb gold. This sample also contained 716 ppm arsenic and 1.1 ppm mercury.

WICKED FALL (Fig. 12, Map no. 225)

The Wicked Fall prospect is located about two miles southeast of the head of Silver Bay, on the creek that drains from Pinta Lake (Fig. 12). It is marked on a map of prospects in the Sitka and Silver Bay areas, that was published by Knopf in 1912. It is also located on an Edgecumbe Exploration Company map of the 1940's (Plate 3). Nothing further is known of its history.

The Edgecumbe Exploration Company map (Plate 3) shows two "tunnels" on the Wicked Fall prospect. BLM personnel located, mapped, and sampled only one 17-foot adit (Fig. 27). Mineralized rock in the area occurs near the fault contact between graywacke and slate of the Cretaceous Sitka Graywacke. Discontinuous quartz veins up to 1.8 feet thick occur adjacent to the fault. Quartz stringers at a high angle to the fault are also common. The veins and stringers of milky quartz pinch and swell and commonly contain slate partings. Minor sulfides, mainly pyrite and arsenopyrite, are concentrated adjacent to the partings and in the sheared slate. Precious metal values are low. A select sample of iron-stained quartz and slate returned 280 ppb gold (sample no. 1407).

PINTA LAKE AREA (Fig. 12, Map nos. 224, 226, 227)

Several outcrops of quartz near Pinta Lake, and along the ridge west of the lake, toward Silver Bay, were examined by BLM geologists during this study. Quartz veins and pods are up to six feet wide, however most are barren of sulfide minerals. The quartz is emplaced in fault zones with little continuity to any of the occurrences. A sample taken near the outlet of Pinta Lake contained 205 ppb gold, 0.4 ppm silver, and 2,550 ppm arsenic (Map no. 227, sample 2218).

FREE GOLD (Fig. 12, Map no. 228)

DeArmond (1997a) mentions the "Witch" claim, staked in 1876, which is thought to be the same as the Free Gold prospect. Activity on the property included the construction of various mine buildings and the installation of an arrastre in 1879. The Free Gold prospect was mentioned in a 1904 report (Wright and Wright, 1905) and again in 1912 (Knopf, 1912). It was described as being "partly developed" at those times. The Edgecumbe Exploration Company map of the Silver Bay area (Plate 3) locates a Free Gold adit about a quarter of a mile north of the northern Lucky Chance Lake. BLM geologists did not locate the adit in 1995, but collected samples of quartz veins and veinlets from outcrops and trenches in the area. The veins are hosted in massive graywacke that also includes interbeds of phyllite. The veins strike northeast and dip about 70° to the northwest. There are no visible sulfides in the quartz veins, but iron staining is present. Analytical results indicated low precious metal values (samples 2154-2156).

LUCKY CHANCE MOUNTAIN (Fig. 12, Map nos. 229, 230, 232-235)

While investigating the Lucky Chance Mine, BLM geologists discovered several adits and trenches driven on quartz veins in the Lucky Chance Mountain area. One set of workings lies about half a mile southeast of the Lucky Chance adits (Map nos. 232-235). These workings consist of 4 trenches and a 20-foot adit. The quartz veins generally strike northwest and dip steeply, both to the southwest and northeast. They are typically hosted by graywacke and phyllite. Many of the veins are cut by north-northwest trending faults. Sulfides are rare. Select samples of iron-stained quartz with pyrite and arsenopyrite contained 4,840 ppb gold (Map no. 235, sample 2229) and 2,230 ppb gold (Map no. 233, sample 2158).

BLM personnel examined an adit and trench on the east side of the northern Lucky Chance Lake, northeast of the Lucky Chance Mine. The workings expose quartz lenses and stringers that are situated along a fault zone oriented 332° and dipping 67° northeast. The quartz is hosted by phyllite and graywacke and is exposed for 90 feet along strike and 35 feet vertically. Sulfides include pyrite and arsenopyrite, but are rare. Precious metal values are low. A select sample taken from float on the northwest side of the lake contained 1,180 ppb gold (Map no. 229, sample 2153).

LUCKY CHANCE MINE (Fig. 12, Map no. 231)

The Lucky Chance Mine has an obscure history, complicated mainly by the numerous owners and names associated with the property. The original stakers were the Francis brothers of Sitka who named their claims the Francis Lode. Their 1874 claims were the first recorded in the Silver Bay area. Soon after recording their claims, the Francis brothers sold their interest in them to Nicholas Haley, a mining promoter closely associated with the mining history of Silver Bay. Additional owners included the Lake Mountain Mining Company, and the Providence and Sitka Gold Mining Company (DeArmond, 1997a). These two owners were responsible for most of the developments at the site.

The first reports of development of the Lucky Chance Mine are from a newspaper article in 1885. The article reports a 25-foot shaft with a 30-foot drift at the mine (DeArmond, 1997a). By 1887, a 5-stamp mill was in operation and about 60 tons of ore had been processed from 2 adits (Roehm, 1940). By 1904 a 10-stamp mill, a sawmill, and a water-power plant were in operation (Wright and Wright, 1904). Although the total production from the mine is unknown, 1,200 tons of ore were reportedly removed from stopes above the 468-foot, 'No. 2 tunnel' (Fig's. 28, 29). In addition to this adit, workings included a 45-foot adit ('No. 1 tunnel'), a shaft, an open stope or glory hole, and other small open cuts and trenches (Roehm, 1940). A 3,000 to 4,000-foot aerial tram, erected in 1901, connected the mine site to the mill below. A corduroy road ran from the head of Silver Bay

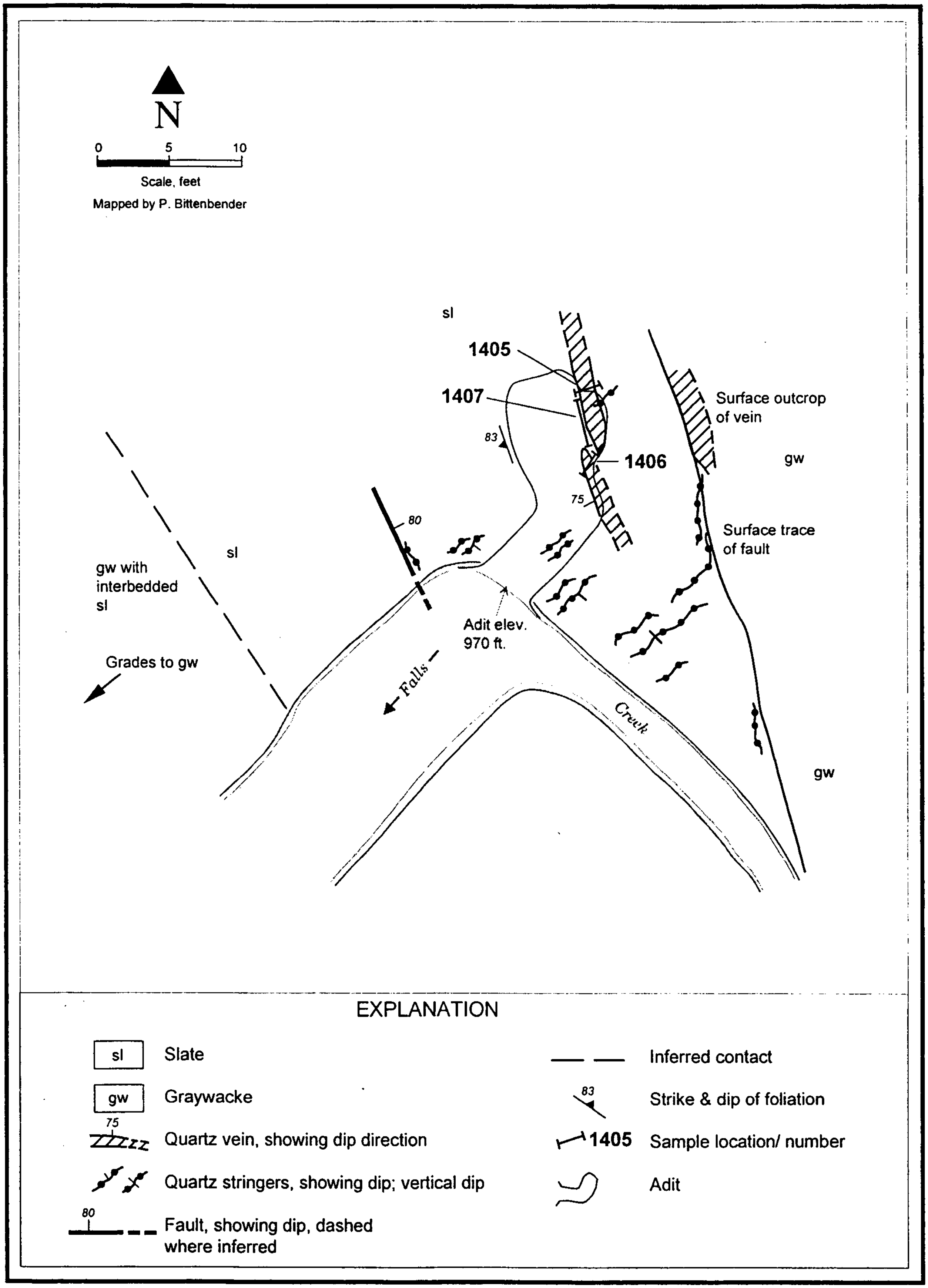


Figure 27. Wicked Fall prospect adit (Fig. 12, Map no. 225).

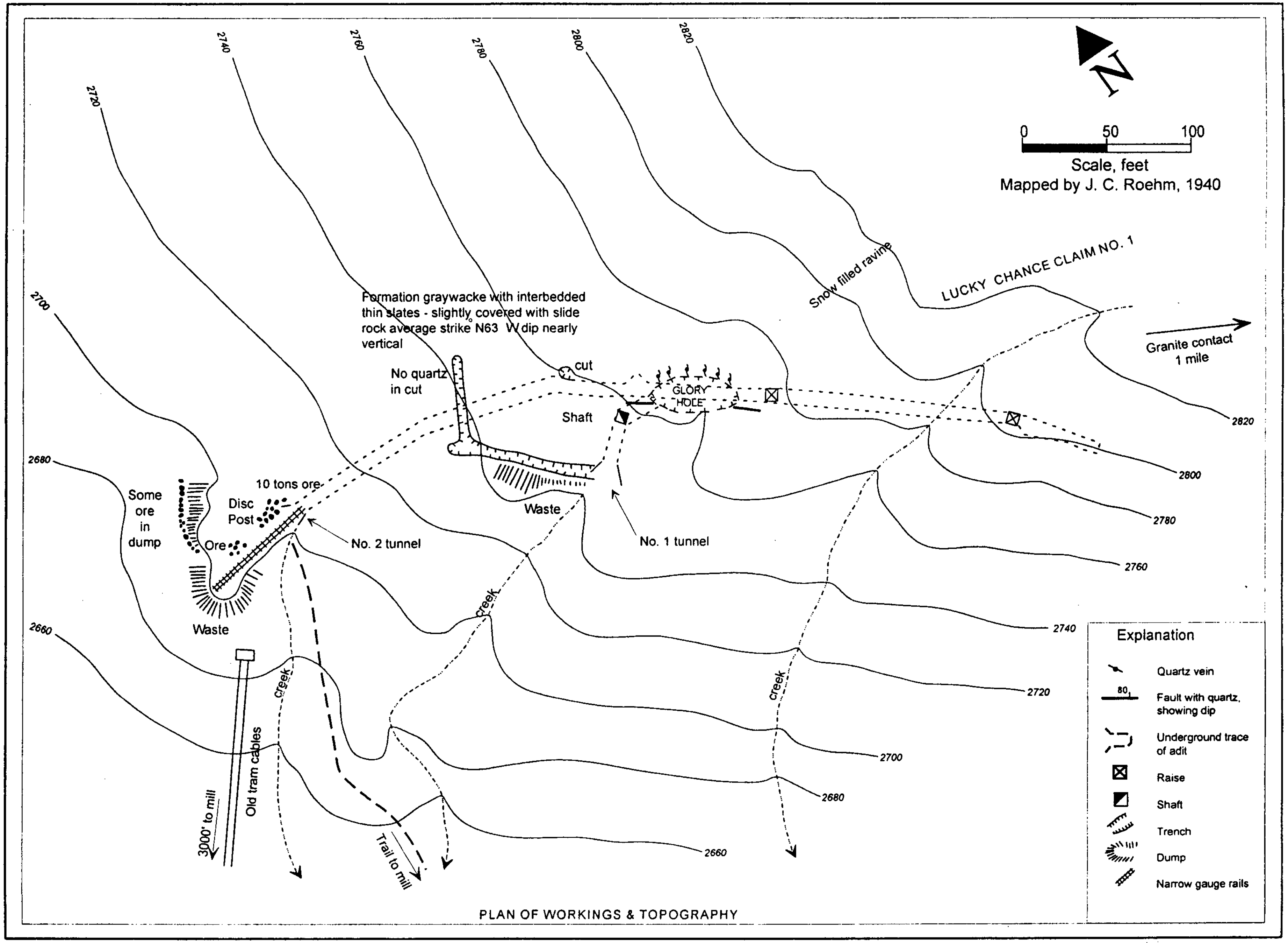


Figure 28. Lucky Chance Mine workings, plan view (Roehm, 1940; Fig. 12, Map no. 231).

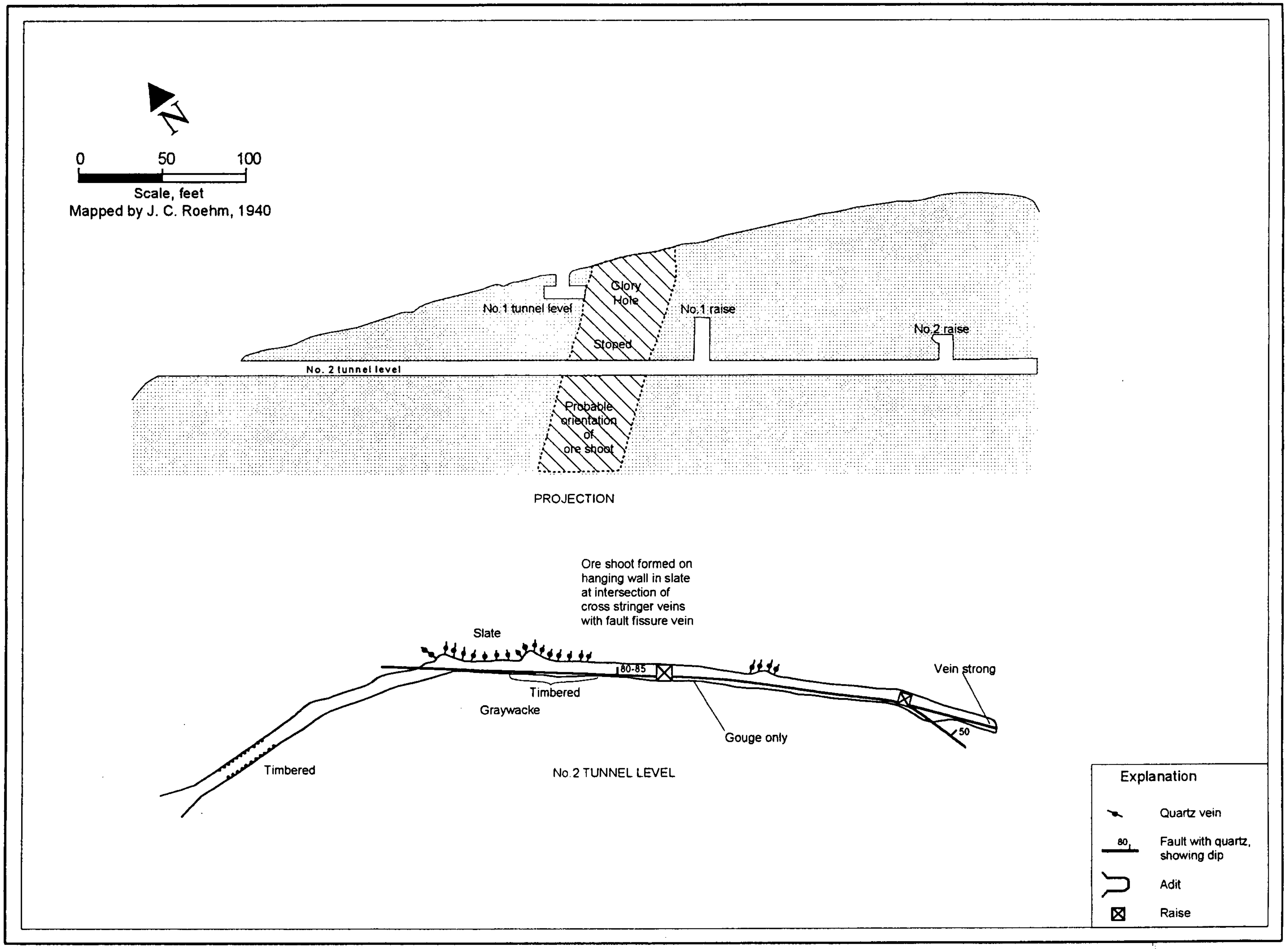


Figure 29. Lucky Chance Mine workings, cross section and plan view of No. 2 adit (Roehm, 1940) (Fig. 12, Map no. 231).

to the mill site (DeArmond, 1997a). A detailed study of the property with accompanying maps was done by Roehm (1940).

BLM examination revealed that all workings at the mine site are caved and inaccessible and no mineralized outcrop is exposed at the surface. Much of the following geologic description and maps are taken from the report of Roehm (1940; Figs. 28 & 29).

The Lucky Chance workings were driven to develop quartz veins and stringers in graywacke and phyllite. The quartz is localized along a northwest trending shear at the contact between graywacke and phyllite. The shear dips steeply to the northeast. Foliation in the phyllite also strikes to the northwest and is steeply dipping, but is cut by the shear at a low angle. Numerous quartz stringers in the phyllite hanging wall of the shear are oriented at a high angle to the shear. The glory hole above the main adit was cut where these stringers, which carry the highest gold assays, are the most numerous (Roehm, 1940).

Quartz from the mine dumps is generally milky white with graywacke and phyllite partings. Gangue minerals also include white mica, chlorite, calcite, and limonite. Sulfides include pyrite and arsenopyrite in thin seams and patches up to half an inch across. Visible gold is present, particularly adjacent to the partings and associated with limonite along the vein margins. Analytical results indicate the presence of minor silver plus a trace of lead. Two select samples contained 19.3 ppm and 16.9 ppm gold (samples 2210 and 2212, respectively). A sample of concentrate, collected from the mill site, contained 26.5 ppm gold, 13 ppm silver, 1,250 ppm lead and greater than 1% arsenic (sample 2213).

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APPENDIX A - SUMMARY INFORMATION FOR MINES, PROSPECTS, AND MINERAL OCCURRENCES

Appendix Table A-1 lists summary information for mines, prospects, and mineral occurrences found in the Chichagof-Baranof area. The information provided includes: prospect name and Minerals Availability System (MAS) number, location information, land status, deposit type and major commodities present, workings and current condition, production figures (when available), BLM work during this study, selected references for additional information, and mineral development potential. The last category is a subjective ranking that prioritizes prospects with respect to one another.

Abbreviations and Descriptions

Prospect Number:

Refers to mine, prospect, or occurrence numbers used to show locations on Plate 1.
(See Appendix Table C-1 for cross reference between Prospect numbers and Map numbers used in the Analytical Results Table B-1.)

Property Name/MAS no.:

MAS refers to the Minerals Availability System database devised by the Bureau of Mines and currently supported by the Bureau of Land Management in Alaska.

Location:

Township, range, section, Bureau of Mines quadrangle number, USGS 1:63,360-scale map number

Land status:

N	Native
S	State
OF	Open Federal (open to mineral entry)
CF	Closed Federal (closed to mineral entry)
P	Private (mineral survey number listed)

Deposit type: (with commodity abbreviations; and other abbreviations as defined on p. 177)

V	Vein
PV	Polymetallic vein
Mag Seg	Magmatic segregation
S	Skarn
P	Porphyry
Dissem	Disseminated sulfides

Deposit type: (continued)

VMS	Volcanogenic massive sulfide
Peg	Pegmatite
PL	Placer
O	Other (or unknown)

Workings:

T(s)	Trench(es)
P(s)	Pit(s)
C(s)	Cut(s), opencut(s)
# Adit(s):	Lengths, in feet; (caved lengths in paren.)
# Shaft(s):	Depths, in feet; (flooded depths in paren.)

Production:

NA Not Applicable - if no production has occurred from the site

BLM work:

M	Mapped
S	Sampled
R	Reconnaissance, recon sampling
NF	Not found
NE	Not examined

Select references:

Numbers refer to the references listed on page 173.

MDP (mineral development potential):

All mines, prospects, and mineral occurrences are assigned high, medium, or low mineral development potential classifications. These rankings reflect the authors' opinions with regard to each property and thereby differ from the mineral development potential ratings given to entire KMDA's in the body of this report. The rankings are based on the following criteria:

H High grades and probable continuity of mineralized rock exist. The property is likely to have economically mineable resources under current economic conditions. A high potential exists for developing tonnage or volume with reasonable geologic support for continuity of grade.

M Either a high grade or continuity of mineralized rock exists, but not both. Mineralized rock is confined by geology and/or structures, or grades are overall low. It could serve as a resource if economics were not a factor, but is presently uneconomic under existing conditions.

L The property exhibits uneconomic grades and/or little evidence of continuity of mineralized rock. There is little or no obvious potential for developing ore resources or it is an insignificant source of the material of interest.

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P1	LEMESURIER ISLAND PALIGORSKITE 0021110083	T41S, R57E, Sec 27, 111B1	CF	O: Replacement in ls	NA	1,000 lb test shipment (13)	Material tested by USBM Rolla Lab (13)	NE	13, 29, 55	L
P2	BONANZA 0021110084	T41S, R57E, Sec 34, SW, 111B1	CF	S: Mo, Cu	NA	NA	None	NE	29	L
P3	CROW POINT 0021110069	T42S, R57E, Sec 3, 111B1	CF	S: Mo, Cu	NA	NA	MoS_2 to 0.47% (61)	NE	61, 72	L
P4	WHITNEY 0021110068	T42S, R57E, Sec 4, 111B1	P: MS 1427, 1428	S: Mo	Adits (2): 78, 25	NA	None	NE	58, 61	L
P5	INIAN ISLAND 0021110081	T42S, R55E Sec 12, 111A1	CF	O: Fe?	NA	NA	None	NE	54	L
P6	MARVITZ 0021110070	T43S, R55E, Sec 21, 111A2	OF	V: Au, Ag, Pb	Adits (3): 25, 50, 210; OC	NA	Free Au found in veins (37); up to 1,952 ppb Au in sil metaseds; workings not found	S	37, 54	L
P7	COLUMN POINT 0021110085	T43S, R55E, Sec 21, 111A2	OF	PL	NA	NA	Claims staked in 1974, worked in 1976	NE	54	L
P8	NEKA BAY 0021120156	T43S, R59E, Sec 19, 112A6	N	V: Cu, Pb, Zn	TP	NA	1.5-ft to 3.5-ft-wide vein exposed over 50' along strike w/ up to 6.3% Cu, 0.38% Pb, & 1.9% Zn (72)	NF	72	L
P9	SURGE BAY 0021110080	T44S, R54E, Sec 26, 111A2	CF	Mag Seg: Cu, Ni	NA	NA	None	NE	8	L

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P10	SQUID BAY 0021140079	T46S, R55E, Sec 15, 114D8	CF	Mag Seg: Cu, Ni	NA	NA	Composite grab sample contained 0.38% Cu, 0.05% Ni (26); gabbronorite host	NE	26, 29	L
P11	BOHEMIA BASIN 0021140017	T45S, R55E, Sec 12, 13, 114D8	P; OF; MS 2257, 2258	Mag Seg; Ni, Cu, Co	Adit: 156; T (15); Diamond drilling (30,000 ft)	Test shipment	Resources: 24 million tons grading 0.29% Ni, 0.17% Cu, 0.017% Co; measured and inferred categories (26); 3 ore bodies hosted in layered gabbronorite complex	R	12, 25, 26, 36, 39, 50, 70, 73	M-H
P12	BON TARA MINE 0021110088	T44S, R55E, Sec 36, 111A2	OF	V: Au, Ag, di host w/gb	Adit: 35; OC: several	$1,100 Au (34)	Samples contain from nil to 0.16 oz/t Au; best samples from surface cut (26)	R	26, 34	L-M
P13	GOLDWIN 0021140039	T45S, R56E, Sec 3, 114D8	OF	V: Au, Ag, Cu; di w/ minor chl sc	Adit: 265		Sample of py contained 69 oz/t Au (54); other samples contained: 0.6 ft at 0.11 oz/t Au; 0.8 ft wallrock contained trace to 0.05 oz/t Au; 14 samples: nil to 0.14 oz/t Au (26)	R	26, 42, 54, 77	L-M
P14	NILSEN 0021140070	T45S, R56E, Sec 11, 114D7	OF	V: Au	NA	NA	None	NE	8	L
P15	ROSSMAN VEIN 0021140201	T45S, R56E, Sec 14, 114D7	CF	V: Au	NA	NA	Assays up to 1 oz/t Au (54)	NE	54	L
P16	COLUMBINE GROUP 0021140084	T45S, R56E, Sec 22, 114D7	OF	V: Au	NA	NA	None	NE	8	L

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P17	APEX EL NIDO 0021140008	T45S, R56E, Sec 23, 114D7	OF; active claims	V: Au, Ag, W	Adits: Apex (4): (1490), 800, 400, 60; El Nido (2): 1000, 680	17,000 oz Au, 2,400 oz Ag	Resources: Indicated 26,633 tons @ 0.945 oz/t Au (21); Samples contained trace to 3.8 oz/t Au across 0.2 to 3.8 ft-wide veins; aplite dikes contained trace to 0.04 oz/t Au (26); hosted in di and amphibolite; veins 1 to 4 ft wide	R	21, 26, 54, 69	H
P18	PHONOGRAPH 0021140092	T46S, R58E, Sec 6, 114D7	OF	Mag Seg: Ni	NA	NA	Sample contained 0.31% Ni, trace Au; hosted in pyroxenite	NE	72	L
P19	GYPSUM CREEK 0021140307	T45S, R64E, 114D4	OF	S: Cu	road pit	NA	Copper values to about 2,000 ppm; minor Mo, Ni, Co	M, S	30	L
P20	CAMEL GYPSUM 0021140040	T46S, R64E, Sec 1, 114D3	OF	O: Hydrothermal or sedimentary : gypsum	Adits (5): 75, (4 caved)	NA	Bureau of Mines drilled in 1948 & 1962; resource of 92,500 tons gypsum (22, 23)	R	14, 19, 20, 22, 23	L
P21	KAISER GYPSUM 0021140041	T46S, R64E, Sec 2, 114D3	P: MS 647	O: Hydrothermal or sedimentary: gypsum	glory hole; shafts (2): drifts	500,000 tons	Active 1906-1923; drilled by Bureau of Mines in early 1960's; no resources calculated due to drilling difficulties	R	14, 20, 64	L
P22	FRESHWATER BAY 0021140308	T43S. R63E, Sec 17, 114D4	OF	P, S: Mo, Cu	road pit	NA	High grade samples to 0.2% Mo, 155 ppm Cu; porphyry intruding carbonate, minor skarn	M, S	NA	L
P23	EAST POINT PIT 0021140309	T47S, R64E, Sec 12, 114D3	OF	S: Zn, Pb, Ag	road pit	NA	Clots and disseminations of sphalerite with minor galena and chalcopyrite; high grade sample to 26% Zn, 1.74% Pb, 460 ppm Cu, 52 ppm Ag	S	30	L

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P24	BIG LEDGE 0021140015	T47S, R64E, Sec 12, 114D3	OF	Mag Seg: Cu, Ni	T; P	NA	Samples contained up to 0.91% Cu and 0.84% Ni across 40 ft. Hi-grade contained 7.02% Cu, 4.4% Ni, and 910 ppm Co	M, S	8, 9	L-M
P25	BALDY LODE 0021140010	T47S, R64E, Sec 15, 114D4	OF	S: Cu	T; P	NA	Samples contained up to 0.29% Cu, 240 ppm W	S	8	L
P26	3-J 0021140211	T47S, R64E, 114D4	OF	O: Mo, Cu; hosted in dike	NA	NA	Chip sample contained 0.01% Mo, 0.07% Cu (61); BLM sampling across 0.3 ft contained 0.3% ppm Cu, 0.2% ppm Mo	S	61	L
P27	COLUMBIA POINT 0021140200	T47S, R64E, Sec 18, 114D4	S	O: Cu; hosted in dike	NA	NA	None	R	28	L
P28	TENAKEE INLET MARBLE 0021140100	T47S, R63E, Sec 23, 114D4	S	O: marble	NA	NA	Marble contains abundant greenstone partings	NE	10,11	L
P29	REDONE 0021140212	T48S, R64E, Sec 27, 114C4	N	O:	NA	NA	None	R	72	L
P30	BASKET BAY 0021140213	T49S, R65E, Sec 16, 114C3	N	O:	NA	NA	MAPCO staked claims for uranium	R	72	L
P31	KOBY 0021140051	T47S, R58E, Sec 3, 114D6	OF	V: Au, Ag, Pb, Cu, Bi, Cd; hosted in gs sc	Adit: 300; C(s) along 300 ft of strike	NA	3- to 6-ft widths contained 0.02 oz/t Au, 0.5-0.9 oz/t Ag (43); dump samples contained to 2.96 oz/t Au, 52.5 oz/t Ag, 1% Pb (26)	R	26, 43, 54	L

Table A-1. Summary information for mines, prospects, and mineral occurrences										
Prospect no.	**Name MAS no.**	**Location**	**Land status**	**Deposit type**	**Workings**	**Production**	**Significant results**	**BLM work**	**Select references (p. 173)**	**MDP**
P32	CABLE CLAIMS 0021140305	T46S, R57E, Sec 26, 27, 35, 114D7	CF	Dissem: Cu	NA	NA	Samples contained up to 2,200 ppm Cu and 4,800 ppm Zn across 5 ft (26); Fault zone in metased	NE	26	L
P33	MINE MOUNTAIN AREA 0021140065	T46S, R57E, Sec 27, 114D7	CF	V: Au, Cu	NA	NA	Samples contained up to 0.30 ppm Au, 2,100 ppm Cu (26); hosted in di, gd	NE	26, 54	L
P34	MINE MOUNTAIN MINE 0021140025	T46S, R57E, Sec 29, 114D7	CF	V: Au	Adit: 250, open stope for 70 ft; T	$3,500 Au (26)	Stoped area contained from nil to 2.45 oz/t Au across 0.2 to 1.2 ft (26); gd and gs host w/aplite dike	R	8, 26, 38	L-M
P35	CUB MOUNTAIN 0021140028	T46S, R56E, Sec 13, 114D7	CF	V: Au	NA	NA	Samples contained up to 1 oz/t Au (54)	NE	54	L
P36	STAG BAY GOLD 0021140085	T45S, R56E, Sec 35, 114D7	CF	V: Au	Adit: 70	NA	2 samples contained 0.05 oz/t and 0.36 oz/t Au across 1.1 ft and 0.5 ft, respectively (26), Brenda vein: nil Au	NE	26	L
P37	STAG BAY MAGNETITE 0021140088	T46S, R56E, Sec 4, 114D8	CF	S: Fe, Cu	T (3): 1 sloughed	NA	Samples contained from 9.6 to 51% Fe, to 0.93% TiO_2, 100 ppm Cu (26); in fault near di-gb, marble	NE	26, 54, 69	L
P38	STAG BAY COPPER 0021140087	T46S, R56E, Sec 4, 114D8	CF	P: Cu, Fe, W	TP	NA	Upper workings: nil Au, trace Ag, 0.03% to 0.76% Cu (2); lower workings: 20-90% mag (69); Cu to 1.07% in trench 2 (26); at contact between an & di	NE	2, 26, 54, 69	L
P39	STRANGER RIVER 0021140105	T46S, R56E, Sec 29, 114D8	CF	PL: Au	NA	NA	Pan concentrate samples contained up to 0.00005 oz/yd^3 Au, trace Ag (26)	NE	26	L

Table A-1. Summary information for mines, prospects, and mineral occurrences										
Prospect no.	**Name MAS no.**	**Location**	**Land status**	**Deposit type**	**Workings**	**Production**	**Significant results**	**BLM work**	**Select references (p. 173)**	**MDP**
P40	SLIM & JIM 0021140119	T47S, R55E, Sec 36, 114D8	CF	V: Cu	NA	NA	Samples contained up to 1% Cu, 0.3% Zn, and 200 ppm Ni across 6.9 ft (26); fault zone in gw	NE	26	L
P41	BERTHA BAY 0021140014	T47S, R56E, Sec 9, 114D8	CF	Mag Seg: Cu	T; P	NA	None	NE	31	L
P42	LAKE MORRIS-MT. FRITZ 0021140304	T46S, R56E, Sec 36; T47S, R56E, Sec 1, 114D7	CF	Dissem: Cu	NA	NA	Cu-bearing float in talus, stream float, and ss samples; mainly secondary Cu minerals on slip surfaces in Goon Dip Gs	NE	26	L
P43	LAKE ELFENDAHL 0021140054	T46S, R56E, Sec 36, 114D7	CF	V: Cu, Pb, Zn	NA	NA	None	NE	54	L
P44	MT. BAKER 0021140009	T47S, R57E, Sec 6, 114D7	OF	P: Cu, Au, Ag	Adit: 300; Shaft; T(s): several	NA	Cu values in Goon Dip Gs along 2-mi zone; Cu in shears and dissem in gs; assays to 7.52% Cu across 2 ft w/ Ag (26)	R	16, 26, 31, 32, 67	L-M
P45	MIRROR HARBOR 0021140068	T47S, R56E, Sec 22, 114D7	CF	Mag Seg: Ni, Cu, Co	Shaft: (173), 2 levels; T (34)	Test shipment	Resources: Measured: 7,300 tons w/ 1.6% Ni, 0.9% Cu (65); Hypothetical: 1M tons w/ 0.32% Ni, 0.12% Cu (71); hosted in layered ultramafic, gabbronorite; 3 ore bodies	NE	26, 36, 61, 65, 68, 71, 75	M
P46	LITTLE BAY 0021140057	T47S, R56E, Sec 23, 114D7	CF	Mag Seg: Cu, Ni	T	NA	Southern extension of Mirror Harbor deposit	NE	34	L

Table A-1. Summary information for mines, prospects, and mineral occurrences										
Prospect no.	**Name MAS no.**	**Location**	**Land status**	**Deposit type**	**Workings**	**Production**	**Significant results**	**BLM work**	**Select references (p. 173)**	**MDP**
P47	SNOW SLIDE 0021140107	T47S, R57E, Sec 18, 114D7	CF	Dissem: Cu	Adit: 171	NA	None	NE	31	L
P48	COX BROTHERS 0021140203	T47S, R57E, Sec 18, 114D7	CF	V: Au	Adit: 16; T (4); P (3)	NA	Reported up to 0.30 oz/t Au across 2.5 ft (72); up to 0.1 oz/t Au across 2.7 ft (66)	NE	66, 72	L
P49	NEW CHICHAGOF MINING SYNDICATE 0021140069	T47S, R57E, Sec 21, 114D7	CF	V: Au	Adit (4): (750), (140), (20), (20); T (12)	NA	Samples from 110-ft-long by 4-ft-wide zone of qz ls br averaged 0.24 oz/t Au (66); hosted in ls	R	45, 66	M-H
P50	MARTHA-BROWN CUB 0021140110	T47S, R57E, Sec 32, 114D7	CF	V: Au	NA	NA	Hosted in gw	NE	66	L
P51	GOLDEN HAND APEX 0021140037	T47S, R57E, Sec 22, 114D7	CF, active claim held	V: Au	Adit: 225, w/ winze	4 oz Au	Qz vein exposed for 23 ft averaged 0.34 oz/t Au across 3 ft; sample of 0.2-ft by 3-ft zone contained 186.74 oz/t Au (66); hosted in gw	R	62, 66	M-H
P52	CONGRESS 0021140027	T48S, R56E, Sec 2, 114C7	CF	VMS: Cu, Zn	Adit: 25	NA	12-ft-wide zone of sil gs contained 0.58% Cu, 0.086% Zn (66); hosted in gs	NE	66	L
P53	SENATE 0021140109	T48S, R56E, Sec 1, 114C7	CF	VMS: Cu	NA	NA	Hosted in gs	NE	66	L
P54	TRIPLET ISLAND 0021140300	T48S, R57E, Sec 14, 114C7	CF	VMS: Zn, Pb, Cu	NA	NA	Sample across 0.1 ft sl lens contained 35% Zn, 0.15% Pb, and 0.11% Cu (66)	NE	66	L
P55	CALCIUM CARBONATE TIME 0021140113	T48S, R57E, Sec 4, 114C7	CF	O: limestone	NA	NA	None	NE	66	L

Table A-1. Summary information for mines, prospects, and mineral occurrences										
Prospect no.	**Name MAS no.**	**Location**	**Land status**	**Deposit type**	**Workings**	**Production**	**Significant results**	**BLM work**	**Select references (p. 173)**	**MDP**
P56	DISCOVERY ON 1ST TEER 0021140115	T48S, R57E, Sec 14, 114C7	CF	NA	NA	NA	5 claims taked 1920; no known commodity; no recorded activity since original staking	NE	66, 72	L
P57	WINTHER 0021140114	T48S, R57E, Sec 11, 114C7	CF	NA	NA	NA	7 claims staked 1933; no known commodity; no recorded activity since original staking	NE	66, 72	L
P58	EAGLE GROUP 0021140116	T48S, R57E, Sec 10, 114C7	CF	NA	NA	NA	4 claims staked 1935; no known commodity; no recorded activity since original staking	NE	66, 72	L
P59	MCKALLICK LODE 0021140063	T48S, R58E, Sec 30, 114C7	CF	V: Au	Adits (2): 50, 40	NA	2.3-ft-thick qz lens contained 0.24 oz/t Au (66); hosted in gw	NE	38, 66	L
P60	HIRST-CHICHAGOF 0021140003	T48S, R57E, Sec 25, 114C7	P: MS 1502A /B, 1503, 1504, 2066; CF	V: Au	Adit w/ 4 levels: 6,950; shafts (2): to 1,800 ft below sea level	131,000 oz Au, 33,000 oz Ag from 140,000 tons ore	Resources: 30,000 tons @ 1.0 oz/t Au, (17); 70,000 tons @ 0.25 oz/t Au; 70,000 tons tailings @ 0.14 oz/t Au (66); hosted in gw	NE	17, 38, 66	H
P61	HODSON 0021140310	T48S, R57E, Sec 23, 114C7	CF	V: Au	Adit: 235; P	NA	Samples from narrow qz veins contain from nil to 0.33 oz/t Au (58); hosted in gw	NE	58	L
P62	BASOINIUER 0021140013	T48S, R57E, Sec 26, 114C7	P: MS 1587	V: Au	T	NA	Samples contained traces of Au, Ag (66); hosted in gw	NE	66	M
P63	CHICHAGOF PROSPERITY 0021140024	T48S, R57E, Sec 23, 114C7	CF	V: Au	Adits (2): 150 w/ 2 winzes, 45	NA	Samples across 0.15- to 2.8-ft thick vein contained from nil to 0.695 oz/t Au (66); hosted in gw	NE	27, 66	M

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P64	BAUER 0021140074	T48S, R57E, Sec 23, 114C7	CF	V: Au	Adits (2): 610, 25; T (s)	NA	No significant metal values in the lower adit; Alaska Juneau reports 0.01 to 0.92 oz/t Au in upper adit (66); hosted in gw	NE	33, 66	L
P65	HANLON 0021140044	T48S, R57E, Sec 34, 114C7	CF	V: Au	C; T	NA	Samples contained up to 0.01 oz/t Au (66); hosted in gw	NE	38, 66	L
P66	MCKALLICK PLACER 0021140064	T49S, R58E, Sec 8, 114C7	CF	PL: Au	NA	NA	Alluvial placer; pan concentrate sample of stream gravels contained 0.11 oz/t Au (66)	NE	38, 66	L
P67	BANEY 0021140011	T49S, R58E, Sec 16, 114C7	CF	V: Au	Shaft: (flooded); P(s); T(s)	NA	Qz vein from 0.25 to 3 ft wide exposed over 300 ft; dump sample contained 2.76 oz/t Au and 0.32% W (66); hosted in gw	NE	33, 66	M
P68	HANSEN & BOLSHAN 0021140311	T49S, R57E, Sec 15, 114C7	CF	V: Au	Shaft: (29)	NA	Samples from dumps contained up to 0.915 oz/t Au (58); hosted in gw	NE	58	L
P69	AMERICAN GOLD COMPANY 0021140006	T49S, R58E, Sec 4, 114C7	CF	V: Au	Adit: 220, w/ winze; P	NA	Samples from narrow qz veins contained up to 0.18 oz/t Au; select sample contained 2.42 oz/t Au (66); hosted in gw	NE	44, 66	L
P70	JUMBO 0021140049	T49S, R58E, Sec 4, 114C7	CF	V: Au	Shafts (2): (flooded) w/ winze and 1,600 ft of drifts; Adit: 48	1,450 oz Au	18 samples taken along strike of vein contained up to 0.07 oz/t Au (66); hosted in gw	NE	66	M

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P71	ALASKA CHICHAGOF 0021140005	T49S, R58E, Sec 4, 114C7	CF; P: MS 957B	V: Au	Adit: (580), 2 levels; Shaft w/ stopes	660 oz Au	Production grade of nearly 1 oz/t Au; samples contained 36 ppm Au, and 150 ppm Ag (66) ; hosted in gw	NE	38, 66	M
P72	OB 0021140313	T48S, R57E, Sec 36, 114C7	P; CF	V: Au	Adit: (250) w/ winze; T(s)	NA	Samples of qz vein up to 4 ft thick contained from nil to 0.2 oz/t Au; hosted in gw	NE	66	L
P73	FLORA 0021140312	T48S, R57E, Sec 36, 114C7	P	V: Au	Adit: 90	NA	Samples from a narrow qz vein contained from nil to 0.10 oz/t Au (66); hosted in gw	NE	66	L
P74	MCKALLICK CHICHAGOF MINES 0021140034	T48S, R57E, Sec 36, 114C7	CF	V: Au	T(s)	NA	Persistent fault zone near Chichagof fault; Au values to 0.09 oz/t on surface, 0.2 oz/t in drift, 0.36 oz/t from winze (66); hosted in gw	NE	33, 66	M
P75	CHICHAGOF 0021140023	T48S, R57E, Sec 36, 114C7	P: MS 1575, 864, 817, 936, 1460, 1047, 956B, 1461	V: Au	Adit w/ 5 levels: 9,950; 6 shafts: to 2,750 ft below sea level	659, 955 oz Au, 195,000 oz Ag; average grade about 1.09 oz/t Au	Resources: 76,600 tons @ 0.4 oz/t Au (17); 463,000 tons @ 0.30 oz/t Au; 456,000 measured tons of tailings @ 0.11 oz/t Au (66); hosted in gw	S	4, 17, 38, 66	H
P76	HELEN CHICHAGOF 0021140029	T48S, R58E, Sec 31, 114C7	CF	V: Au	Adits (4); 10 to 20 ft long	NA	Samples contained up to 0.2 oz/t Au (66); hosted in gw	NE	43, 66	L

Table A-1. Summary information for mines, prospects, and mineral occurrences										
Pros-pect no.	Name MAS no.	Location	Land status	Deposit type	Work-ings	Production	Significant results	BLM work	Select references (p. 173)	M D P
P77	POWER LINE PROSPECT 0021140302	T48S, R58E, Sec 31, 114C7	CF	V: Au	Adit: 50; T	NA	Grab sample from sulfide bearing dike contained 0.52 oz/t Au (66); hosted in gw	NE	66	L
P78	HANDY 0021140043	T48S, R58E, Sec 31, 114C7	P: MS 1459	V: Au	Adit: 80	NA	Drilled between 1945 and 1953, but results not available; Bureau of Mines samples contained from nil to 0.12 oz/t Au (66); hosted in gw	NE	66	L
P79	ANDY 0021140301	T48S, R58E, Sec 31, 114C7	P: MS 1498	V: Au	Adit: 57	NA	Hosted in gw	NE	38, 66	L
P80	HILL & BERKLAND 0021140045	T49S, R58E, Sec 3, 114C7	CF	V: Au	Adit: 50	NA	Hosted in gw	NE	38, 66	L
P81	LAKE ANNA 0021140053	T49S, R58E, Sec 15, 114C7	CF	V: Au	Adit : 80	NA	Narrow qz vein exposed in adit contained up to 0.005 oz/t Au (66); hosted in gw	NE	35, 66	L
P82	WOLL 0021140058	T49S, R58E, Sec 2, 114C7	CF	V: Au	Adits (3); T(s)	NA	Best sample contained 0.51 oz/t Au; other samples contained much less Au (66); hosted in gw	NE	38, 66	L
P83	ANDERSON 0021140007	T49S, R58E, Sec 12, 114C7	CF	V: Au	Adit: 36; C	NA	On strike with Chichagof fault; values up to 1.5 ppm Au (66); hosted in gw	NE	66	L
P84	FLAT TOP MOUNTAIN, SEA LEVEL 0021140062	T49S, R59E, Sec 18, 114C6	CF	V: Au	NA	NA	Sample of qz float contained 2 ppm Au (66); hosted in gw	NE	66	L
P85	FLAT TOP MOUNTAIN, UPPER WORKINGS 0021140125	T49S, R59E, Sec 20, 114C6	CF	V: Au	P	NA	Sample of qz float contained 2 ppm Ag, and 200 ppm As (66); hosted in gw	NE	66	L

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P86	CHICHAGOF STAR 0021140046	T49S, R59E, Sec 6, 114C6	CF	V: Au	NA	NA	Hosted in gw	NE	66	L
P87	FALLS 0021140128	T49S, R59E, Sec 24, 25, 114C6	OF	Dissem: Cu	NA	NA	Samples contained from 10 to 300 ppm Cu and from nil to 0.5 ppm Ag in chl sc, hn, chert & gs (26); hosted in Kelp Bay Group	NE	26	L
P88	PAT 0021140306	T49S, R60E, Sec 28, 32, 114C6	OF, CF	Dissem: Cu	NA	NA	Samples contained from 15 to 360 ppm Cu, 10 to 1,600 ppm Zn; highest values found in sc and gneiss w/ py & po; hosted along contact between Goon Dip Gs and Whitestripe Marble	NE	26	L
P89	ELDORADO 0021140193	T50S, R59E, Sec 3, 114C6	CF	PL: Au	NA	NA	17 pan concentrate and stream sediment samples contained from nil to 0.9 ppm Au (66)	NE	66	L
P90	FALCON ARM 0021140033	T50S, R59E, Sec 10, 114C6	CF	V: Au	Adits (4): 3,000, 15, 75, 35; P	NA	Sample from upper workings contained 2.16 oz/t Au; Mineralized rock located along a fault-controlled gulch in gw that extends at least 5,000 ft (66)	NE	66	M
P91	COBOL MINE 0021140026	T50S, R59E, Sec 36, 114B6	CF	V: Au	Adits (2): 1,600, 550 w/ winze, stope	100 oz Au	Zone 57 ft long by 3 ft wide averaged 0.28 oz/t Au; float sample below present workings contained 8.74 oz/t Au (66); hosted in gw	NE	63, 66	M
P92	RAM 0021140129	T50S, R60E, Sec 4, 9, 114C6	CF	Dissem: Cu	NA	NA	Samples contained from 55 to 190 ppm Cu (26); hosted in gneiss-metavolcanic	NE	26, 72	L

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P93	USHK 0021140130	T50S, R60E, Sec 10, 15, 114C6	OF	Dissem: Cu	NA	NA	Samples contained from 5 to 290 ppm Cu, nil to 0.7 ppm Ag, 5 to 100 ppm Mo (26); hosted in Goon Dip Gs and amphibolite	NE	26, 72	L
P94	ORANGE GULCH 0021140221	T50S, R60E, Sec 36, 114B6	CF	O:	NA	NA	Orange-colored gulch along fault contact between metasediment and metavolcanic rocks and gs; contained up to 12 ppm Au, 7 ppm Ag, 3,400 ppm Zn, 100 ppm Mo (66)	NE	66	L
P95	SLOCUM ARM 0021140136	T51S, R60E, Sec 4, 114B6	CF	P: Mo	NA	NA	Mo mineralization in a variety of rock types is scattered across an area greater than a square mile (66); gs intruded by gd	S	3, 66	M
P96	NEXT 0021140199	T51S, R60E, Sec 22, 114B6	CF	Dissem: Cu	NA	NA	malachite and dissem py/po in greenstone (28)	NE	28	L
P97	DEEP BAY 0021140303	T51S, R61E, Sec 8, 114B5	OF	O:	NA	NA	Stream sediment sample contained 12 ppm Au (26); no Au found in recent sampling	S	26	L
P98	RODMAN BAY 0021140075	T52S, R63E, Sec 17, 114B5	P: MS 554, 555	V: Au	Adit: 780	NA	High-grade sample contained 45 ppb Au, nil Ag	M, S	76, 77	L
P99	MIDDLE ARM 0021140188	T52S, R65E, Sec 28, 114B3	OF	V: Cu	NA	NA	Samples contained up to 192 ppm Cu, 10 ppb Au, and 98 ppm Zn	S	28	L
P100	PORTAGE ARM 0021140050	T52S, R65E, Sec 23, 114B3	OF	V: Cu	NA	NA	Covellite, cp in qz veins (28); Bureau of Mines samples contained 1,810 ppm Cu, 2 ppm Ag, 48 ppm Zn	S	28	L

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P101	LOST ANCHOR 0021140153	T52S, R66E, Sec 32, 114B3	OF	V: Cu	NA	NA	Samples contained up to 4,060 ppm Cu	S	72	L
P102	THE BASIN 0021140189	T53S, R66E, Sec 15, 114B3	OF	V: Cu	NA	NA	Samples contained up to 230 ppm Cu, 110 ppm Zn, and 0.5 ppm Ag	S	28	L
P103	SOUTH ARM 0021140190	T53S, R65E, Sec 13, 114B4	OF	V: Cu	NA	NA	Samples contained up to 585 ppm Cu, 310 ppm Zn	S	28	L
P104	BLACK HAWK & SUSIE GROUPS 0021140147	T52S, R61E, Sec 8, 114B5	OF	V: Au	NA	NA	Samples contained up to 0.45 oz/t Au (72)	NE	72	L
P105	SEALION COVE 0021140076	T53S, R60E, Sec 11, 114B6	OF	P: Mo, Cu	NA	NA	Samples contained up to 2,450 ppb Au, 21 ppm Mo, 110 ppm Cu, >1% As	S	28	L
P106	LITTLE BLONDE & HIGH GRADE GROUPS 0021140151	T53S, R61E, Sec 15, 114B6	OF	V: Au, Pb, Zn; hosted in contact between gs & arg	Little Blonde: T (3): 30, 12, 10; High Grade: T: 100	NA	Little Blonde: up to 0.42 oz/t Au across 0.6 ft qz (49) High Grade: assays from float contained up to 3 oz/t Au; other samples contained nil Au (49)	NF	49, 51	L
P107	KRESTOF GROUP 0021140052	T54S, R62E, Sec 3, 114A5	OF	V: Au	T (5)	NA	Sample across 0.5 ft contained 0.03 oz/t Au, nil Ag; hosted in gw & slate	M, S	48, 59, 60	L
P108	MAGOUN ISLAND 0021140059	T54S, R62E, Sec 20, 114A5	OF	P: Mo, Cu	NA	NA	Samples contained up to 1% Cu, 1,245 ppm Mo, 9.4 ppm Ag	S	61	L

Table A-1. Summary information for mines, prospects, and mineral occurrences										
Prospect no.	**Name MAS no.**	**Location**	**Land status**	**Deposit type**	**Workings**	**Production**	**Significant results**	**BLM work**	**Select references (p. 173)**	**MDP**
P109	HALLECK ISLAND 0021140152	T54S, R63E, Sec 18, 114A5	OF	V: Au	Adit: 125; Shaft: (80)	NA	Samples contained from 5 to 295 ppb Au; qz veinlets in gw and slate	M, S	47, 51	L
P110	SIGINAKA ISLAND 0021140198	T54S, R63E, Sec 19, 114A5	OF	Dissem: Cu	NA	NA	Samples contained to 505 ppb Au, 332 ppm Cu	S	28	L
P111	INDIAN RIVER 0021140001	T55S, R64E, Sec 18, 114A4	OF	Mag Seg: Cr, Fe	NA	NA	Magnetite and chromite in serpentinite (28)	R	28	L
P112	PANDE BASIN 0021140159	T55S, R65E, Sec 16, 114A4	P: MS 538	PL: Au	NA	NA	No evidence of Au-bearing gravels (27)	NE	27	L
P113	WARM SPRINGS BAY 0021140154	T55S, R67E, Sec 19, 114A3	OF	P: Cu, Mo, Zn	NA	NA	20 samples averaged 600 ppm Cu, 85 ppm molybdenum; select sample contained up to 1,445 ppm Cu, 626 ppm Mo, and 1,030 ppm Zn	S	72	M
P114	CASCADE 0021140021	T55S, R64E, Sec 29, 114A4	OF	V: Au	C(s)	NA	Staked prior to 1910; sulfides include po, aspy, rare cp	NF	27	L
P115	THETIS 0021140016	T55S, R64E, Sec 28, 114A4	OF	V: Au, Ag, Pb	Adits (2): unknown length	NA Mill test only	Mill test contained approximately 0.33 oz/t Au, 2 oz/t Ag (1)	M, S	1, 5, 77	L
P116	BOSTON CLAIM 0021140018	T56S, R64E, Sec 4, 114A4	S	V: Au	Adit: 118; T; P	NA	Staked prior to 1904; trace Au found in several samples (33)	NF	27, 33, 77	L
P117	HALEY & HANLON 0021140042	T55S, R64E, Sec 34, 114A4	S	V: Ni, Cu, Co	Adit: 15	NA	Samples yielded 0.99% Cu, 0.2% Ni & 0.09 % Co (25)	NF	25	L

Table A-1. Summary information for mines, prospects, and mineral occurrences										
Prospect no.	**Name MAS no.**	**Location**	**Land status**	**Deposit type**	**Workings**	**Production**	**Significant results**	**BLM work**	**Select references (p. 173)**	**MDP**
P118	GANGOLA 0021140160	T56S, R64E, Sec 12, 114A4	S	V: W, Cu	T; P	NA	Samples contained up to 570 ppb Au, 1,010 ppm Cu, and 1,110 ppm W	M, S	72	L
P119	BULLION 0021140060	T56S, R64E, Sec 21, 114A4	OF	V: Au	NA	NA	Active around 1900	NF	27, 77	L
P120	APEX 0021140162	T56S, R64E, Sec 14, 114A4	OF	V: Au	Adit: 8	NA	Qz vein in shear zone; zone up to 2 ft wide; values up to 40 ppb Au, 920 ppm Cu	M, S	5	L
P121	LIBERTY 0021140055	T56S, R64E, Sec 24, 114A4	OF	V: Au	Adits (2): 35, 310	NA	Discontinuous qz vein, up to 4 ft thick; situated in fault parallel to country rock fol; highest Au value only 60 ppb	M, S	5, 27	L
P122	BARANOF QUEEN 0021160026	T56S, R65E, Sec 19, C 116D4	S	V: Au	NA	NA	Staked prior to 1912	NF	27	L
P123	HENRIETTA 0021160027	T56S, R65E, Sec 19, 116D4	S	V: Au	NA	NA	Staked prior to 1912	NF	27	L
P124	SILVER BAY 0021160023	T56S, R65E, Sec 19 116D4	S	V: Au, Cu	NA	NA	Active prior to 1900; reported low grade Au and Ag (78); up to 8-ft-wide vein (3)	NF	3, 27	L
P125	EDGECUMBE EXPLORATION 0021160061	T56S, R64E, Sec 25, 116D4	OF	V: Au	Adit: 120 w/ winze, raise	Unknown quantity milled	Samples contained up to 1,810 ppb Au, 0.6 ppm Ag, and 212 ppm Zn	M, S	53	L
P126	EUREKA 0021160009	T56S, R65E, Sec 30, 116D4	OF	V: Au	Adits (3): 85, 2 caved	NA	Claim active prior to 1898; select sample contained 27.5 ppm Au, 3.2 ppm Ag, 4,060 ppm As	M, S	1, 27	L

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P127	GOLD REEF 0021160024	T56S, R65E, Sec 30, 116D4	OF	V: Au	NA	NA	Active around 1912	NF	27	L
P128	GREEN LAKE 0021160030	T56S, R65E, Sec 29, 116D4	S	V: Au	Adits (3): 389, ?, 1 caved; T, P	NA	Up to 6-ft vein in outcrop; 0.02 oz/t Au in sample across 4 ft (46)	S	33, 46	L
P129	LOWER LEDGE 0021160016	T56S, R65E, Sec 32, 116D4	OF	V: Au	Adit: 63; Shaft: (flooded); C(s)	NA	Qz stringers in shear exposed in adit; very low precious metal values; up to 2,350 ppb Au in local float sample	M, S	5, 27, 77	L
P130	STEWART 0021160007	T56S, R65E, Sec 32, 116D4	P: MS 567, OF	V: Au, Ag	Adits (3): 180 (w/ 29 ft winze), 93, 33	Unknown quantity milled	Qz vein exposed over 200 ft horiz and 120 ft vert; up to 16 ft wide; average 5- to 6-ft-wide vein; values up to 3,130 ppb Au, minor Ag	M, S	5, 27, 77	L
P131	NO NAME 0021160065	T56S, R65E, Sec 32, 116D4	OF	V: Au	Adit: 264	NA	Low precious metal values; Au values to 60 ppb across 3.5 ft.; high As and Hg values	M, S,		L
P132	BAUER 0021160005	T56S, R65E, Sec 32, 116D4	OF	V: Au	Adit: 1,070	NA	Very minor mineralization; Au values to 280 ppb	M, S	27, 77	L
P133	WICKED FALL 0021160029	T56S, R65E, Sec 33, 116D4	OF	V: Au	Adits (2): 17, ?	NA	Active around 1912; Plate 3 shows 2 adits; select sample 280 ppb Au	M, S	27	L
P134	FREE GOLD 0021160010	T57S, R66E, Sec 5, 116D4	OF	V: Au	1 Adit?	NA	Active prior to 1904; Plate 3 shows one adit on prospect; samples from area reveal low precious metal values	S	27	L

Table A-1. Summary information for mines, prospects, and mineral occurrences										
Prospect no.	**Name MAS no.**	**Location**	**Land status**	**Deposit type**	**Workings**	**Production**	**Significant results**	**BLM work**	**Select references (p. 173)**	**MDP**
P135	LUCKY CHANCE 0021160017	T57S, R66E, Sec 5, 116D4	OF	V: Au, Ag	Adits (2): (513) total length; T; P; glory hole	1,200 tons mined; unknown quantity Au	Visible Au present on dump; samples contained from 0.17 to 1.72 oz/t Au (52)	S	27, 52	L
P136	LUCKY CHANCE MTN. 0021160064	T57S, R66E, Sec 5, 8,9, 116D4	OF	V: Au	Adits (2): 20, 50 caved; T	NA	Qz veins in gw and phyllite; low Au values: 4,840 ppb in select sample	M, S		L
P137	HILL 0021160002	T57S, R66E, Sec 13, 116D3	OF, CF	Mag Seg: Cr	NA	NA	Grab sample contained 0.6% Cr	S	72	L
P138	RED BLUFF BAY 0021160001	T58S, R68E, Sec 9, 116D3	OF	Mag Seg: Cr	T; P	NA	Resource: 29,500 mt @ 12% Cr_2O_3 (72); diamond drilled	S	18, 24, 72	L-M
P139	GODDARD HOT SPRINGS 0021160011	T58S, R64E, Sec 17, 116D5	S	Mag Seg: U-Th	NA	NA	Allanite to 7% in heavy mineral concentrates	S	35, 41, 74	L
P140	PATTERSON BAY 0021160062	T61S, R69E, 116C2, C3	CF	P: Cu	NA	NA	Rubble crop samples contained up to 970 ppb Au, 3,100 ppm Cu, and 4,820 ppm As	S	7	L
P141	MT. MURAVIEF 0021160063	T62S, R68E, Sec 2, 3, 116C3	OF	O: Cu, Zn	C	NA	Copper in massive pods, disseminated in schist, and in volcanic breccia; 1.6% Cu over 18 ft; select sample to 6.3% Cu	M, S	7	L
P142	SNIPE BAY 0021160025	T63S, R67E, Sec 9, 116B3,B4	OF	Mag Seg: Cu, Ni	T; P	NA	Resource: 94,000 tons grading 0.94% Cu, 0.33 % Ni (72); prospect has been diamond drilled	S	8, 15, 40, 72	M

Table A-1. Summary information for mines, prospects, and mineral occurrences

Prospect no.	Name MAS no.	Location	Land status	Deposit type	Workings	Production	Significant results	BLM work	Select references (p. 173)	MDP
P143	REDFISH BAY 0021160021	T64S, R67E, Sec 1, 116B3,B4	CF	Peg: REE	NA	NA	REE reported in 1952 (56); largest dike 30-40 ft thick; no commercially valuable minerals (6); hosted in Tertiary intrusive	S	6, 56	L
P144	PORT LUCY 0021160019	T64S, R69E, Sec 4, 116B2	OF	V: Cu	NA	NA	Samples contained up to 197 ppm Cu	S	76	L
P145	PORT CONCLUSION 0021160018	T65S, R70E, Sec 6, 116B2	S	V: Cu	NA	NA	Samples contained up to 0.5 ppm Ag, 230 ppm Cu, and 110 ppm Zn	S	78	L

REFERENCES USED IN APPENDIX TABLE A-1
(Full references provided in the Bibliography, p. 133)

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APPENDIX B - ANALYTICAL RESULTS

Sampling and Analytical Procedures

SAMPLING

Rock sample types include continuous chip, chip channel, grab, random chip, representative chip, select, and spaced-chip samples. **Continuous chip** samples consist of rock fragments taken in a continuous line across the sample site; **chip channel** samples are rock fragments cut from a sample line of relatively uniform width and depth across the sample site; **grab** samples are collections of rock fragments taken more or less at random from the sample site; grab samples often include samples of float or rubblecrop; **random chip** samples are rock fragments collected randomly from the sample site; **representative chip** samples are rock fragments collected to characterize the rock type at the sample site; **select** samples are collected from the highest-grade part of the sample site; and **spaced-chip** samples are composed of rock fragments taken at specified intervals across the sample site.

Stream sample types include stream sediment, pan concentrate, and placer samples. **Stream-sediment** samples consist of silt to clay-sized particles found in streams or along stream banks. Metals adsorb to these fine particles, so the samples are used to determine the presence of anomalous metal concentrations in the area drained by the stream. **Pan concentrate** samples are the heavy mineral fraction of a pan full of sand and gravel reduced by normal panning techniques. **Placer** samples consist of the heavy mineral fraction concentrated from 16 pans (0.1yd^3) of material processed through a 4-foot long sluice box.

ANALYTICAL PROCEDURES

Samples were prepared and subsequently analyzed using both atomic absorption spectrophotometry (AA) and inductively coupled argon plasma atomic emission spectroscopy (ICP) techniques. Gold was analyzed using a 30 gram sample by fire assay preconcentration followed by an AA finish. Silver, copper, lead, zinc, nickel, cobalt, and molybdenum were usually analyzed by AA techniques. A few samples were analyzed for platinum-group metals using fire-assay techniques followed by an ICP finish. Several samples were analyzed for the same element using two different techniques. The result from the more accurate method is presented in the tables (see Table B-4, p. 219, for analytical detection limits).

Rock samples were dried, crushed, and pulverized to at least minus 100 mesh. A sample weight of 0.5 grams was put into solution using an aqua-regia leach technique for the AA and ICP analyses.

Limestone samples were analyzed using whole rock methods. Major oxide concentrations were determined by X-ray fluorescence spectroscopy (XRF) and total carbonate by acid/alkali procedures ($CaCO_3$ determined by volumetric/titration method ASTM C-25). Each sample was rinsed, dried, and weighed prior to analysis.

Several rock chip samples were analyzed for rare-earth elements (REE) by neutron activation analysis (NAA). The standard sample preparation described above was used for these samples, however no sample dissolution was required.

Analytical Results of Samples from Mines, Prospects, and Mineral Occurrences

Sample data and analytical results are tabulated in Tables B-1 to B-3. In addition to the analytical results, the following are listed in the tables: map number, field sample number, mineral location name, sample type, sample size, sample site, and sample description. The results are organized by map numbers, which are displayed on the sample locality map (Plate 2, in pocket). The map numbers are arranged generally north to south and west to east on Plate 2. Analytical results from carbonate and whole-rock sampling are presented in Table B-2. Rare-earth element (REE) sample analyses are presented in Table B-3. A list of analytical detection limits is included as Table B-4.

KEY TO APPENDIX B TABLES

All analyses were conducted by a commercial laboratory. Results are presented by chemical element symbol.

Analyses in bold and followed by an asterisk (*) are assay-grade analyses.

ABBREVIATIONS

Abbreviations for sample types (see page 175 for definitions of sample types):

	Rock Chip		Stream Sample
C	continuous chip	SS	stream sediment
CC	chip channel	PC	pan concentrate
G	grab	PL	placer
RC	random chip		
Rep	representative chip		
S	select		
SC	spaced chip		

Abbreviations for sample sites:

FL	float	RC	rubblecrop
MD	mine dump	TP	trench, pit, or cut
MT	mill tailings	UW	underground workings
OC	outcrop		

Abbreviations used in sample descriptions in Table B-1:

@	at	hn	hornfels/hornfelsed
adj	adjacent	hw	hanging wall
alt	altered	int	intrusive
an	andesite	K-spar	potassium feldspar
ar	argillite	ls	limestone
aspy	arsenopyrite	mag	magnetite
az	azurite	meta	metamorphic
bt	biotite	ml	malachite
br	breccia/brecciated	mo	molybdenite
calc	calcite/calcareous	monz	monzonite
cg	coarse-grained	min	mineralized
cng	conglomerate	msv	massive
chl	chlorite/chloritic	oz/t	troy ounces per short ton
cp	chalcopyrite	peg	pegmatite
di	diorite	pl	phyllite
dissem	disseminated/disseminations	po	pyrrhotite
ep	epidote	porph	porphyry/porphyritic
fel	felsic	py	pyrite/pyritic
fest	iron stained	qz	quartz
fg	fine-grained	sed(s)	sediment(s)
Fm	Formation	sc	schist
fw	footwall	sil	silicified/siliceous
gd	granodiorite	sl	sphalerite
gn	galena	sulf	sulfide
gp	graphite/graphitic	vn	vein
gs	greenstone	vnlets	veinlets
gw	graywacke	volc	volcanic
hem	hematite	w/	with
hnbd	hornblende	xcut	crosscut/crosscutting

Table B-1. Analytical results of samples from mines, prospects, and mineral occurrences.

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
1	2394	Marvitz	S		RC	Sil metaseds w/ dissem & banded sulf	1952	1	108	31	71	7	23	8	0.96	109	7
1	2395	Marvitz	Rep	1	OC	Gossan & banded msv py in alt sil zone	1470	1.2	74	16	165	5	40	18	2.7	138	7
1	2396	Marvitz	G		RC	Sil zone w/ dissem py	300	<0.1	46	12	95	8	60	35	0.72	76	44
2	1242	Westport	Rep		TP	Cp, ml in alt br ar of Pt. Augusta Fm.	<5	<.2	2930	<2	<2	1	8	7	0.3	2	10
3	1241	Westport	Rep	2	TP	Ls w/ py to 10% near mafic dike	<5	<.2	11	6	22	<1	6	5	0.64	12	60
3	1391	Westport	S		TP	Ls at contact w/ volc rock, ~4% py	<5	<.2	54	30	52	<1	49	20	2.74	22	40
		Map numbers 4-8 are carbonate sample sites (See Table B-3)															
9	1395	Westport	RC		TP	Sil volc w/ dissem py to 2%	<5	<.2	3	2	60	<1	1	1	0.23	2	160
10	1243	Westport	Rep	2	TP	Fel dike w/ cp to 2% in qz vns	<5	<.2	1715	<2	<2	<1	5	4	0.24	<2	20
10	1392	Westport	S		TP	Fg py in alt metased, ~1% py	<5	<.2	33	6	2	<1	46	27	0.44	<2	10
11	1245	Westport	Rep	0.7	TP	Calc vn w/ py to 3%	<5	<.2	22	<2	2	<1	<1	<1	0.09	2	3660
12	1394	Westport	Rep	5.5	TP	Dissem py to 5% in sil volc	<5	<.2	100	<2	50	8	1	4	1.01	<2	40
13	1396	Westport	G		TP	Carbon-rich ls w/ minor py <1%	<5	<.2	4	<2	30	3	11	3	0.14	<2	50
14	1244	Westport	Rep	2	TP	Fel volc w/ dissem & clots of py to 2%	<5	<.2	26	12	32	12	6	4	0.49	24	20
15	1393	Westport	S		TP	Sil volc w/ seams & dissem py to 7%	<5	<.2	25	24	20	6	5	4	0.29	112	40
16	2132	8-Fathom Bight	S		TP	Tonalite w/ py/po <1% near dike	<5	0.4	179	<2	52	2	17	25	1.58	4	170
17	2073	8-Fathom Bight	PC	4 pans		Black sand	<5	0.2	40	4	62	1	20	20	1.83	6	120
17	2133	8-Fathom Bight	SS				<5	<0.2	52	8	90	1	29	21	2.61	8	90
18	2071	8-Fathom Bight	Rep		OC	Porph mafic volc, py to 5%, fest	<5	0.2	54	<2	64	<1	21	27	2.1	4	240
18	2130	8-Fathom Bight	S		TP	Banded hn w/ py/po to 1%	<5	<0.2	55	<2	50	<1	25	21	2.84	28	70
19	2072	8-Fathom Bight	PC	4 pans		Abundant black sand	<5	<0.2	16	12	60	6	16	19	0.89	<2	20
19	2131	8-Fathom Bight	SS				<5	<0.2	12	<2	46	<1	10	11	1.99	<2	40
20	2074	8-Fathom Bight	SS				<5	<0.2	56	14	104	1	34	22	2.7	6	40
21	2070	8-Fathom Bight	Rep	2	TP	Banded hn, py to 8%	55	0.6	433	4	58	2	7	19	1.21	834	10
22	2134	8-Fathom Bight	SS				<5	<0.2	49	4	70	<1	26	13	2.54	30	90
23	2135	8-Fathom Bight	SS				<5	<0.2	29	2	50	1	13	10	2.41	4	50
24	2136	8-Fathom Bight	SS				<5	<0.2	36	2	70	1	14	12	2.37	12	50
25	2068	8-Fathom Bight	Rep	0.7	OC	Fel dike, py to 10% locally	<5	0.2	61	4	62	7	8	11	0.69	2	<10
25	2069	8-Fathom Bight	S	2	OC	Calc-silicate skarn, py to 2%, cp	<5	0.4	91	8	74	3	19	21	1.28	60	60
25	2129	8-Fathom Bight	S		RC	Banded hn w/ py/po to 3%	<5	0.2	173	2	60	<1	52	32	0.75	22	10
26	1389	Salt Lake Bay	SS			Gd to di in area	<5	<.2	30	2	50	<1	15	15	3.68	24	80
27	1239	Salt Lake Bay	Rep	0.5	OC	Sheared gd w/ qz vnlets & msv sulf pod	15	1.2	654	6	52	<1	16	70	5.05	52	30
27	1388	Salt Lake Bay	S		TP	K-spar peg dike w/ py seams (1%)		<.2	4	<2	10	1	2	4	2.45	60	10
28	1238	Salt Lake Bay	Rep	1.5	OC	Dissem py/po to 3% in alt di	10	<.2	49	2	54	4	8	17	2.79	<2	130
29	1387	Salt Lake Bay	S		OC	Fault zone w/ 3% dissem py in gd	<5	0.2	687	<2	44	1	16	27	2.94	2	40
30	1240	Salt Lake Bay	Rep	2	TP	Highly alt di, oxidized (fest) potassic	<5	<.2	23	<2	48	1	22	13	1.17	6	60
30	1390	Salt Lake Bay	S		TP	Fault gouge w/ py to 3% in gd to di	<5	<.2	9	2	52	<1	3	9	3.68	12	100
31	1237	Salt Lake Bay	S	0.5	TP	Hem in clay gouge in sheared gd	30	<.2	16	12	336	18	6	12	1.27	2260	20
31	1385	Salt Lake Bay	Rep	1.5	TP	Sheared alt gd w/ hem	<5	<.2	27	2	72	1	6	15	1.56	1700	30
31	1386	Salt Lake Bay	G		TP	Peg w/ minor crystalline py		<.2	20	<2	4	6	2	5	0.59	6	30
32	1236	Salt Lake Bay	SS			Pt. Augusta Fm. gw + gd	<5	<.2	53	4	80	<1	29	14	2.99	6	150
33	1384	Salt Lake Bay	SS			Int & gw in area	<5	<.2	51	6	98	<1	27	16	3.21	8	140
34	1235	Salt Lake Bay	SS			Pt. Augusta Fm. gw & marble	<5	<.2	60	8	98	<1	31	17	3.58	2	150
35	1355	Seagull Creek Road	G		FL	Py cubes & dissem to 10% in ls/marble	<5	<.2	74	<2	50	<1	61	40	2.83	22	60
36	1208	Seagull Creek Road	Rep	1.5	OC	Py dike in fractured ls	25	<.2	340	<2	136	<1	4	16	1.05	82	70

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
1	2394		<5	2.61	<0.2	101	11.45	<2	14	0.01	6	14	0.37	1697	<0.01	5		8	<5	<20	119	<10	<10	0.03			141	<20	13	<1		
1	2395		<5	0.54	<0.2	88	26.6	<2	85	0.03	20	31	1.05	4064	<0.01	9		8	14	<20	26	<10	<10	0.18			261	<20	28	<1		
1	2396		6	3.12	<0.2	133	50.22	<2	17	0.19	58	1	0.26	2524	<0.01	22		<5	7	27	195	<10	<10	0.03			621	<20	94	<1		
2	1242	<.5	<2	8.79	<.5	45	2.28	<10	20	0.03	10		1.29	1460	0.13		580	<2	10		106			<.01	<10	<10	14	<10				
3	1241	<.5	<2	>15.00	<.5	27	3.16	<10	<10	0.04	10		1.06	395	0.02		560	<2	1		708			0.03	<10	<10	34	<10				
3	1391	<.5	<2	>15.00	<.5	47	5.11	<10	10	0.01	10		0.81	325	<.01		390	<2	3		788			0.13	<10	<10	38	<10				
9	1395	<.5	<2	0.15	<.5	37	3.94	<10	<10	0.07	20		0.09	1085	0.15		50	<2	<1		13			<.01	<10	<10	7	<10				
10	1243	<.5	<2	13.1	<.5	28	7.73	<10	<10	0.05	10		3.68	1845	0.06		890	<2	10		91			<.01	<10	<10	10	<10				
10	1392	<.5	<2	9.04	<.5	70	4.66	<10	40	0.24	10		2.5	945	0.08		1530	<2	15		109			<.01	<10	<10	62	<10				
11	1245	<.5	<2	>15.00	0.5	5	0.49	<10	<10	0.03	<10		0.24	940	0.01		<10	<2	<1		1840			<.01	<10	<10	1	<10				
12	1394	0.5	<2	1.6	<.5	28	5.7	<10	80	0.64	170		0.2	2590	0.09		130	<2	<1		45			<.01	<10	<10	<1	<10				
13	1396	<.5	<2	9.89	<.5	135	2.06	<10	10	0.08	<10		0.58	245	0.01		110	<2	3		118			<.01	<10	<10	5	<10				
14	1244	<.5	<2	0.66	<.5	162	3.36	<10	310	0.22	40		0.26	405	0.15		80	<2	1		13			<.01	<10	<10	1	<10				
15	1393	<.5	<2	0.75	<.5	96	4.72	<10	810	0.2	10		0.23	365	0.05		150	<2	1		16			<.01	<10	<10	<1	<10				
16	2132	0.5	<2	1.17	<0.5	43	4.54	<10	40	0.39	20		0.99	375	0.12		1780	4	3		68			0.16	<10	<10	63	<10				
17	2073	0.5	2	1.31	<0.5	80	9.72	<10	50	0.12	10		1.11	445	0.05		1140	<2	6		44			0.31	<10	<10	558	<10				
17	2133	0.5	2	1.42	<0.5	44	4.88	<10	70	0.12	10		1.45	970	0.02		1340	<2	10		71			0.18	<10	<10	96	<10				
18	2071	0.5	<2	1.4	<0.5	34	4.42	<10	10	0.76	20		1.22	385	0.17		1420	4	6		78			0.34	<10	<10	112	<10				
18	2130	0.5	<2	2.25	<0.5	65	2.8	<10	40	0.42	10		0.81	330	0.25		980	6	5		151			0.3	<10	<10	74	<10				
19	2072	<0.5	<2	0.89	<0.5	222	>15.00	<10	470	0.04	20		0.37	615	0.06		680	<2	2		39			0.17	10	<10	1045	<10				
19	2131	<0.5	<2	1.43	<0.5	52	9.86	<10	40	0.06	<10		0.61	405	0.02		820	<2	2		76			0.12	<10	<10	300	<10				
20	2074	0.5	<2	0.85	0.5	51	4.81	<10	40	0.08	10		1.84	830	0.01		900	<2	8		53			0.12	<10	<10	76	<10				
21	2070	0.5	<2	1.33	<0.5	37	4.76	<10	10	0.17	20		0.59	545	0.07		2330	4	5		33			0.19	<10	<10	34	<10				
22	2134	<0.5	<2	1.65	<0.5	34	3.55	<10	40	0.26	<10		1.22	390	0.06		760	<2	7		103			0.19	<10	<10	89	<10				
23	2135	<0.5	<2	1	<0.5	28	4.77	<10	30	0.12	<10		0.9	390	0.06		790	<2	5		66			0.17	<10	<10	116	<10				
24	2136	<0.5	<2	1.46	<0.5	47	6.29	<10	60	0.15	<10		1.09	480	0.07		940	<2	5		158			0.19	<10	<10	167	<10				
25	2068	3	2	3.01	<0.5	111	3.41	<10	30	0.1	130		0.36	595	0.04		240	2	2		51			0.15	<10	<10	26	<10				
25	2069	0.5	<2	1.58	<0.5	62	4.5	<10	20	0.44	30		1	575	0.09		2110	4	7		52			0.22	<10	<10	66	<10				
25	2129	0.5	2	1.37	<0.5	127	3.36	<10	110	0.11	20		0.45	255	0.1		210	2	1		19			0.09	<10	<10	23	<10				
26	1389	<.5	<2	2.21	<.5	48	3.79	<10	20	0.1	<10		0.83	490	0.05		800	<2	4		120			0.13	<10	<10	122	<10				
27	1239	0.5	<2	4.57	<.5	87	6.22	10	60	0.13	<10		0.99	560	0.04		640	<2	7		265			0.21	<10	<10	92	<10				
27	1388	<.5	<2	2.42	<.5	80	1.34	<10	160	0.12	10		0.31	155	0.06		110	<2	3		60			0.06	<10	<10	25	<10				
28	1238	<.5	<2	0.53	<.5	92	5.71	<10	<10	0.4	10		1.14	670	0.1		1260	<2	9		64			0.16	<10	<10	141	<10				
29	1387	<.5	<2	1.2	<.5	93	7.72	10	<10	0.13	<10		1.4	500	0.02		1070	<2	13		118			0.33	<10	<10	155	<10				
30	1240	<.5	<2	1.72	<.5	163	3.05	<10	780	0.11	10		0.79	725	0.09		660	<2	8		44			0.12	<10	<10	89	<10				
30	1390	<.5	<2	12.4	<.5	24	4.04	10	10	0.12	<10		1.22	1005	0.01		230	<2	2		160			0.08	<10	<10	90	<10				
31	1237	<.5	<2	>15.00	<.5	17	3.79	<10	10	0.14	<10		0.4	2030	0.04		430	36	5		167			<.01	<10	<10	35	<10				
31	1385	<.5	<2	8.16	<.5	21	4.36	<10	30	0.11	<10		0.42	775	0.05		510	30	7		114			0.07	<10	<10	61	<10				
31	1386	<.5	<2	2.86	<.5	111	0.65	<10	<10	0.11	<10		0.14	110	0.04		40	<2	<1		34			0.01	<10	<10	19	<10				
32	1236	<.5	<2	4.02	<.5	51	3.42	<10	70	0.43	<10		1.83	445	0.05		680	<2	8		242			0.2	<10	<10	109	<10				
33	1384	<.5	<2	1.13	0.5	56	4.19	<10	70	0.34	10		2.01	585	0.06		750	<2	10		122			0.22	<10	<10	128	<10				
34	1235	<.5	<2	1.63	<.5	54	4.08	<10	90	0.33	10		1.86	580	0.03		600	<2	10		114			0.23	<10	<10	125	<10				
35	1355	<.5	<2	6.5	<.5	64	7.22	<10	<10	0.36	<10		3.19	375	0.05		890	<2	4		259			<.01	<10	<10	43	<10				
36	1208	<.5	<2	8.53	1	56	3.55	<10	30	0.21	<10		1.57	475	0.06		930	<2	4		350			<.01	<10	<10	36	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	ppm	Ag ppm	Cu ppm	%	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
36	1209	Seagull Creek Road	S	0.66	OC	Qz clot between py dike & ls	<5		0.2	735		<2	24	4	192	81	0.7	28	50
37	1383	Salt Lake Bay	SS			Pt. Augusta Fm. metaseds in area	<5		<.2	43		8	96	<1	31	12	3.06	<2	60
38	1234	Salt Lake Bay	SS			Pt. Augusta Fm. metaseds in area	<5		<.2	59		8	108	<1	33	17	3.36	6	150
39	1381	Salt Lake Bay	SS			Gd & minor marble in area	<5		<.2	50		6	104	<1	31	15	2.97	<2	130
39	1382	Salt Lake Bay	Rep		OC	Pt. Augusta Fm. gw w/ <1% py	<5		<.2	62		8	44	10	27	11	1.66	<2	20
40	1353	Game Creek Road	SS			In Pt. Augusta Fm. metaseds	<5		<.2	59		12	118	<1	32	17	3.33	20	120
41	1354	Game Creek Road	G		FL	Rhyolite w/ dissem py <1%, copper stain	<5		<.2	36		112	680	<1	18	14	1.64	2	80
42	1207	Seagull Creek Road	Rep	2	OC	Fest sil volc w/ abundant py	<5		<.2	72		14	150	<1	27	22	2.98	<2	90
43	1206	Game Creek Road	Rep		TP	Py & cp in qz w/ gw & sil slate	<5		<.2	56		66	72	<1	12	7	1.06	<2	40
43	1352	Game Creek Road	S		TP	Gw w/ seams of py <1%	10		<.2	23		2	2	<1	13	7	0.83	62	400
44	1203	Game Creek Road	Rep	2	TP	Sl, py in alt fg int	<5		<.2	3		2	8	5	1	3	0.32	<2	20
44	1205	Game Creek Road	Rep	2	TP	Cp & py in alt fg int	<5		<.2	6		6	6	4	1	22	0.23	2	10
45	1201	Game Creek Road	Rep	2	OC	Rhyolite w/ py in mafic-fel volc sequence	<5		<.2	14		10	16	6	<1	<1	0.52	10	30
45	1202	Game Creek Road	Rep	2	OC	Fest & sil zone in volc adj to rhyolite	<5		<.2	21		8	38	6	1	2	0.6	<2	30
45	1204	Game Creek Road	Rep	2	TP	Rhyolite w/ py	10		<.2	9		<2	2	9	1	9	0.28	<2	10
45	1350	Game Creek Road	SC	36 @ 2	OC	Rhyolite w/ 2% dissem py	<5		<.2	11		10	46	9	1	1	0.37	12	60
45	1351	Game Creek Road	Rep	10	OC	Alt rhyolite w/ 1-2% py	<5		<.2	12		2	50	4	<1	4	0.62	6	50
46	1210	Spasski Creek Road	Rep	15	OC	Fg int w/ mag	<5		<.2	30		12	196	<1	46	28	3	<2	90
47	2086	Spasski Creek	S	2	OC	Alt sil dike, cp to 5%, py to 10%	<5		<0.2	1.15	*	<2	<2	<1	12	11	0.27	<2	20
48	2087	Spasski Creek	S		FL	Mariposite-rich fel dike, fest	<5		<0.2	24		6	<2	<1	32	11	0.68	<2	10
48	2142	Spasski Creek	S		TP	Msv py lenses in alt cng	<5		1.3	98		28	34	<1	99	26	0.22	46	<10
49	2088	8530 Spur Road	Rep		FL	Skarn w/ po to 15%, trace cp	<5		0.3	98		<1	30	<1	120	39	2.62	<2	70
50	2089	Suntaheen Creek	S	0.1	OC	Calc vn w/ qz, no sulf	<5		<0.2	12		2	12	<1	4	3	0.2	<2	20
51	2145	8535 Road	Rep		OC	Alt volc at contact w/ ls, sulf to 2%	<5		0.3	295		<1	108	27	14	32	2.81	<2	20
52	2143	8535 Road	Rep		TP	Mafic dike w/ sulf, alt hnbd int	<5		0.2	92		1	84	1	72	32	4.25	2	30
52	2144	8535 Road	S		TP	Porph hnbd int, sulf to 10%	<5		0.2	92		3	50	7	2	29	3.67	<2	40
53	2090	Iyouktug Creek Road	Rep	3	OC	Porph dike, py to 10%	<5		<0.2	40		2	106	<1	36	55	3.42	<2	70
54	2075	False Bay	S		OC	Calc vns, py/po to 1%	<5		0.2	19		2	38	<1	5	7	0.72	2	40
55	2137	False Bay	C	1.4	OC	Fel dike in ls, 1-2% py, trace cp	<5		<0.2	78		8	62	<1	200	43	3.75	30	30
		Map number 56 is a carbonate sample site (See Table B-3)																	
57	2076	Gypsum Creek	S	2	FL	Skarn boulder, cp to 2%, po to 50%	<5		<0.2	116		<1	151	6	310	30	0.28	<2	<10
57	2077	Gypsum Creek	S	1x2	OC	Marble w/py stringers/stockwork	<5		<0.2	46		<1	14	11	50	14	0.29	<2	30
57	2078	Gypsum Creek	S	0.5	OC	Hn w/ po to 5%, trace cp	<5		<0.2	60		<1	32	1	200	42	3.48	2	<10
57	2138	Gypsum Creek	S		TP	Msv py seams in fossiliferous ls	<5		0.3	24		4	45	2	60	8	0.58	16	10
58	2079	Gypsum Creek	SS				<5		<0.2	79		2	88	6	9	6	2.45	4	40
59	2085	Gypsum Creek	SS				<5		<0.2	41		2	80	3	22	8	3.33	4	40
60	2084	Gypsum Creek	SS				<5		<0.2	57		2	96	1	20	8	2.11	8	<30
61	2083	Gypsum Creek	SS				<5		<0.2	79		4	80	3	24	9	2.55	14	30
62	2082	Gypsum Creek	SS				<5		<0.2	70		2	46	5	8	7	2.13	<2	30
63	2081	Gypsum Creek	Rep	2	OC	Hn w/ po/cp to 10% combined	<5		<0.2	210		<1	28	1	2	26	0.38	<2	<10
64	2080	Gypsum Creek	S	1.5x2	OC	Skarn/hn w/ po/cp to 15% combined, locally	<5		<0.2	2200		<1	39	1	9	98	1.12	<2	<10
65	2139	Gypsum Creek	S		TP	Msv py/po, some cp in alt int	25		<0.2	1900		<1	15	<1	48	300	0.28	24	<10
65	2140	Gypsum Creek	Rep		TP	Skarn w/ py/po to 30%, cp to 3%	50		0.4	1950		<1	39	28	24	110	0.93	18	<10
65	2141	Gypsum Creek	C	3.7	OC	Skarn adj to marble, sulf to 10%	<5		0.4	1500		<1	32	2	12	66	0.76	16	<10
66	2165	Gypsum Creek area	G		RC	Gossan, sil zone, minor py, trace cp	15		<0.2	12		<1	8	4	7	47	0.66	<2	<10

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
36	1209	<.5	<2	0.78	<.5	109	>15.00	<10	380	0.08	<10		0.41	90	<.01		230	22	1		56			<.01	<10	<10	7	<10				
37	1383	<.5	<2	0.42	<.5	43	3.41	<10	30	0.11	<10		2.35	305	0.01		330	<2	7		27			0.09	<10	<10	95	<10				
38	1234	<.5	<2	1.39	<.5	59	4.27	<10	50	0.33	10		2.21	545	0.04		640	<2	11		98			0.21	<10	<10	127	<10				
39	1381	<.5	<2	1.04	<.5	52	4.05	<10	50	0.24	10		2	530	0.02		650	<2	10		64			0.16	<10	<10	113	<10				
39	1382	<.5	<2	0.73	<.5	120	2.96	<10	30	0.15	<10		0.81	40	0.11		390	<2	3		89			0.09	<10	<10	66	<10				
40	1353	<.5	<2	0.67	0.5	58	4.48	<10	60	0.32	10		2.29	645	0.01		650	<2	12		55			0.18	<10	<10	126	<10				
41	1354	<.5	<2	1.58	2.5	70	3.98	<10	80	0.34	10		1.1	635	0.05		820	<2	5		54			<.01	<10	<10	41	<10				
42	1207	<.5	<2	0.65	0.5	53	5.48	<10	10	0.31	10		2.11	535	0.01		850	<2	5		19			0.25	<10	<10	59	<10				
43	1206	<.5	<2	14.65	0.5	84	2.34	<10	<10	0.17	<10		0.72	1525	0.04		300	<2	6		663			<.01	<10	<10	31	<10				
43	1352	<.5	<2	4.58	<.5	59	3.17	<10	350	0.32	<10		1.12	830	0.03		510	2	6		119			<.01	<10	<10	21	<10				
44	1203	<.5	<2	0.09	<.5	57	2.98	<10	80	0.13	20		0.07	100	0.16		210	<2	<1		7			<.01	<10	<10	1	<10				
44	1205	<.5	<2	0.51	<.5	53	3.33	<10	850	0.12	30		0.13	365	0.16		210	<2	1		11			<.01	<10	<10	<1	<10				
45	1201	0.5	<2	0.02	<.5	42	2.4	<10	30	0.3	60		0.02	315	0.1		80	<2	<1		4			<.01	<10	<10	<1	<10				
45	1202	<.5	<2	0.18	<.5	55	3.86	<10	50	0.36	110		0.12	1330	0.15		90	<2	<1		12			<.01	<10	<10	1	<10				
45	1204	<.5	<2	0.26	<.5	77	3.6	<10	210	0.15	60		0.05	150	0.21		230	<2	<1		7			<.01	<10	<10	<1	<10				
45	1350	<.5	<2	1.69	<.5	68	3.8	<10	70	0.13	40		0.44	1780	0.27		340	<2	4		90			<.01	<10	<10	<1	<10				
45	1351	0.5	<2	2.08	<.5	33	3.18	<10	80	0.36	20		0.48	2000	0.09		800	<2	<1		116			<.01	<10	<10	8	<10				
46	1210	1	<2	2.9	<.5	121	7.54	10	<10	0.27	30		2.16	1100	0.11		1110	<2	10		199			0.44	<10	<10	150	<10				
47	2086	0.5	4	7.89	<0.5	49	5.38	<10	380	0.06	<10		1.97	1280	0.06		420	4	10		94			<0.01	<10	<10	25	10				
48	2087	1	4	7.95	<0.5	1050	4.24	<10	20	0.3	<10		2.1	1030	0.04		300	4	31		58			<0.01	<10	<10	46	<10				
48	2142	0.5	<2	5.94	<0.5	45	>15.00	<10	710	0.02	<10		1.53	985	0.01		100	6	3		50			<0.01	<10	<10	22	30				
49	2088	1	<2	2.25	<0.5	119	11.05	<10	70	0.33	10		1.04	115	0.27		790	4	4		154			0.4	<10	<10	45	<10				
50	2089	0.5	8	>15.00	<0.5	30	2.78	<10	10	0.04	<10		1.65	1035	0.01		150	2	1		1100			<0.01	<10	<10	4	10				
51	2145	1	4	3.95	<0.5	47	5.2	<10	10	0.31	10		0.83	515	0.11		2120	2	8		47			0.37	<10	<10	81	20				
52	2143	0.5	<2	3.81	<0.5	111	5.51	<10	80	0.09	<10		1.71	625	0.15		800	8	12		109			0.5	<10	<10	163	20				
52	2144	0.5	<2	3.71	<0.5	24	5.14	<10	10	0.22	<10		1.77	370	0.37		880	6	12		118			0.38	<10	<10	177	20				
53	2090	1	<2	5.53	0.5	21	8.51	<10	20	0.2	<10		2.54	625	0.02		1860	8	9		381			0.01	<10	<10	133	<10				
54	2075	0.5	6	>15.00	<0.5	20	2.64	<10	10	0.12	<10		1.54	1525	0.02		290	4	6		710			<0.01	<10	<10	19	10				
55	2137	0.5	<2	5.98	<0.5	229	5.02	<10	20	0.09	<10		4.47	710	0.08		530	12	19		326			<0.01	<10	<10	123	10				
57	2076	<0.5	<2	10.05	0.5	16	>15.00	<10	870	<0.01	<10		0.15	655	<0.01		190	2	2		110			0.03	<10	<10	12	<10				
57	2077	<0.5	8	>15.00	<0.5	1	6.21	<10	30	<0.01	<10		0.09	1125	<0.01		140	4	<1		213			<0.01	<10	<10	4	10				
57	2078	1	4	4.84	<0.5	141	6.24	<10	170	0.17	<10		1.78	155	0.01		1520	8	2		25			0.4	<10	<10	59	<10				
57	2138	0.5	<2	8.42	<0.5	70	>15.00	<10	50	0.07	<10		0.51	345	0.02		670	2	2		65			0.04	<10	<10	25	20				
58	2079	<0.5	<2	1.47	0.5	17	2.43	<10	230	0.06	10		1.02	285	0.03		720	<2	2		80			0.14	<10	10	56	10				
59	2085	0.5	2	2.09	0.5	33	3.38	<10	100	0.08	10		1.94	620	0.03		780	<2	4		104			0.12	<10	<10	79	<10				
60	2084	<0.5	2	2.33	0.5	25	4.67	<10	70	0.08	10		0.99	440	0.04		730	<2	2		125			0.12	<10	<10	121	<10				
61	2083	0.5	<2	2.5	<0.5	23	3.77	<10	90	0.08	10		1.09	450	0.04		700	<2	2		145			0.11	<10	<10	86	<10				
62	2082	0.5	<2	2.32	<0.5	16	4.14	<10	70	0.07	10		1.15	465	0.03		520	<2	2		115			0.13	<10	<10	105	<10				
63	2081	0.5	2	3.1	<0.5	43	4.6	<10	30	0.02	<10		0.12	640	0.01		660	2	<1		14			0.02	<10	<10	4	<10				
64	2080	0.5	4	9.95	<0.5	52	>15.00	<10	140	0.1	<10		0.03	1420	<0.01		510	2	1		9			0.02	<10	<10	17	<10				
65	2139	<0.5	<2	0.44	<0.5	21	>15.00	<10	90	<0.01	30		0.08	75	<0.01		210	4	2		4			0.01	<10	<10	9	<10				
65	2140	1	<2	6.75	<0.5	32	13.5	<10	150	0.01	<10		0.06	815	<0.01		370	6	1		22			0.02	<10	<10	15	30				
65	2141	0.5	<2	12.8	<0.5	84	>15.00	<10	60	<0.01	<10		0.07	1605	<0.01		510	4	2		<1			0.01	<10	<10	22	40				
66	2165	<0.5	<2	0.02	<0.5	112	7.6	<10	<10	0.03	<10		0.12	150	0.01		90	<2	1		9			<0.01	<10	<10	10	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
66	2166	Gypsum Creek area	S		RC	Skarn w/ py <1%, cp	<5	<0.2	560	<1	30	<1	5	13	3.38	2	20
66	2167	Gypsum Creek area	G		OC	Alt carbonate rock, py, gray sulf	<5	<0.2	11	4	97	<1	8	<1	0.06	38	<10
66	2246	Gypsum Creek area	Rep		OC	Int/ls contact, trace cp, py	<5	<0.2	83	2	21	0.6	50	42	<2	30	<0.5
67	1218	Seal Creek	G		FL	Fest skarnified int near ls contact	<5	0.2	180	4	22	<1	23	12	5.39	<2	20
68	1364	Seal Creek	SS			Fel int & marble float	<5	<.2	22	22	66	<1	17	10	2.88	<2	40
69	1219	Seal Creek	SS			Downstream from int-ls contact	<5	<.2	33	6	136	2	84	17	1.97	6	40
70	1365	Seal Creek	S		FL	Marble w/ 2-3% py, po, cp	<5	0.8	89	10	36	<1	8	17	4.19	14	70
71	1220	Seal Creek	S		TP	Hn lens in ls, py/po to 5%	<5	0.6	273	2	16	<1	2	48	1.47	22	<10
71	1366	Seal Creek	Rep	2.8	TP	Fel dike w/ 5% py + po	<5	0.2	43	28	28	<1	137	43	5.84	20	30
71	1367	Seal Creek	S		RC	Py (40%) in calc matrix near dike, skarn	<5	0.2	19	102	324	<1	66	62	0.65	58	<10
72	1368	Seal Creek	SS			Area of ls w/ intruding dikes	<5	<.2	44	16	128	1	72	15	2.41	6	40
73	1369	Seal Creek	SS			Ls w/ mafic dikes in area	<5	<.2	21	4	92	1	39	12	2.5	<2	40
		Map number 74 is a carbonate sample site (See Table B-3)															
75	1221	Seal Creek	S	1	OC	Skarn w/ garnet, ep, cp <1%, ml, py	15	3	2030	<2	54	<1	5	13	3.63	<2	<10
75	1370	Seal Creek	Rep	60	OC	Sil int w/ ~5% dissem py & po	<5	<.2	124	<2	52	10	22	27	2.02	<2	20
76	1222	Seal Creek	Rep	1.5	OC	Fest skarn w/ py/po, 6' skarn zone	<5	<.2	34	<2	42	<1	27	20	4.2	32	70
76	1371	Seal Creek	Rep	30	OC	Int w/ dissem py/po to 3% near skarn	<5	<.2	90	<2	14	1	13	22	2.33	<2	60
77	1372	Seal Creek	SS			Mapped Freshwater Bay volc	<5	<.2	38	8	124	1	30	19	3.53	34	90
78	1223	Seal Creek	Rep	0.1	TP	Ribbons of hem in qz vn in fault w/ gs	<5	<.2	8	<2	88	<1	5	14	0.6	2	1570
79	2066	Kennel Creek Road	Rep	0.4	OC	Syenite peg, K-spar, bt	<5	<0.2	21	2	12	<1	10	3	0.7	<2	30
80	2067	Kennel Creek Road	SS				<5	<0.2	24	2	40	7	6	6	3.14	<2	50
80	2341	Kennel Creek, N of	SS			Monz float in stream	<5	<.1	29	8	60	5	8	13	2.31	<5	48
81	2128	Kennel Creek Road	S		FL	Int w/ 2% py/po, gneissic	<5	<0.2	91	<2	20	97	24	19	0.54	6	20
81	2343	Kennel Creek Road	G	1	OC	Fest sil cng	<5	<0.1	28	6	60	<1	6	1	0.98	<5	60
82	2342	Kennel Creek	SS			Stream in granite & monz float	<5	<0.1	20	7	52	3	11	11	2.4	<5	81
83	1229	Tenakee Road	Rep		TP	Py to 5% on fractures in gs dike in ls	<5	<.2	82	<2	52	1	8	31	3.54	<2	20
83	1230	Tenakee Road	Rep		TP	Marble w/ py to 10%, near int contact	<5	<.2	1	<2	8	<1	4	8	0.49	24	90
83	1380	Tenakee Road	S		TP	Interbedded gw & ls w/ ~7% py/po	30	<.2	182	<2	28	<1	13	68	1.29	4	50
84	1231	Tenakee Road	C	0.66	OC	Mafic dike w/ py to 2% in marble	<5	<.2	165	<2	142	<1	39	31	3.87	<2	10
85	2340	Kennel Creek, S of	SS			Stream in gd, monz & hn	<5	<0.1	26	9	44	5	7	11	2.33	<5	57
86	2339	Kennel Creek	SS			Stream in monz & metaseds	<5	<0.1	26	7	61	6	10	14	2.48	<5	71
87	1246	Freshwater Bay	S		RC	Contact zone	<5	<0.1	73	5	12	409	10	10	0.63	9	31
87	1247	Freshwater Bay	S		RC	Banded hn w/ qz vns & blebs	<5	<0.1	134	11	11	611	18	15	0.52	<5	32
87	1248	Freshwater Bay	S	1.5	RC	Banded green/black hn w/in a pebble cng	<5	<0.1	57	4	23	2030	10	9	1.69	<5	37
87	1249	Freshwater Bay	S		RC	Qz-rich gd at contact, minor banded hn	<5	<0.1	66	3	9	822	8	11	0.48	<5	22
87	1250	Freshwater Bay	S		RC	Dark garnet hn	<5	0.2	168	5	82	1566	4	28	1.38	<5	42
87	2344	Freshwater Bay	G	0.5	TP	Fest hn w/ fg dissem py & po	<5	<0.1	65	5	26	46	14	8	0.34	<5	21
87	2370	Freshwater Bay	SC	15 @ 1	TP	Fault surface in skarnified hn	<5	<0.1	75	8	30	76	13	7	2.57	<5	20
87	2371	Freshwater Bay	SC	25 @ 1	TP	Fel int w/ minor po & py	<5	<0.1	50	6	19	70	9	5	1.3	<5	28
87	2372	Freshwater Bay	RC		RC	Heavily fest hn w/ dissem po	<5	<0.1	116	6	97	54	35	20	1.91	<5	59
87	2373	Freshwater Bay	Rep	3	TP	Dk gray hn w/ dissem po & trace py	<5	<0.1	68	5	109	49	171	26	2.43	<5	110
88	2065	8517 Road, N Spur	SS				<5	<0.2	50	10	122	2	14	12	4.23	<2	60
89	2064	8517 Road, N Spur	S	0.3	TP	Qz vn w/ calc, py/po to 5% locally	<5	0.4	547	<2	134	<1	59	45	0.5	2	20
90	2125	8518 Road	SS				<5	<0.2	12	<2	52	<1	7	6	2	<2	60
91	2126	8510 Road	SS				<5	<0.2	12	2	62	1	8	8	2.13	<2	60

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam. no.	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
66	2166	<0.5	<2	2.81	<0.5	32	2.86	10	<10	0.03	<10		1.36	155	0.07		390	<2	2		84			0.08	<10	<10	72	<10				
66	2167	<0.5	<2	2.16	1	5	0.4	<10	<10	<0.01	<10		9.54	165	<0.01		<10	<2	1		26			<0.01	<10	<10	<1	<10				
66	2246	<2	3.76	<0.5	8	117	10	<10	30	<10	0.12		50	<1	8		4	1	374		0.04			<10	<10	48	<10	18				
67	1218	<.5	<2	4.01	<.5	112	4.63	10	<10	0.19	<10		0.92	185	1.05		880	<2	3		240			0.28	<10	<10	67	<10				
68	1364	0.5	<2	6.02	0.5	26	3.04	<10	40	0.08	10		2.94	510	0.03		590	<2	3		136			0.15	<10	<10	74	<10				
69	1219	<.5	<2	2.05	0.5	62	3.5	<10	40	0.1	10		2.18	470	0.05		1240	<2	4		57			0.27	<10	<10	75	<10				
70	1365	<.5	<2	4.59	0.5	35	5.38	<10	<10	0.12	<10		2.19	240	0.98		850	<2	4		181			0.11	<10	<10	72	<10				
71	1220	<.5	<2	>15.00	<.5	77	10.6	<10	10	0.06	<10		0.39	275	0.35		330	<2	<1		198			0.06	<10	<10	12	<10				
71	1366	<.5	<2	3.7	0.5	136	6.23	<10	<10	0.19	<10		2.18	175	0.92		1020	<2	3		215			0.15	<10	<10	43	<10				
71	1367	<.5	<2	7.23	7	67	>15.00	<10	10	<.01	<10		0.75	405	<.01		70	<2	1		40			0.01	<10	<10	28	<10				
72	1368	<.5	<2	4.46	0.5	75	3.38	<10	40	0.13	10		2.58	420	0.02		1020	<2	5		110			0.17	<10	<10	79	<10				
73	1369	0.5	<2	2.95	0.5	34	3.33	<10	40	0.08	10		1.76	440	0.04		800	<2	3		127			0.2	<10	<10	77	<10				
75	1221	<.5	<2	13	<.5	140	5.62	10	30	0.01	<10		0.36	1045	0.01		120	<2	1		4			0.06	<10	<10	52	<10				
75	1370	<.5	<2	2.14	0.5	51	4	<10	<10	0.07	<10		0.33	110	0.44		1480	<2	1		177			0.16	<10	<10	24	<10				
76	1222	0.5	<2	0.59	<.5	122	9.85	10	20	<.01	10		2.24	3020	<.01		350	<2	7		11			<.01	<10	<10	77	<10				
76	1371	<.5	<2	2.1	<.5	41	3.54	<10	<10	0.14	<10		0.78	165	0.2		670	<2	4		228			0.19	<10	<10	80	<10				
77	1372	0.5	<2	1.73	0.5	38	4.12	<10	100	0.13	10		1.24	725	0.03		1160	<2	5		113			0.19	<10	<10	102	<10				
78	1223	<.5	<2	>15.00	0.5	31	4.57	<10	<10	0.23	10		1.66	2990	0.01		330	<2	1		416			<.01	<10	<10	46	<10				
79	2066	0.5	<2	0.48	<0.5	165	0.96	<10	<10	0.2	10		0.14	180	0.09		190	<2	<1		127			0.04	<10	<10	18	<10				
80	2067	<0.5	<2	1.05	<0.5	16	4.06	<10	30	0.07	10		0.49	315	0.04		690	<2	3		140			0.17	<10	<10	105	<10				
80	2341		<5	1.33	<.2	14	4.06	6	29	0.14	14	14	0.67	522	0.05	4		<5	<5	<20	134	<10	<10	0.14			91	<20	5	2		
81	2128	<0.5	<2	1.13	<0.5	122	2.87	<10	470	0.09	10		0.21	300	0.09		840	2	2		34			0.23	<10	<10	38	<10				
81	2343		<5	0.3	<0.2	139	1.89	<2	<10	0.57	12	6	0.53	283	0.15	1		<5	<5	<20	17	<10	<10	0.2			35	<20	16	4		
82	2342		<5	0.6	<0.2	21	2.01	5	23	0.16	12	14	0.77	311	0.04	4		<5	<5	<20	45	<10	<10	0.16			56	<20	7	2		
83	1229	<.5	<2	4.69	<.5	13	6.93	10	<10	0.09	10		2.32	345	0.04		3040	<2	7		123			0.06	<10	<10	119	<10				
83	1230	<.5	<2	>15.00	<.5	18	2.37	<10	<10	<.01	<10		0.73	425	0.01		110	<2	1		574			<.01	<10	<10	17	<10				
83	1380	<.5	<2	7.29	<.5	61	8.65	<10	20	0.2	<10		0.94	450	0.02		850	<2	5		152			0.1	<10	<10	74	<10				
84	1231	0.5	<2	6.49	<.5	68	6.04	20	790	<.01	<10		3.06	610	<.01		1160	<2	16		67			0.49	<10	<10	250	<10				
85	2340		<5	1.45	<0.2	14	3.53	7	34	0.14	11	10	0.65	346	0.05	4		<5	<5	<20	122	<10	<10	0.15			85	<20	4	2		
86	2339		<5	1.49	<0.2	19	3.87	6	15	0.19	11	13	0.89	571	0.05	4		<5	<5	<20	119	<10	<10	0.18			93	<20	5	2		
87	1246		<5	0.62	<0.2	119	2.24	<2	13	0.1	4	3	0.13	163	0.11	1		<5	<5	<20	26	<10	<10	0.07			16	<20	6	3		
87	1247		<5	0.48	<0.2	71	3.03	<2	12	0.11	7	2	0.13	99	0.07	1		<5	<5	<20	16	<10	<10	0.12			19	<20	8	3		
87	1248		<5	1.34	<0.2	41	2.04	<2	17	0.14	7	11	0.29	395	0.17	1		<5	<5	<20	130	<10	<10	0.13			32	<20	9	4		
87	1249		<5	0.4	<0.2	108	2	<2	<10	0.08	3	2	0.11	133	0.08	<1		<5	<5	<20	23	<10	<10	0.05			11	<20	5	2		
87	1250		<5	1.57	<0.2	23	6.66	<2	<10	0.55	19	21	1.43	668	0.1	4		<5	<5	<20	30	<10	<10	0.36			56	<20	12	3		
87	2344		<5	0.54	<0.2	104	2.35	<2	<10	0.11	7	5	0.29	171	0.08	<1		<5	<5	<20	10	<10	<10	0.14			31	<20	9	4		
87	2370		<5	1.86	<0.2	59	2.89	<2	23	0.14	7	9	0.36	247	0.06	5		<5	<5	<20	91	<10	<10	0.12			37	<20	7	3		
87	2371		<5	1.33	<0.2	101	1.6	<2	<10	0.11	10	4	0.19	247	0.11	2		<5	<5	<20	45	<10	<10	0.1			20	<20	9	5		
87	2372		<5	1.3	<0.2	66	6.28	<2	<10	0.99	12	17	1.71	705	0.12	2		<5	6	<20	54	<10	<10	0.39			82	<20	7	4		
87	2373		<5	1.34	<0.2	165	4.98	<2	<10	1.47	7	23	2.73	669	0.15	6		<5	<5	<20	33	<10	<10	0.44			98	<20	4	6		
88	2065	0.5	<2	0.55	<0.5	39	3.58	<10	110	0.08	10		1.09	485	0.01		1100	<2	8		46			0.25	<10	<10	89	<10				
89	2064	<0.5	<2	0.82	<0.5	255	4.1	<10	30	0.09	<10		0.31	125	0.02		150	2	1		23			0.06	<10	<10	24	<10				
90	2125	<0.5	<2	0.8	<0.5	19	3.22	<10	30	0.13	<10		0.64	375	0.03		640	<2	3		87			0.19	<10	<10	74	<10				
91	2126	<0.5	<2	0.91	<0.5	17	4.12	<10	40	0.13	10		0.63	850	0.03		660	<2	3		98			0.18	<10	<10	83	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sample no.	Location	Sample type	Sample size (ft)	Sample site	Sample description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
92	2127	8517 Road	S		TP	Ar w/ minor py, fest	<5	<0.2	128	4	94	1	76	13	2.74	<2	70
93	2062	8515 Road	SS				<5	<0.2	23	4	60	<1	11	10	1.91	6	60
93	2063	8515 Road	S		FL	Chert cng w/ py/po to 5%	<5	0.2	37	4	28	1	18	10	0.61	2	20
94	2061	8515 Road	SS				<5	<0.2	36	8	92	<1	18	10	2.94	2	40
95	2060	8515 Road	SS				<5	<0.2	31	8	112	1	18	15	2.51	12	70
96	2059	8515 Road	SS				<5	<0.2	23	6	88	<1	21	13	2	8	40
97	2124	8515 Road	S		FL	Qz in ar w/ py/po, trace cp	<5	0.2	132	8	32	<1	23	14	1.55	<2	<10
98	2123	8515 Road	S		RC	Ar w/ dissem py <1% along fractures	40	<0.2	72	4	70	1	30	12	2.77	6	30
99	2058	8515 Road	Rep		OC	Ar w/ py/po to 3%	<5	<0.2	83	<2	62	<1	13	33	3.07	<2	20
100	2057	8510 Road	SS				<5	<0.2	30	6	100	<1	18	13	2.13	16	40
101	2056	8510 Road	S		OC	Latite dike w/ py to 1% locally	<5	<0.2	46	4	56	<1	28	13	2.08	18	100
101	2122	8510 Road	G		TP	Metavolc w/ 2% py/po, trace cp, fest	10	0.2	262	8	110	2	151	31	2.66	8	60
102	2053	8510 Road	SS				<5	<0.2	42	6	94	<1	18	16	2.96	8	130
102	2054	8510 Road	S		FL	Sil volc br w/ py/po, trace cp	<5	0.2	275	2	84	2	268	16	1.82	14	20
102	2055	8510 Road	S		OC	Sil volc br w/ py/po, trace cp (?)	<5	<0.2	79	<2	64	<1	45	10	1.87	2	10
103	2168	Baldy Lode	S		OC	Calc-silicate skarn, py/po/cp to 2%	<5	0.4	330	<1	23	10	1	28	0.71	<2	10
103	2169	Baldy Lode	S		TP	High grade sulf, same location as 2168	15	2	2900	<1	40	<1	6	361	0.63	<2	10
103	2170	Baldy Lode	G		OC	Alt int/ls contact, py to 3%, cp	<5	<0.2	1650	<1	16	1	20	69	0.45	<2	10
104	2047	East Point Pit	Rep	9	TP	Mafic dike/ls contact, py to 5%	<5	0.3	20	25	1230	1	8	19	2.37	28	60
104	2048	East Point Pit	S	2.5	TP	Ls boulders w/ sl to 50% in clots	<5	7.8	220	3800	**26.4** *	<1	5	15	0.36	38	10
104	2049	East Point Pit	Rep	5	TP	Ls adj to mafic dike, ankerite/siderite, py	<5	0.2	12	38	1410	<1	1	2	0.08	8	<10
104	2118	East Point Pit	C	5	TP	Alt mafic dike, py/po, fest	<5	0.2	20	4	147	<1	8	36	4.06	28	10
104	2119	East Point Pit	G		TP	Marble w/sl to 20%, gn to 1%, cp	<5	52	460	**1.74** *	**15.3** *	42	96	93	0.47	378	10
105	2046	East Point area	Rep	5	OC	Mafic dike in ls, dissem py	<5	<.2	8	24	100	<1	3	102	1.48	324	10
106	2050	Big Ledge	C	10	OC	Mafic dike, cp/po/ml to 5%	370	3	**1.17** *	<2	174	<1	3400	72	3.71	100	<10
106	2051	Big Ledge	SC	15@0.5	OC	Mafic dike, cp/po to 2%	64	8.9	8300	<2	134	<1	**1.15** *	210	5.27	790	<10
106	2052	Big Ledge	SC	25@0.5	OC	Mafic dike, cp, ml, az; po in clots	22	2.9	9400	<2	142	<1	6500	158	3.04	26	<10
106	2120	Big Ledge	C	4	OC	Mafic dike, stringers of cp, pentlandite	502	8.8	**2.25** *	30	428	<1	9600	450	4.19	8	<10
106	2121	Big Ledge	S		OC	High grade of 2120 location, 50% sulf	<5	22	**7.02** *	2	1055	<1	**4.4** *	910	1.94	40	<10
107	2742	3-J	S	0.3	OC	Fest selvage on fel dike w/ mo, cp	<5	<.2	280	<1	3	237	1	8	0.41	4	<10
107	2743	3-J	RC		OC	Monz dikes in hn, trace cp	<5	<.2	59	<1	8	1	4	6	0.54	6	20
108	2117	3-J	Rep		OC	Hnbd-bt gd w/ mag	<5	<.2	14	4	42	<1	5	5	1.04	<2	120
109	2116	3-J	SS				<5	<.2	15	14	32	2	4	15	1.93	4	80
110	1232	Tenakee Road	S	0.1	TP	Py/po to 2% in mafic dike, ls host	5	<.2	99	2	78	3	2	20	2.48	<2	10
111	2566	Tenakee	Rep	3	OC	Granite w/ k-spar	<5	<.2	33	28	104	1	1	3	0.71	<2	<10
111	2567	Tenakee	Rep		RC	Pink-red granitic dikes	<5	<.2	389	14	60	<1	<1	3	1.16	<2	20
111	2741	Tenakee	G		FL	K-spar-rich sand (alaskite)	<5	<.2	26	10	70	<1	5	4	1.12	4	20
112	1224	Kadashan Bay	Rep		TP	Syenite w/ little to no qz, minor py		<.2	15	10	20	2	2	4	0.52	<2	10
112	1373	Kadashan Bay	Rep	2	TP	Alt syenite along shear		<.2	75	12	26	1	1	3	0.49	2	10
113	1374	Corner Bay	Rep		TP	Metavolc w/ <1% dissem py	<5	<.2	37	8	88	1	4	12	0.8	6	230
114	1233	Trap Bay	Rep		OC	Minor py, trace cp, in aplite dike in hn		<.2	36	2	18	<1	3	2	0.32	2	10
115	1375	Corner Creek	S		TP	Ls w/ bands of po & py to 3%	<5	<.2	22	<2	34	<1	2	1	0.11	<2	<10
116	1225	Corner Creek	Rep	1	TP	Alt syenite inclusion in di, py to 2%	<5	<.2	7	<2	20	1	11	27	1.22	<2	40
116	1376	Corner Creek	S		TP	Shear-hosted py in metavolc, py 15%	<5	0.2	89	2	86	<1	35	82	3.43	<2	<10
117	1377	Corner Creek	Rep		TP	Highly fractured syenite		<.2	9	<2	36	1	1	3	0.77	<2	10

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	ppm	Ag ppm	Cu ppm	%	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
118	1378	Kook Lake	SS			Syenite, metavolc, & ls float	<5		<.2	25		12	118	6	20	16	2.38	<2	70
119	1379	Kook Lake	SS			Volc & syenite float	<5		<.2	28		14	106	5	25	15	3.15	<2	50
120	1228	Kook Lake	SS			Gd, syenite & mafic dike as float	10		<.2	23		24	190	2	24	12	3.39	<2	40
121	1226	Kook Lake	Rep		TP	Py & cp in clots to 5% in syenite			<.2	4		4	16	3	1	9	0.67	<2	10
122	1227	Kook Lake	SS			Gd, syenite, & volc as float	<5		<.2	25		32	210	<1	28	12	4.14	<2	40
123	1362	Sitkoh Bay	SS			Area of int w/ minor marble	<5		<.2	19		22	248	1	41	13	2.79	<2	50
124	1363	Sitkoh Bay	Rep		OC	Fel dike in hn & tonalite			<.2	7		6	14	<1	8	4	0.9	<2	40
125	1217	Sitkoh Bay	S		RC	Clots of py/po in trondhjemite	<5		0.2	460		2	44	<1	4	43	1.45	<2	80
125	1361	Sitkoh Bay	S		OC	Msv py in shear in int, py to 25%	10		0.8	97		2	14	13	1	83	0.91	50	10
126	1360	Sitkoh Bay	S		RC	Skarn w/ ~1% py	<5		<.2	29		<2	18	1	2	7	1.24	<2	<10
127	1216	Sitkoh Bay	S	1	OC	Qz w/ hn	<5		<.2	60		<2	26	3	12	16	1.03	<2	90
128	1215	Sitkoh Bay	Rep	2	OC	Syenite w/ thin black silicate vnlets			<.2	<1		2	70	<1	<1	1	0.92	<2	<10
128	1359	Sitkoh Bay	Rep	2.6	OC	Diabase dike in alkalic int, po <1%			<.2	90		<2	130	<1	9	26	2.64	<2	<10
129	1214	Sitkoh Bay	Rep		OC	K-spar-rich syenite			<.2	3		10	70	2	<1	4	0.78	<2	80
129	1358	Sitkoh Bay	S		RC	Alkalic int w/ py ~1%			<.2	8		16	90	1	<1	7	0.97	6	70
130	1213	Sitkoh Bay	S	0.1	OC	Alt tonalite in shear w/ py/po to 10%	<5		<.2	16		<2	54	<1	8	38	.74	<2	30
130	1357	Sitkoh Bay	S		RC	Bt-hnbld tonalite w/ py to 3% in alt zones	<5		<.2	18		2	52	<1	12	67	3.41	<2	70
131	1356	Sitkoh Bay	G		RC	Banded hn w/ po/py <1%	10		<.2	94		6	46	<1	20	28	4.39	<2	30
132	1212	Sitkoh Bay	Rep		FL	Fest hn near int contact	<5		<.2	43		4	34	1	6	13	3.64	<2	10
133	1211	Sitkoh Bay	Rep		OC	Cg bt-hnbd tonalite w/ finely dissem py	<5		<.2	27		2	64	<1	3	12	6.59	<2	30
134	2150	Whitestripe Marble	G		FL	Marble w/ dissem py to 5%	530		0.8	27		12	46	<1	8	9	2.07	658	20
135	2216	Whitestripe Marble	Rep	2	OC	Latite dike, sil, fest, near ls contact	35		<0.2	10		14	24	2	1	<1	1.05	660	60
136	2217	Whitestripe Marble	Rep	2.5	OC	Granitic dike, py to 15% in clots	50		<0.2	1		8	36	1	1	1	0.95	246	60
137	2759	Whitestripe Marble	G		OC	Metabasalt/gs, near contact w/ marble	<5		<0.2	85		2	76	4	22	31	3.84	6	<10
137	2760	Whitestripe Marble	RC		OC	Marble w/ py	<5		0.3	1		<2	4	11	1	<1	0.05	2	<10
138	2758	Whitestripe Marble	SS				20		<0.2	167		2	84	3	48	28	3.76	14	<10
139	2589	Whitestripe Marble	G		FL	Red-green jasper w/ qz, dissem cp	90		2.4	3780		<2	4	<1	2	1	0.39	2	<10
140	2603	Whitestripe Marble	Rep	0.2	OC	Qz vn w/ ep	<5		<0.2	11		<1	7	<1	15	4	0.64	<2	<10
140	2779	Whitestripe Marble	RC		OC	Goon Dip contact w/ marble	<5		<0.2	110		<1	80	2	226	42	5.54	22	20
140	2780	Whitestripe Marble	G		FL	Olivine basalt	<5		<0.2	830		<1	90	<1	72	27	4.52	4	<10
141	2588	Chichagof, Golden Gate No. 1	C	2.2	UW	Qz vn w/ gw ribbons, sulf to 2%	1260		0.3	23		<1	42	<1	13	4	0.4	224	20
141	2591	Chichagof, Golden Gate No. 1	CC	3.5	UW	Shear zone w/ qz & gw	3260		0.6	37		9	83	<1	22	9	0.75	414	90
141	2592	Chichagof, Golden Gate No. 1	CC	3.4	UW	Qz vn w/ 15% gw	1230		0.7	6		80	140	<1	8	3	0.11	128	170
141	2593	Chichagof, Golden Gate No. 1	CC	4.5	UW	Qz vn	2070		0.8	27		9	85	<1	28	12	0.46	316	40
141	2757	Chichagof, Golden Gate No. 1	C	5	OC	Qz vn w/ gp sc partings, <1% py	860		0.3	7		4	14	1	8	2	0.18	1345	60
141	2763	Chichagof, Golden Gate No. 1	C	0.9	UW	Qz vn w/ gp partings, <1% py	**12.5**	*	6.2	17		73	46						
141	2764	Chichagof, Golden Gate No. 1	C	3.1	UW	Qz vn w/ gp partings, py to 5%	**27.6**	*	13	11		148	37						
141	2765	Chichagof, Golden Gate No. 1	C	4.7	UW	Qz vn w/ gp partings, 1% py	1250		0.6	9		<1	11						
141	2766	Chichagof, Golden Gate No. 1	C	4.6	UW	Qz vn w/ gp partings, br, <1% py	850		0.5	11		10	11						
141	2767	Chichagof, Golden Gate No. 1	C	4.6	UW	Qz vn w/ br fragments, gp partings	1200		1.8	15		6	23	1	13	3	0.21	580	40
141	2768	Chichagof, Golden Gate No. 1	C	2.3	UW	Qz vn w/ gp br & fault gouge, py	1010		0.3	16		1	98	2	15	5	0.26	216	30
142	2590	Whitestripe Marble	G		RC	Sil gs w/ py	<5		<0.2	117		<2	56	<1	42	30	4.35	30	10
143	2761	Whitestripe Marble	G	5x5	FL	Chl/gp sc, adj to marble, 1-2% py	<5		<0.2	106		8	52	3	39	11	1.23	14	320
143	2762	Whitestripe Marble	RC	5	OC	Fest gp sc w/ qz boudins	<5		<0.2	57		2	66	6	32	10	1.95	2	160
144	2778	Whitestripe Marble	RC	50	OC	Goon Dip Gs, near contact	15		0.3	1950		<1	56	2	146	28	3.31	6	<10

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
118	1378	0.5	<2	1.57	<.5	34	4.17	<10	50	0.11	10		1.37	1025	<.01		1500	<2	4		204			0.21	<10	<10	101	<10				
119	1379	1	<2	1.44	<.5	51	3.21	<10	40	0.14	10		1.11	950	0.04		900	<2	4		174			0.18	<10	<10	74	<10				
120	1228	2	<2	1.69	0.5	44	3.4	<10	70	0.2	30		1.08	1690	0.09		690	<2	4		214			0.19	<10	<10	69	<10				
121	1226	<.5	<2	1.01	<.5	67	1.83	<10	<10	0.23	10		0.13	265	0.1		130	<2	<1		21			0.11	<10	<10	18	<10				
122	1227	2.5	<2	2.35	0.5	44	2.96	<10	80	0.26	40		1.11	2050	0.22		520	<2	4		354			0.18	<10	10	55	<10				
123	1362	1	<2	1.99	3	54	3.5	<10	60	0.21	10		1.42	1425	0.08		910	<2	4		134			0.21	<10	<10	146	<10				
124	1363	<.5	<2	0.97	<.5	111	1.04	<10	<10	0.09	<10		0.35	130	0.08		200	<2	1		33			0.06	<10	<10	21	<10				
125	1217	<.5	<2	1.31	<.5	65	6.75	<10	10	0.31	10		0.44	735	0.07		620	<2	<1		90			0.15	<10	<10	37	<10				
125	1361	<.5	<2	0.18	<.5	27	>15.00	<10	110	0.03	<10		0.09	1260	<.01		330	<2	<1		27			0.09	<10	<10	19	<10				
126	1360	<.5	<2	9	<.5	40	3.13	<10	<10	0.02	<10		0.08	960	0.02		530	<2	1		44			0.08	<10	<10	82	<10				
127	1216	<.5	<2	0.35	<.5	410	3.23	<10	<10	0.36	<10		0.54	200	0.08		350	<2	5		33			0.14	<10	<10	50	<10				
128	1215	<.5	<2	0.14	<.5	49	2.03	<10	10	0.33	10		0.19	1285	0.09		210	<2	<1		13			0.09	<10	<10	16	<10				
128	1359	0.5	<2	3.74	<.5	21	4.66	10	40	0.62	<10		2.45	1495	0.01		820	<2	12		235			0.25	<10	<10	146	<10				
129	1214	0.5	<2	2.29	<.5	25	1.54	<10	<10	0.26	10		0.31	935	0.06		540	<2	<1		162			0.11	<10	<10	13	<10				
129	1358	0.5	<2	2.21	<.5	27	2.75	<10	10	0.25	10		0.41	980	0.04		500	<2	<1		102			0.1	<10	<10	23	<10				
130	1213	0.5	<2	4.31	<.5	66	3.93	10	20	0.11	<10		1.58	565	0.07		1270	<2	8		288			0.22	<10	<10	131	<10				
130	1357	0.5	<2	3.79	<.5	38	4.16	10	10	0.15	<10		1.34	550	0.1		1340	<2	7		166			0.21	<10	<10	113	<10				
131	1356	0.5	<2	6.89	<.5	34	3.43	10	<10	0.07	<10		0.73	220	0.17		1430	<2	4		204			0.24	<10	<10	72	<10				
132	1212	<.5	<2	3.07	<.5	44	3.1	10	70	0.11	<10		0.7	275	0.08		870	<2	4		56			0.18	<10	<10	71	<10				
133	1211	0.5	<2	4.88	<.5	36	4.06	10	80	0.07	<10		1.26	655	0.03		620	2	12		215			0.16	<10	<10	109	<10				
134	2150	<0.5	<2	>15.00	<0.5	20	4.5	<10	13840	0.04	<10		4.65	590	<0.01		200	<2	5		483			0.02	<10	<10	46	<10				
135	2216	<0.5	<2	0.04	<0.5	95	1.27	<10	680	0.23	<10		0.39	125	0.04		150	<2	<1		17			<0.01	<10	<10	1	<10				
136	2217	<0.5	<2	0.8	<0.5	62	1.21	<10	220	0.23	<10		0.36	255	0.02		170	<2	<1		19			<0.01	<10	<10	1	<10				
137	2759	<0.5	<2	2.12	<0.5	12	8.81	<10	150	0.03	<10		2.54	1250	<0.01		1520	<2	4		38			0.73	<10	<10	77	<10				
137	2760	<0.5	<2	>15.00	<0.5	1	0.15	<10	320	0.01	<10		0.59	435	<0.01		30	<2	<1		731			<0.01	<10	<10	1	<10				
138	2758	<0.5	<2	2.69	<0.5	63	6.01	10	20	0.01	<10		2.35	710	<0.01		540	<2	9		40			0.6	<10	<10	199	<10				
139	2589	<0.5	<2	1.94	1	41	0.46	<10	20	0.07	<10		0.14	55	<0.01		20	<2	<1		19			0.02	<10	<10	7	<10				
140	2603	<0.5	<2	1.11	<0.5	152	0.75	<10	<10	<0.01	<10		0.27	145	<0.01		30	<2	1		55			0.06	<10	<10	29	<10				
140	2779	<0.5	<2	3.3	<0.5	565	7.37	10	460	<0.01	<10		5.35	770	<0.01		480	<2	25		60			0.46	<10	<10	202	<10				
140	2780	<0.5	<2	5.31	<0.5	209	5.73	10	150	<0.01	<10		2.61	650	<0.01		690	<2	10		43			0.61	<10	<10	206	<10				
141	2588	<0.5	<2	1.36	<0.5	44	1.63	<10	10	0.08	<10		0.51	360	<0.01		310	<2	1		183			<0.01	<10	<10	7	3				
141	2591	<0.5	<2	1.27	<0.5	47	2.51	<10	20	0.09	<10		0.72	420	<0.01		490	<2	1		157			<0.01	<10	<10	12	4				
141	2592	<0.5	<2	0.46	1	141	0.94	<10	50	0.07	<10		0.19	150	<0.01		160	<2	<1		74			<0.01	<10	<10	2	3				
141	2593	<0.5	<2	1.48	<0.5	107	2.84	<10	120	0.14	<10		0.61	405	<0.01		460	<2	2		227			<0.01	<10	<10	9	6				
141	2757	<0.5	<2	0.42	<0.5	216	0.76	<10	70	0.08	<10		0.18	145	<0.01		100	<2	<1		57			<0.01	<10	<10	4	2				
141	2763																											5				
141	2764																											2				
141	2765																											2				
141	2766																											2				
141	2767	<0.5	<2	0.41	<0.5	220	1.14	<10	80	0.11	<10		0.15	110	<0.01		120	<2	<1		92			<0.01	<10	<10	4	4				
141	2768	<0.5	<2	0.52	<0.5	182	1.55	<10	70	0.11	<10		0.24	140	<0.01		160	2	<1		98			<0.01	<10	<10	4	5				
142	2590	<0.5	<2	5.39	<0.5	178	5.14	<10	20	0.06	<10		4.1	305	<0.01		470	2	21		126			<0.01	<10	<10	174	<10				
143	2761	<0.5	<2	0.49	<0.5	156	3.12	<10	320	0.07	<10		1.05	585	<0.01		500	<2	7		21			0.18	<10	<10	56	<10				
143	2762	<0.5	<2	0.92	<0.5	124	3.32	<10	290	0.15	<10		1.38	620	<0.01		770	<2	7		41			0.25	<10	<10	75	<10				
144	2778	<0.5	<2	1.34	<0.5	161	4.21	<10	20	0.02	<10		2.95	400	0.08		420	<2	2		54			0.34	<10	<10	102	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
145	2602	Whitestripe Marble	G		RC	Fest gs w/ sparse py	<5	<0.2	220	<1	44	14	137	91	3.62	14	<10
146	2776	Slocum Arm	RC		OC	Intermediate sill in gs, sil fractures	<5	<0.2	65	<1	92	3	36	18	2.37	8	10
146	2777	Slocum Arm	RC		OC	Fg diabasic dike, xcuts sill in 2776	<5	<0.2	103	<1	25	2	75	17	2.92	4	<10
147	2772	Slocum Arm	RC		OC	Qz vnlets in gs w/ <1% cp	10	<0.2	570	<1	9	5	4	2	0.33	18	<10
147	2773	Slocum Arm	Rep	100x100	OC	Qz vn swarm xcut gs, <1% py	<5	<0.2	60	<1	6	6	6	2	0.33	14	<10
147	2774	Slocum Arm	RC	0.3	OC	Qz vn w/ <1% cp + mo	25	<0.2	500	<1	5	2	8	1	0.55	4	<10
147	2775	Slocum Arm	RC		OC	Intermediate sill in gs, sil fractures	<5	<0.2	137	<1	23	5	41	11	3.54	4	<10
148	2601	Slocum Arm	Rep		OC	Qz vns & stringers, barren	<5	<0.2	30	1	17	<1	2	1	0.74	<2	<10
149	2600	Slocum Arm	Rep	1.5	OC	Qz lens hosted in gs	<5	<0.2	21	<1	13	<1	2	<1	0.34	2	<10
150	2599	Slocum Arm	G		OC	Fest gd, sparse sulf	<5	<0.2	9	<1	17	<1	1	<1	0.39	4	<10
151	2598	Slocum Arm	RC	5	OC	Gd	<5	<0.2	4	<1	19	<1	1	<1	0.53	6	<10
152	2503	Deep Bay	SS				<5	<.2	35	8	40	3	19	9	2.65	<2	20
152	2504	Deep Bay	SS				<5	<.2	38	14	36	4	6	4	1.86	<2	20
152	2505	Deep Bay	Rep	3	OC	Gd w/ sparse fest	<5	<.2	16	4	32	<1	4	2	0.64	<2	40
152	2703	Deep Bay	G		OC	Bt gneiss, <1% py, chl	<5	<.2	67	<2	40	2	2	5	1.25	<2	10
153	2501	Deep Bay	PC			Mag in sample	<5	<.2	18	4	38	1	29	9	1.43	<2	20
153	2502	Deep Bay	SS				<5	<.2	40	10	44	9	25	10	3.8	2	30
153	2700	Deep Bay	PC				<5	<.2	18	2	54	2	20	9	1.86	<2	40
153	2701	Deep Bay	PC				125	<.2	18	4	38	3	25	7	1.37	<2	20
153	2702	Deep Bay	G		FL	Dark-green amphibolite w/ <1% py	<5	<.2	76	8	136	<1	19	16	3.62	6	40
154	2506	Deep Bay	Rep	0.5	FL	Qz w/ py blebs to 5%	<5	<.2	35	<2	6	<1	11	5	0.24	<2	<10
155	2704	Deep Bay	PC				<5	<.2	34	4	82	3	70	14	2.02	<2	20
156	2001	Arthur Point	PC	4 pans			5	<.2	33	4	72	<1	14	15	2.4	<2	50
156	2002	Arthur Point	PC	4 pans			10	<.2	38	2	62	<1	13	12	2.69	<2	50
157	2003	Arthur Point	PC	4 pans			<5	<.2	61	2	64	<1	38	15	2.74	<2	30
157	2007	Arthur Point	SS				<5	<.2	68	2	68	<1	18	14	4.08	4	40
158	2004	Arthur Point	PC	4 pans			<5	<.2	31	2	70	<1	15	12	2.4	<2	40
159	2005	Arthur Point	SS				<5	<.2	86	2	62	<1	11	19	3.41	2	140
159	2006	Arthur Point	SS				<5	<.2	62	2	84	1	14	16	5.29	2	130
160	2149	Rodman Bay	SS				45	0.2	73	8	140	1	42	16	3.38	34	120
160	2204	Rodman Bay	Rep	25	UW	Qz stringers in black pl, trace py	45	<0.2	31	4	56	<1	15	7	1.44	4	60
160	2205	Rodman Bay	Rep	25	UW	Qz stringers in black pl, no sulf	<5	<0.2	22	4	52	<1	12	6	1.24	6	20
160	2206	Rodman Bay	Rep	15	UW	Qz boudins, vnlets in black pl	20	<0.2	27	2	58	<1	17	7	1.48	2	240
160	2207	Rodman Bay	Rep	10	UW	Qz vns/stringers in black pl	<5	<0.2	20	2	48	<1	13	5	1.16	<2	60
160	2208	Rodman Bay	Rep	5	UW	Qz vns, masses in black pl	<5	<0.2	28	2	62	<1	17	7	1.48	4	40
160	2209	Rodman Bay	Rep	5	UW	Qz stringers in black pl	<5	<0.2	17	4	32	<1	8	2	0.73	2	30
161	2740	Portage Arm	G	50	RC	Qz material w/ 1-2% cp, 5-10% py	<5	1	1810	<2	26	<1	16	18	0.29	<2	<10
162	2565	Portage Arm	C	2	OC	Qz-filled shear zone w/ py/po	<5	<.2	22	<2	48	<1	2	1	1.03	<2	60
162	2739	Portage Arm	Rep	100	OC	Qz vns & lenses, 2-5% py/po	<5	2	301	4	8	2	4	18	0.34	<2	20
163	2738	Kelp Bay	Rep	35	OC	Bull qz w/ carbonate lenses	<5	<.2	61	<2	10	<1	7	3	0.36	2	<10
164	2564	Lost Anchor	S	0.4	OC	Qz vn w/ cp, py	<5	1.4	4060	2	40	1	109	156	1.74	<2	<10
165	2737	Lost Anchor	Rep		OC	Qz vns, trace cp, po to 2%	<5	0.2	365	<2	6	1	10	26	0.36	<2	<10
166	2561	Lost Anchor	S	0.2	OC	Qz vn w/ sulf in gs	<5	<.2	49	<2	6	6	6	3	0.45	6	<10
166	2562	Lost Anchor	C	3.75	OC	Qz vn	<5	<.2	11	<2	4	2	5	1	0.29	2	<10
166	2563	Lost Anchor	Rep	0.3	OC	Qz br zone w/ py, fest	<5	<.2	108	4	24	4	24	13	0.98	6	<10

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
145	2602	<0.5	<2	0.77	<0.5	182	9.75	<10	200	0.13	<10		3.77	1400	<0.01		850	<2	17		20			0.5	<10	<10	168	<10				
146	2776	<0.5	<2	1.29	<0.5	109	4.56	10	40	0.04	<10		1.63	590	0.14		740	<2	5		39			0.45	<10	<10	101	<10				
146	2777	<0.5	<2	2.33	<0.5	89	1.89	<10	<10	0.08	<10		1.29	260	0.17		250	<2	2		52			0.12	<10	<10	58	<10				
147	2772	<0.5	2	0.29	<0.5	196	0.68	<10	50	<0.01	<10		0.15	35	0.01		80	<2	<1		5			0.02	<10	<10	18	<10				
147	2773	<0.5	2	0.38	<0.5	293	1.11	<10	60	<0.01	<10		0.12	45	<0.01		100	<2	1		1			0.09	<10	<10	22	<10				
147	2774	<0.5	<2	0.83	<0.5	289	0.47	<10	360	<0.01	<10		0.03	25	0.01		50	<2	<1		2			0.01	<10	<10	9	<10				
147	2775	<0.5	<2	3.91	<0.5	119	1.8	<10	20	0.03	<10		0.94	240	0.11		330	<2	3		67			0.12	<10	<10	61	<10				
148	2601	<0.5	<2	0.68	<0.5	107	0.71	<10	<10	0.04	<10		0.16	220	0.03		120	<2	1		7			0.04	<10	<10	16	<10				
149	2600	<0.5	<2	0.21	<0.5	104	0.45	<10	10	0.03	<10		0.09	255	0.05		30	<2	1		3			0.02	<10	<10	6	<10				
150	2599	<0.5	<2	0.17	<0.5	104	0.57	<10	10	0.07	<10		0.12	295	0.04		50	<2	<1		4			0.02	<10	<10	6	<10				
151	2598	<0.5	<2	0.33	<0.5	89	0.47	<10	20	0.08	<10		0.07	265	0.04		70	<2	<1		10			0.01	<10	<10	2	<10				
152	2503	<.5	2	0.67	<.5	46	3.19	10	90	0.08	10		0.7	495	0.03		470	<2	4		43			0.24	<10	<10	83	<10				
152	2504	<.5	<2	0.89	<.5	14	2.14	<10	80	0.08	10		0.44	285	0.05		400	<2	3		37			0.16	<10	<10	52	<10				
152	2505	<.5	<2	0.2	<.5	101	0.95	<10	<10	0.15	<10		0.18	205	0.09		70	<2	1		11			0.06	<10	<10	9	<10				
152	2703	<.5	<2	1	<.5	83	1.76	<10	20	0.13	10		0.55	400	0.06		340	<2	4		27			0.14	<10	<10	42	<10				
153	2501	<.5	2	0.81	<.5	292	2.02	<10	10	0.13	10		0.83	420	0.09		130	<2	6		47			0.15	<10	<10	59	<10				
153	2502	0.5	4	0.59	<.5	63	4.13	10	110	0.07	10		0.72	655	0.06		510	<2	6		44			0.28	<10	<10	92	<10				
153	2700	<.5	2	0.91	<.5	165	2.46	<10	10	0.18	<10		0.86	605	0.09		150	<2	5		48			0.15	<10	<10	52	<10				
153	2701	<.5	2	0.73	<.5	172	1.84	<10	10	0.12	10		0.7	365	0.08		110	<2	4		41			0.12	<10	<10	45	<10				
153	2702	<.5	2	2.81	<.5	51	3.5	<10	20	0.11	<10		0.67	540	0.21		1030	<2	9		132			0.16	<10	<10	171	<10				
154	2506	<.5	<2	0.12	<.5	251	0.72	<10	10	0.01	<10		0.11	30	0.01		50	2	<1		3			0.01	<10	<10	7	<10				
155	2704	<.5	2	1.06	<.5	191	2.33	<10	10	0.11	<10		1.34	690	0.04		130	<2	6		47			0.16	<10	<10	62	<10				
156	2001	<.5	2	1.45	<.5	162	4	<10	10	0.17	<10		1.49	1095	0.2		430	<2	13		64			0.2	<10	<10	150	<10				
156	2002	<.5	2	2.06	<.5	103	3.83	<10	20	0.14	<10		1.17	700	0.15		500	<2	11		97			0.23	<10	<10	149	<10				
157	2003	<.5	<2	2.25	<.5	144	6.26	<10	10	0.12	<10		1.59	690	0.16		580	<2	15		100			0.27	<10	<10	279	<10				
157	2007	<.5	4	2.2	<.5	25	4.1	10	50	0.07	<10		1.29	800	0.03		730	<2	10		127			0.21	<10	<10	123	<10				
158	2004	<.5	<2	1.65	<.5	120	3.7	<10	10	0.14	<10		1.25	625	0.16		460	<2	14		99			0.28	<10	<10	159	<10				
159	2005	<.5	<2	1.1	<.5	21	3.68	10	80	0.1	<10		0.94	820	0.04		730	<2	8		76			0.17	<10	<10	119	<10				
159	2006	0.5	<2	1.5	<.5	22	3.09	<10	80	0.06	<10		0.77	600	0.04		780	<2	7		87			0.15	<10	<10	101	<10				
160	2149	<0.5	<2	1.06	<0.5	88	5.53	<10	1170	0.15	<10		1.74	545	<0.01		1400	<2	4		76			0.22	<10	<10	67	<10				
160	2204	<0.5	<2	7.83	<0.5	110	2.24	<10	170	0.1	<10		0.69	650	<0.01		400	<2	3		642			0.15	<10	<10	29	<10				
160	2205	<0.5	2	7.22	<0.5	84	2	<10	270	0.05	<10		0.72	415	0.01		430	<2	3		552			0.13	<10	<10	27	<10				
160	2206	<0.5	<2	7.06	<0.5	121	2.36	<10	280	0.1	<10		0.77	555	<0.01		490	<2	3		462			0.17	<10	<10	32	<10				
160	2207	<0.5	2	9.47	<0.5	94	1.82	<10	190	0.09	<10		0.61	625	<0.01		370	<2	2		892			0.13	<10	<10	25	<10				
160	2208	<0.5	<2	5.31	<0.5	108	2.49	<10	480	0.09	<10		0.82	435	<0.01		520	<2	2		462			0.15	<10	<10	33	<10				
160	2209	<0.5	2	10.4	<0.5	104	1.19	<10	190	0.08	<10		0.35	380	<0.01		270	<2	1		1385			0.08	<10	<10	16	<10				
161	2740	<.5	<2	0.69	<.5	294	1.29	<10	10	<.01	<10		0.18	60	<.01		300	2	1		6			0.07	<10	<10	31	<10				
162	2565	<.5	2	0.52	<.5	57	3.4	10	10	0.09	50		0.1	410	0.06		110	<2	<1		13			0.01	<10	<10	1	<10				
162	2739	<.5	<2	0.17	<.5	226	4.99	<10	100	0.1	<10		0.06	120	0.04		120	<2	1		5			0.01	<10	<10	5	<10				
163	2738	<.5	<2	1.49	<.5	298	0.65	<10	10	0.01	<10		0.23	115	0.01		80	<2	1		13			0.02	<10	<10	8	<10				
164	2564	<.5	4	1.88	<.5	147	10.95	<10	20	0.03	<10		0.61	170	0.03		150	<2	2		8			0.01	<10	<10	31	<10				
165	2737	<.5	2	0.45	<.5	331	2.54	<10	70	0.01	<10		0.11	50	0.02		280	<2	<1		4			0.04	<10	<10	7	<10				
166	2561	<.5	2	0.65	<.5	186	0.42	<10	<10	<.01	<10		0.05	20	<.01		90	<2	<1		4			0.01	<10	<10	6	<10				
166	2562	<.5	<2	0.4	<.5	244	0.33	<10	<10	<.01	<10		0.06	20	<.01		30	<2	<1		3			<.01	<10	<10	4	<10				
166	2563	<.5	<2	3.32	0.5	94	1.89	<10	<10	0.03	<10		0.87	390	0.06		630	2	3		23			0.07	<10	<10	56	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam. no.	Location	Sam. type	Sample size (ft)	Sam. site	Sample description	Au ppb	ppm	Ag ppm	Cu ppm	%	Pb ppm	%	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
167	2045	The Basin	Rep	6	OC	Qz vns in sil gs, ar, cp <1%, py	<5		0.5	118		8		56	1	53	18	1	10	90
167	2114	The Basin	Rep		OC	Sil metavolc w/ py/po <1%	<5		<.2	51		6		44	<1	20	9	0.89	<2	80
167	2115	The Basin	G		FL	Alt metavolc w/ 5% po, fest	<5		0.3	230		4		110	<1	83	44	2.33	4	70
168	2044	South Arm	Rep		FL	Mudstone, tuff, py/cp to 5% combined	<5		<.2	128		<2		164	<1	26	26	4.62	2	10
168	2113	South Arm	G		FL	Alt metavolc w/ minor cp, py	<5		<.2	585		2		310	<1	41	58	3.38	<2	<10
169	2042	Middle Arm	SS				<5		<.2	38		4		98	1	33	26	2.61	24	70
170	2043	Middle Arm	Rep	0.7x1	OC	Qz vn w/ minor py	10		<.2	14		8		62	1	4	2	0.2	210	10
171	2112	Middle Arm	Rep		OC	Qz w/ minor py, trace cp	<5		<.2	192		8		32	<1	12	6	0.18	2	10
172	2568	False Eagle	PC			Sea level	95		<0.2	22		6		90	<1	30	11	2.43	20	120
172	2569	False Eagle	SS			Sea level	45		<0.2	26		6		92	<1	26	10	2.5	48	140
173	1413	Sealion Cove	Rep	0.18	OC	Qz vn w/ minor sulf, py 1%, aspy	555		0.6	53		8		8	1	5	3	0.2	660	20
173	1414	Sealion Cove	Rep	0.67	OC	Hn sandstone hosting qz vn	20		<.2	30		<2		90	1	17	5	2.07	80	250
173	1415	Sealion Cove	C	0.25	OC	Qz in hn sandstone	5		<.2	6		<2		18	1	5	1	0.48	22	80
173	1416	Sealion Cove	C	0.33	OC	Qz w/ aspy (2%), py + cp <<1%	25		0.2	220		<2		2	2	8	6	0.12	70	<10
173	1459	Sealion Cove	C	0.5	OC	Qz vn w/ po & aspy	1190		0.2	73		<2		<2	3	6	5	0.06	1890	<10
173	1460	Sealion Cove	G	0.4	OC	Hn	2360		0.4	82		<2		68	2	14	7	2.77	6900	230
173	1461	Sealion Cove	C	0.5	OC	Qz vn w/ po & aspy	1810		0.3	58		<2		6	13	6	7	0.27	1645	20
173	1462	Sealion Cove	Rep	50	OC	Hn br zone w/ qz stringers & br sparse po	20		0.2	18		<2		88	4	14	6	2.16	740	290
173	1463	Sealion Cove	RC	5	OC	Fest br zone, hn adj to fel dike	10		0.6	23		<2		110	1	20	9	2.03	1510	190
173	1464	Sealion Cove	RC	10	OC	Tonalite w/ 4% po	15		0.2	61		14		104	2	3	1	0.51	748	260
173	2594	Sealion Cove	Rep	0.4	OC	Qz, mafic int w/ blebs of py/po	<5		0.2	37		7		30	1	3	1	0.59	334	40
173	2595	Sealion Cove	Rep		OC	Qz vn w/ py	<5		<0.2	6		<1		11	1	3	1	0.29	798	130
173	2596	Sealion Cove	S		OC	Qz vn w/ trace cp + mo, py/po	1160		0.9	108		<1		29	24	5	7	1.52	512	40
173	2597	Sealion Cove	Rep	0.4	OC	Fest qz w/ blebs & dissem po	100		0.4	44		10		20	1	2	1	0.46	1485	40
173	2769	Sealion Cove	G		OC	Qz vn on shoreline, 1% py/aspy	2450		0.9	75		<1		4	7	4	1	0.03	416	<10
173	2770	Sealion Cove	G		OC	Aplitic dike w/ <1% py	10		0.8	66		4		23	3	1	<1	0.38	120	30
173	2771	Sealion Cove	G		FL	Qz w/ aspy to 1%	640		8	39		102		13	3	4	1	0.38	>10000	80
174	2008	Krestof Group	C	0.5x10	OC	Qz vn w/ aspy to 1%	380		<.2	7		16		78	<1	10	3	0.5	60	100
174	2009	Krestof Group	C	0.3x7	OC	Qz vn & sheared gw, up to 1% aspy	8050		1.5	12		40		62	<1	9	7	1.09	152	70
174	2010	Krestof Group	Rep	7	OC	Qz vns, 8 vns sampled	45		<.2	5		4		28	<1	6	2	0.64	<2	20
175	1412	Halleck Island	G		OC	Ar w/ minor qz stringers, minor fest	20		<.2	56		<2		56	1	316	32	3.35	34	80
175	1458	Halleck Island	G	0.5	FL	Sil calc rock	<5		<.2	1		<2		10	1	10	3	8.4	<2	<10
175	2705	Halleck Island	C	0.5	UW	Shear zone w/ qz vnlets, calc	<5		<.2	24		2		60	<1	71	10	1.68	4	290
175	2706	Halleck Island	C	3.8	UW	Sheared mudstone, qz vnlets	80		<.2	62		<2		74	<1	365	34	3.63	28	160
175	2707	Halleck Island	C	2.1	UW	Fel dike, <1% dissem py	<5		<.2	30		4		62	<1	17	10	1.76	<2	280
175	2708	Halleck Island	C	5	UW	Shear zone w/ qz vnlets adj to dike	295		<.2	41		2		66	<1	279	25	2.89	52	140
175	2709	Halleck Island	C	2.1	UW	Sheared mudstone, qz, no sulf	15		<.2	54		2		72	<1	399	36	3.45	16	110
176	2014	Magoun Island	Rep	0.2x3	RC	Qz vn in gd, cp, ml, fest	40		0.6	1200		<2		18	20	4	1	0.06	<2	<10
177	2013	Magoun Island	Rep	0.25x3	OC	Qz vn, cp, ml, mo to 3% locally	55		1.5	1700		<2		6	71	4	<1	0.07	68	30
178	2012	Magoun Island	S	0.7x2	OC	Qz vn, bt gd, cp + mo to 3% locally	125		8	1.0		2		30	350	4	1	0.03	<2	20
179	2011	Magoun Island	Rep	0.7x2	RC	Qz vn, bt tonalite, mo to 2% locally, cp, ml	25		<.2	390		8		6	800	4	<1	0.04	2	20
180	2103	Magoun Island	Rep	25	OC	Qz vn in tonalite w/ cp, py	70		1.5	1200		2		22	1	4	1	0.19	2	10
181	2101	Magoun Island	Rep	50	OC	Qz vn in bt tonalite, cp to 1-2%	20		0.3	315		4		18	<1	2	2	0.26	6	10
181	2102	Magoun Island	Rep		OC	Qz vns w/ mo <1%, cp <1%, py	<5		0.2	52		6		6	1	2	<1	0.27	2	<10
182	2507	Siginaka Island	Rep	0.6	OC	Fest gs w/ cp <0.1%, py	<5		<.2	53		6		68	1	12	9	4	10	350

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
167	2045	<.5	<2	0.06	<.5	177	2.43	<10	<10	0.06	<10		0.56	1230	0.01		220	<2	1		9			<.01	<10	<10	29	<10				
167	2114	<.5	<2	0.24	<.5	167	1.99	<10	<10	0.08	10		0.61	330	0.01		350	<2	2		22			0.01	<10	<10	23	<10				
167	2115	<.5	<2	1.63	<.5	100	6.86	<10	<10	0.41	<10		1.53	680	0.02		1530	<2	5		65			0.47	<10	<10	57	<10				
168	2044	<.5	6	2.35	<.5	61	9.82	10	10	0.01	<10		2.53	1165	<.01		1320	<2	14		133			0.99	<10	<10	365	<10				
168	2113	<.5	2	0.52	1.5	202	8.22	<10	20	0.02	<10		2.87	1020	<.01		270	<2	7		10			0.31	<10	<10	82	<10				
169	2042	0.5	4	1.23	<.5	44	3.85	<10	80	0.09	<10		0.96	1255	<.01		870	<2	4		67			0.2	<10	<10	46	<10				
170	2043	<.5	6	2.21	<.5	265	0.81	<10	<10	0.04	<10		0.09	375	0.02		670	<2	<1		183			<.01	<10	<10	4	<10				
171	2112	<.5	<2	1.93	<.5	184	0.52	<10	10	0.02	<10		0.1	3180	<.01		110	4	1		248			0.03	<10	<10	3	<10				
172	2568	<0.5	<2	0.59	<0.5	191	3.89	<10	<10	0.22	<10		1.27	635	0.07		570	<2	4		34			0.2	<10	<10	86	<10				
172	2569	<0.5	<2	0.4	<0.5	74	4.21	<10	<10	0.09	<10		1.38	685	0.09		730	<2	3		24			0.13	<10	<10	56	<10				
173	1413	<.5	24	0.03	<.5	339	1.01	<10	<10	0.12	<10		0.11	50	0.01		30	<2	<1		6			0.01	<10	<10	9	<10				
173	1414	<.5	<2	0.24	0.5	112	3.58	<10	<10	1.51	<10		1.43	480	<.01		500	<2	12		13			0.25	<10	<10	105	<10				
173	1415	<.5	<2	0.07	<.5	315	0.97	<10	<10	0.25	<10		0.24	115	0.01		90	<2	1		7			0.05	<10	<10	20	<10				
173	1416	<.5	<2	0.07	<.5	290	1.59	<10	<10	0.08	<10		0.09	30	<.01		50	<2	<1		8			<.01	<10	<10	5	<10				
173	1459	<.5	22	0.06	<.5	319	0.99	<10	<10	<.01	<10		0.01	20	<.01		<10	<2	<1		1			<.01	<10	<10	2	20				
173	1460	<.5	10	0.87	<.5	120	3.39	<10	10	1.19	<10		1.18	500	0.13		450	<2	10		49			0.18	<10	<10	90	10				
173	1461	<.5	32	0.09	<.5	342	0.98	<10	<10	0.09	<10		0.07	50	0.02		30	<2	<1		10			0.01	<10	<10	8	<10				
173	1462	<.5	<2	0.34	<.5	200	3.24	<10	<10	1.2	<10		1.2	500	0.07		600	<2	11		23			0.21	<10	<10	101	<10				
173	1463	<.5	<2	0.25	<.5	99	3.92	<10	<10	1.28	<10		1.39	590	0.03		620	<2	12		10			0.22	<10	<10	114	10				
173	1464	<.5	<2	0.08	<.5	215	1.77	<10	<10	0.2	<10		0.05	85	0.08		50	<2	<1		13			0.01	<10	<10	1	<10				
173	2594	<0.5	<2	0.55	<0.5	97	1.15	<10	10	0.17	<10		0.19	160	0.04		140	<2	1		14			0.02	<10	<10	11	<10				
173	2595	<0.5	<2	0.1	<0.5	168	0.49	<10	10	0.11	<10		0.12	60	0.02		80	<2	<1		27			0.01	<10	<10	9	<10				
173	2596	<0.5	22	1.02	1	89	1.38	<10	10	0.17	<10		0.23	105	0.04		200	<2	1		41			0.04	<10	<10	19	10				
173	2597	<0.5	<2	0.33	<0.5	101	1.12	<10	10	0.1	<10		0.05	70	0.06		140	<2	<1		12			<0.01	<10	<10	2	10				
173	2769	<0.5	54	0.01	<0.5	320	0.75	<10	20	0.01	<10		0.01	15	<0.01		40	<2	<1		5			<0.01	<10	<10	1	<10				
173	2770	<0.5	<2	0.22	<0.5	78	1.8	<10	130	0.15	<10		0.08	150	0.06		150	<2	1		8			0.01	<10	<10	2	<10				
173	2771	<0.5	70	0.07	<0.5	186	1.75	<10	10	0.17	<10		0.2	85	0.02		100	4	1		18			0.03	<10	<10	17	50				
174	2008	<.5	<2	0.49	<.5	248	1.36	<10	<10	0.06	<10		0.29	175	0.02		200	<2	<1		51			<.01	<10	<10	13	<10				
174	2009	<.5	<2	0.46	<.5	226	2.17	<10	40	0.08	<10		0.72	380	0.05		430	<2	2		36			<.01	<10	<10	30	<10				
174	2010	<.5	2	1.15	<.5	207	1.22	<10	10	0.01	<10		0.39	250	0.01		210	2	<1		58			<.01	<10	<10	13	<10				
175	1412	<.5	<2	5.74	<.5	727	4.3	<10	230	<.01	<10		6.1	895	<.01		530	68	14		293			<.01	<10	<10	99	<10				
175	1458	<.5	<2	9.49	<.5	55	1.12	<10	<10	<.01	<10		0.88	310	0.05		<10	<2	4		20			0.01	<10	<10	26	<10				
175	2705	<.5	2	14.05	<.5	109	2.18	<10	170	0.06	<10		2.39	1230	<.01		510	<2	6		1755			<.01	<10	<10	39	<10				
175	2706	0.5	4	4.5	0.5	801	4.46	<10	230	0.01	<10		6.23	875	<.01		600	20	15		243			<.01	<10	<10	111	<10				
175	2707	<.5	2	2.09	<.5	35	2.53	<10	470	0.15	<10		1.5	405	0.03		520	<2	2		99			<.01	<10	<10	33	<10				
175	2708	<.5	6	6.34	<.5	601	3.77	<10	270	0.01	<10		5.99	1045	<.01		500	30	12		463			<.01	<10	<10	88	<10				
175	2709	0.5	4	4.13	<.5	881	4.24	<10	280	0.01	<10		6.66	875	<.01		580	<2	15		213			<.01	<10	<10	107	<10				
176	2014	<.5	4	0.01	<.5	314	0.67	<10	<10	0.02	<10		0.02	20	0.01		20	<2	<1		3			<.01	<10	<10	2	<10				
177	2013	<.5	4	0.01	<.5	344	0.69	<10	<10	0.07	<10		0.02	30	0.01		50	<2	<1		6			<.01	<10	<10	3	<10				
178	2012	<.5		<.01	0.5	342	1.74	<10	<10	0.02	<10		0.01	15	0.01		20	<2	<1		2			<.01	<10	<10	2	<10				
179	2011	<.5	<2	0.02	<.5	338	0.5	<10	10	0.03	<10		0.01	15	0.01		30	<2	<1		1			<.01	<10	<10	2	<10				
180	2103	<.5	12	0.05	<.5	269	0.81	<10	20	0.05	<10		0.12	40	0.01		80	<2	<1		2			0.01	<10	<10	7	20				
181	2101	<.5	<2	0.09	<.5	170	0.56	<10	10	0.13	10		0.07	50	0.07		40	2	2		2			0.01	<10	<10	3	<10				
181	2102	<.5	<2	0.03	<.5	154	0.43	<10	<10	0.17	<10		0.03	35	0.1		20	<2	2		2			<.01	<10	<10	1	<10				
182	2507	<.5	2	1.64	<.5	61	3.3	<10	30	0.61	<10		1.31	440	0.34		560	<2	10		64			0.15	<10	<10	97	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	Au ppm	Ag ppm	Cu ppm	Cu %	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
182	2508	Siginaka Island	Rep	1	OC	Fest gs w/ cp <0.1%, py	<5		<.2	24		<2	74	<1	17	12	2.7	6	760
182	2710	Siginaka Island	S		OC	Sil gs w/ <1% po, trace cp	505		0.2	332		6	42	<1	73	14	0.68	34	80
183	2509	Siginaka Island	Rep	2	OC	Fest gs w/ py <1%	<5		<.2	70		<2	98	1	29	14	5.19	<2	590
184	2711	Siginaka Island	S		RC	Fg gs w/ <1% po, carbonate stringers	<5		<.2	59		<2	62	<1	53	25	1.88	8	50
185	2038	Warm Springs Bay	Rep	1x4	OC	Alt tonalite, cp <1%, py to 2%	<5		<.2	290		<2	44	4	34	25	1.07	2	150
186	2111	Warm Springs Bay	S		RC	Porph dike w/ minor py, cp	<5		<.2	28		2	48	<1	5	2	0.9	<2	110
187	2110	Warm Springs Bay	S		OC	Bt-qz gneiss, py <1%, trace cp, mo	<5		<.2	76		4	84	<1	26	11	1.76	<2	210
188	2109	Warm Springs Bay	G		OC	Qz in gneiss, minor py, trace cp	<5		<.2	32		4	46	<1	16	5	1.39	2	100
189	2039	Warm Springs Bay	S		FL	Alt tonalite, py, cp to 2% combined	<5		0.7	198		4	74	54	4	2	0.89	<2	70
189	2041	Warm Springs Bay	S	1x2	FL	Qz vn w/ sl, cp, py to 20%	<5		8.3	1150		5	9000	18	3	3	0.06	<2	<10
189	2581	Warm Springs Bay	Rep	0.2	OC	Qz vn w/ py to 7% hosted in gw	<5		0.5	119		<1	530	1	3	2	0.15	<2	10
189	2584	Warm Springs Bay	S		FL	Qz w/ cp, sl, & py	<5		15	1350		5	2750	6	8	38	0.02	26	<10
189	2750	Warm Springs Bay	SS				<5		<0.2	45		3	100	12	7	3	1.58	2	40
189	2751	Warm Springs Bay	G		FL	Sil tonalite, <1% cp, found near 2750	<5		1	1750		<1	115	43	2	4	0.48	<2	60
190	2582	Warm Springs Bay	Rep	2	RC	Tonalite w/ dissem py	<5		0.3	70		<1	260	<1	1	2	0.75	<2	60
190	2583	Warm Springs Bay	SS				<5		<0.2	39		<1	88	3	3	2	1.43	2	20
191	2040	Warm Springs Bay	S	2	OC	Porph tonalite, gneiss, py to 3%	<5		<.2	43		2	26	<1	1	1	0.44	<2	20
192	2752	Warm Springs Bay	G	2	OC	Sil tonalite w/ 1-2% sl, up to 5% py	135		3.5	590		4	5400	6	1	2	0.43	<2	40
193	2585	Warm Springs Bay	Rep	0.1	OC	Qz vn w/ cp, py <1%	170		49	255		50	56	24	<1	<1	0.21	<2	20
193	2753	Warm Springs Bay	G		FL	Sil tonalite, 1-2% sl, 1% cp, 5-10% py	<5		16	1350		3	7200	4	1	1	0.21	<2	20
194	2586	Warm Springs Bay	G		OC	Tonalite w/ trace cp, py to 7%	<5		0.3	1300		<1	41	11	<1	<1	0.22	<2	20
194	2587	Warm Springs Bay	G	0.5	OC	Tonalite w/ dissem cp, py	<5		1.4	1900		<1	62	30	<1	2	0.19	<2	30
195	2754	Warm Springs Bay	G	30x30	FL	Sil bt tonalite boulders w/ 1% cp, py	<5		1.5	1750		<1	140	550	2	2	1.07	<2	120
196	2604	Warm Springs Bay	Rep	0.6	OC	Sil tonalite w/ trace cp, py	<5		<0.2	13		<2	32	<1	1	1	0.41	2	20
196	2605	Warm Springs Bay	Rep	5	OC	Tonalite w/ trace cp, dissem py	<5		<0.2	33		2	90	1	2	2	0.53	2	60
197	2756	Warm Springs Bay	G		RC	Aplite w/ py stringers in qz	<5		0.2	15		3	12	24	1	<1	0.39	<2	70
198	2755	Warm Springs Bay	G		FL	Qz w/ <1% mo, on ridge top	<5		<0.2	25		<1	17	195	3	<1	0.03	2	310
199	2579	Warm Springs Bay	G	0.5	RC	Tonalite w/ qz stringers, py to 5%	<5		<0.2	38		<1	1100	1	1	1	0.36	2	60
199	2580	Warm Springs Bay	G	0.6	RC	Tonalite w/ sulf to 5%	<5		0.5	420		<1	800	7	1	2	0.48	<2	60
200	2748	Warm Springs Bay	G	1.5	OC	Qz vn w/ sl, trace cp, up to 5% py	<5		<0.2	59		2	850	600	6	2	0.15	<2	20
200	2749	Warm Springs Bay	G		OC	Qz vn w/ 1-2% mo, trace cp	<5		<0.2	13		<1	172	1650	2	2	0.09	<2	20
201	2577	Warm Springs Bay	G	0.4	FL	Sil tonalite w/ mo, cp, py	<5		<0.2	465		<1	93	54	2	4	1	<2	100
202	2746	Warm Springs Bay	G		FL	Di w/ mafic br fragments, trace cp, py	<5		<0.2	285		<1	81	25	3	4	1.06	2	320
202	2747	Warm Springs Bay	G		OC	Di w/ trace cp, 2-3% py	<5		<0.2	81		<1	62	2	3	4	0.87	2	20
203	2540	Warm Springs Bay	SC	10@1	OC	Tonalite w/ cp <1%, po	<5		<.2	650		<1	86	33	4	3	0.83	<2	130
203	2541	Warm Springs Bay	SC	10@1	OC	Tonalite w/ cp <1%, po	<5		0.5	920		<1	115	480	4	3	0.97	<2	220
203	2542	Warm Springs Bay	SC	10@1	OC	Tonalite w/ cp <1%, po	<5		0.2	630		<1	85	53	3	4	0.87	<2	230
203	2543	Warm Springs Bay	SC	10@1	OC	Tonalite w/ cp <1%, po	<5		<.2	590		<1	95	40	3	4	0.85	6	240
203	2544	Warm Springs Bay	SC	10@2	OC	Tonalite w/ cp <1%, po	<5		<.2	540		<1	98	53	2	3	0.9	2	230
203	2545	Warm Springs Bay	CC	0.12	OC	Qz vn w/ cp blebs to 5%	<5		5.4	6000		<1	56	415	4	4	0.04	<2	10
203	2546	Warm Springs Bay	SC	10@2	OC	Tonalite w/ cp <1%, po	<5		0.2	580		<1	85	50	2	3	0.84	<2	210
203	2547	Warm Springs Bay	SC	12@2	OC	Tonalite w/ cp <1%, po	<5		<.2	430		<1	72	32	4	4	0.82	2	170
203	2548	Warm Springs Bay	SC	10@2	OC	Tonalite w/ cp <1%, po	<5		0.5	965		<1	88	60	2	3	0.75	4	220
203	2549	Warm Springs Bay	SC	10@2	OC	Tonalite w/ cp <1%	<5		0.4	830		<1	87	13	4	3	0.86	<2	240
203	2550	Warm Springs Bay	SC	10@2	OC	Tonalite w/ cp <1%, po	<5		0.3	790		<1	116	38	2	3	0.82	<2	310

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
182	2508	<.5	<2	0.53	<.5	69	3.99	<10	10	1.62	<10		1.49	595	0.11		630	<2	12		42			0.29	<10	<10	140	<10				
182	2710	<.5	2	0.88	<.5	115	4.25	<10	20	0.06	<10		0.37	3130	0.02		1340	<2	1		35			0.02	<10	<10	87	<10				
183	2509	<.5	4	1.89	<.5	87	4.13	10	<10	1.32	<10		1.47	330	0.62		1060	<2	15		95			0.17	<10	<10	167	<10				
184	2711	<.5	4	1.06	<.5	112	3.66	<10	<10	0.11	<10		1.57	375	0.07		600	<2	3		19			0.36	<10	<10	107	<10				
185	2038	<.5	2	0.28	<.5	52	2.2	<10	<10	0.32	<10		0.65	120	0.07		650	<2	3		12			0.09	<10	<10	56	<10				
186	2111	<.5	<2	0.28	<.5	88	1.55	<10	<10	0.4	<10		0.47	240	0.12		450	<2	2		32			0.08	<10	<10	25	<10				
187	2110	<.5	<2	0.18	<.5	113	3.23	<10	<10	0.79	<10		0.97	290	0.02		730	<2	4		7			0.11	<10	<10	63	<10				
188	2109	<.5	<2	0.56	<.5	230	1.82	<10	<10	0.27	<10		0.53	225	0.07		1040	2	3		26			0.07	<10	<10	41	<10				
189	2039	<.5	<2	0.32	0.5	171	1.71	<10	<10	0.3	<10		0.47	370	0.1		400	<2	1		30			0.07	<10	<10	20	<10				
189	2041	<.5	800	<.01	69	143	3.32	<10	<10	0.03	<10		<.01	120	<.01		<10	<2	<1		<1			<.01	<10	<10	<1	<10				
189	2581	<0.5	6	0.01	5.5	78	0.75	<10	<10	0.11	<10		0.02	20	<0.01		80	<2	<1		3			<0.01	<10	<10	4	<10				
189	2584	<0.5	544	<0.01	20	42	7.5	<10	<10	<0.01	<10		<0.01	20	<0.01		<10	<2	<1		<1			<0.01	<10	<10	<1	<10				
189	2750	<0.5	<2	0.68	<0.5	162	1.62	<10	130	0.14	<10		0.5	420	0.04		340	<2	1		72			0.1	<10	<10	29	<10				
189	2751	<0.5	<2	0.07	0.5	136	1.91	<10	300	0.16	<10		0.15	140	0.03		140	<2	<1		5			0.01	<10	<10	7	<10				
190	2582	<0.5	2	0.28	1	36	1.59	<10	<10	0.28	<10		0.56	570	0.01		510	<2	2		10			0.1	<10	<10	25	<10				
190	2583	<0.5	<2	0.61	<0.5	34	1.38	<10	<10	0.1	<10		0.51	380	0.01		340	<2	1		62			0.09	<10	<10	24	<10				
191	2040	<.5	<2	0.11	<.5	105	1.22	<10	<10	0.09	<10		0.25	165	0.04		160	<2	1		7			0.04	<10	<10	7	<10				
192	2752	<0.5	26	0.05	37	121	2.27	<10	270	0.27	<10		0.04	55	<0.01		420	<2	<1		2			<0.01	<10	<10	3	30				
193	2585	<0.5	52	0.06	<0.5	63	0.78	<10	<10	0.14	<10		0.03	40	<0.01		220	<2	<1		10			0.01	<10	<10	1	30				
193	2753	<0.5	30	0.04	49	117	1.32	<10	120	0.18	<10		0.01	40	<0.01		250	<2	<1		1			<0.01	<10	<10	2	250				
194	2586	<0.5	<2	0.01	<0.5	42	2.18	<10	<10	0.11	<10		<0.01	5	<0.01		130	<2	<1		6			<0.01	<10	<10	<1	<10				
194	2587	<0.5	<2	0.04	<0.5	44	2.38	<10	<10	0.1	<10		<0.01	15	<0.01		280	<2	<1		2			<0.01	<10	<10	<1	<10				
195	2754	<0.5	<2	0.13	1	141	2.71	<10	20	0.34	<10		0.26	330	0.01		660	<2	<1		9			0.07	<10	<10	11	<10				
196	2604	<0.5	<2	0.19	<0.5	66	0.83	<10	60	0.17	<10		0.25	185	0.03		420	<2	<1		15			0.03	<10	<10	8	<10				
196	2605	<0.5	2	0.17	<0.5	93	1.29	<10	30	0.27	<10		0.37	325	0.03		390	<2	1		14			0.06	<10	<10	15	<10				
197	2756	<0.5	<2	0.02	<0.5	140	1.27	<10	30	0.19	<10		0.04	50	0.03		110	<2	<1		7			0.01	<10	<10	2	<10				
198	2755	<0.5	<2	<0.01	<0.5	272	0.47	<10	<10	0.01	<10		<0.01	10	<0.01		10	<2	<1		<1			<0.01	<10	<10	1	<10				
199	2579	<0.5	86	0.11	8.5	61	1.03	<10	<10	0.2	<10		0.35	310	0.01		310	<2	2		8			0.06	<10	<10	19	<10				
199	2580	<0.5	2	0.13	5	55	1.32	<10	<10	0.24	<10		0.38	290	0.05		260	<2	2		15			0.07	<10	<10	22	<10				
200	2748	<0.5	86	0.03	7.5	197	2.03	<10	100	0.11	<10		0.12	65	0.01		160	<2	<1		6			<0.01	<10	<10	4	<10				
200	2749	<0.5	2	0.02	1.5	154	4.29	<10	270	0.08	<10		0.02	20	0.01		30	<2	<1		7			<0.01	<10	<10	1	<10				
201	2577	<0.5	<2	0.29	<0.5	46	1.99	<10	<10	0.35	<10		0.58	345	0.02		500	<2	2		23			0.12	<10	<10	24	4				
202	2746	<0.5	<2	0.2	<0.5	140	2.09	<10	70	0.54	<10		0.56	365	0.06		470	<2	3		18			0.12	<10	<10	35	3				
202	2747	<0.5	<2	0.27	<0.5	134	1.67	<10	90	0.07	<10		0.51	365	0.04		320	<2	2		20			0.06	<10	<10	18	<2				
203	2540	<.5	<2	0.17	<.5	121	1.81	<10	<10	0.34	<10		0.51	290	0.05		410	<2	3		11			0.09	<10	<10	26	<10			<5	<2
203	2541	<.5	<2	0.22	<.5	113	1.99	<10	<10	0.52	<10		0.55	310	0.07		320	<2	3		19			0.11	<10	<10	30	<10				
203	2542	<.5	2	0.22	<.5	62	1.88	<10	<10	0.48	<10		0.48	270	0.04		510	<2	3		12			0.1	<10	<10	28	<10				
203	2543	<.5	<2	0.15	<.5	65	1.85	<10	<10	0.47	<10		0.49	275	0.04		480	<2	3		8			0.1	<10	<10	27	<10				
203	2544	<.5	<2	0.23	<.5	80	1.84	<10	<10	0.55	<10		0.51	275	0.05		850	<2	3		14			0.11	<10	<10	28	<10				
203	2545	<.5	<2	0.02	0.5	234	1.09	<10	<10	0.02	<10		<.01	10	0.01		70	4	<1		4			<.01	<10	<10	1	<10				
203	2546	<.5	<2	0.19	<.5	81	1.65	<10	<10	0.5	<10		0.44	255	0.06		570	6	2		14			0.1	<10	<10	24	<10				
203	2547	<.5	<2	0.13	<.5	150	1.73	<10	<10	0.49	<10		0.4	230	0.07		350	<2	2		10			0.09	<10	<10	23	<10				
203	2548	<.5	<2	0.13	0.5	119	1.74	<10	<10	0.45	<10		0.4	210	0.06		400	4	2		16			0.08	<10	<10	22	<10				
203	2549	<.5	<2	0.16	<.5	143	1.82	<10	<10	0.49	<10		0.47	245	0.07		440	<2	3		16			0.1	<10	<10	25	<10				
203	2550	<.5	<2	0.12	<.5	56	1.8	<10	<10	0.54	<10		0.51	220	0.03		380	<2	3		10			0.12	<10	<10	28	<10				

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Map no.	Sample no.	Location	Sample type	Sample size (ft)	Sample site	Sample description	Au ppb	Au ppm	Ag ppm	Cu ppm	Cu %	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
203	2551	Warm Springs Bay	SC	10@2	OC	Tonalite w/ cp <1%, po	<5		<.2	140		<1	88	1	2	2	0.91	<2	230
203	2552	Warm Springs Bay	SC	10@2	OC	Tonalite w/ cp <1%, po	<5		<.2	140		<1	65	3	2	1	0.83	<2	200
203	2553	Warm Springs Bay	SC	10@2	OC	Tonalite w/ cp <1%, po	<5		<.2	118		<1	56	<1	1	1	0.81	<2	190
203	2554	Warm Springs Bay	SC	10@2	OC	Tonalite w/ cp <1%, po	<5		<.2	230		<1	58	21	2	2	0.82	<2	180
203	2555	Warm Springs Bay	SS				<5		<.2	37		5	17	2	1	<1	0.38	2	20
203	2556	Warm Springs Bay	G	0.5	RC	Tonalite w/ blebs of cp, mo, sil	<5		0.6	1600		<1	115	785	3	2	0.91	<2	190
203	2557	Warm Springs Bay	SS				<5		<.2	70		6	23	24	1	<1	0.98	<2	30
203	2558	Warm Springs Bay	SS				<5		<.2	146		1	80	3	3	3	2	2	10
203	2559	Warm Springs Bay	SS				<5		<.2	59		2	50	2	2	3	0.84	<2	20
203	2560	Warm Springs Bay	SS				<5		<.2	26		4	42	5	3	1	0.75	<2	30
203	2578	Warm Springs Bay	G	0.5	FL	Tonalite w/ dissem cp, py on sil zones	<5		3.5	4900		<1	148	95	1	3	0.32	<2	30
203	2718	Warm Springs Bay	SC	10@1	OC	Tonalite, cp <1%, qz vnlets	<5		0.6	1550		<1	88	600	6	5	0.8	<2	250
203	2719	Warm Springs Bay	SC	10@1	OC	Tonalite, cp <1%, qz vnlets	<5		<.2	510		<1	101	57	10	4	0.95	2	290
203	2720	Warm Springs Bay	SC	10@1	OC	Tonalite, cp <1%, trace mo, qz vnlets	<5		0.6	1300		<1	117	186	4	4	0.99	<2	310
203	2721	Warm Springs Bay	SC	10@1	OC	Tonalite, cp + mo <1%, qz vnlets	<5		0.5	1150		<1	119	187	4	5	1.21	<2	360
203	2722	Warm Springs Bay	SC	10@1	OC	Br tonalite, cp to 5% locally, 1% po	<5		0.3	930		<1	130	6	6	7	1.39	<2	380
203	2723	Warm Springs Bay	SC	10@1	OC	Tonalite, br locally, cp <1%, 1% po	<5		0.2	640		<1	117	13	3	3	0.97	<2	270
203	2724	Warm Springs Bay	SC	10@1	OC	Tonalite, <1% cp, po to 1%	<5		<.2	495		<1	80	32	3	3	0.86	<2	190
203	2725	Warm Springs Bay	S	1.5	OC	High-grade qz vnlet w/ cp, mo, po	<5		4	5300		<1	92	925	3	3	0.35	<2	80
203	2726	Warm Springs Bay	SC	10@1	OC	Tonalite, <1% cp, py on fractures	<5		<.2	290		<1	62	11	2	2	0.82	2	190
203	2727	Warm Springs Bay	SC	10@1	OC	Tonalite, <1% cp, py on fractures	<5		<.2	265		<1	66	13	2	3	0.87	<2	200
203	2728	Warm Springs Bay	SC	10@1	RC	Tonalite, <1% cp, py in fractures	<5		<.2	1200		<1	40	352	1	4	0.75	<2	180
203	2729	Warm Springs Bay	SC	10@1	OC	Tonalite cut by fractures, cp <1%, py	<5		<.2	310		<1	55	5	2	2	0.84	<2	190
203	2730	Warm Springs Bay	SC	10@1	OC	Tonalite, cp <1%, more in fractures	<5		0.2	440		<1	60	10	2	2	0.85	<2	140
203	2731	Warm Springs Bay	SC	10@1	OC	Tonalite, cp, py to 1%	<5		<.2	210		<1	61	15	1	2	0.85	<2	160
203	2732	Warm Springs Bay	SC	10@1	OC	Tonalite cut by sulf-filled fractures, cp	<5		0.3	820		<1	60	123	2	5	0.89	<2	170
203	2733	Warm Springs Bay	S	0.7	OC	Tonalite w/ sulf vnlets, <5% cp, py	<5		5.2	6600		<1	175	240	2	8	0.63	<2	100
204	2745	Warm Springs Bay	G		FL	Di w/ trace cp, 2-5% py	<5		0.3	570		3	77	34	9	5	1.28	4	210
205	2736	Warm Springs Bay	SS				<5		<.2	34		5	55	3	3	3	0.94	4	30
206	2735	Warm Springs Bay	RC	10x50	OC	Tonalite, qz vnlets w/ cp, trace mo, py	<5		0.4	465		<1	90	30	2	3	0.87	<2	150
207	2734	Warm Springs Bay	SS				<5		<.2	29		4	83	7	3	1	1.32	<2	60
208	2146	Harbor Mtn Road	Rep	2	OC	Fest fault gouge & silica boxworks in gw	660		0.4	25		20	64	2	19	10	1.78	406	70
209	1400	Thetis	Rep		OC	Qz stringers & lenses in ar, <1% po	10		0.2	23		12	56	1	11	5	0.64	2	20
209	1401	Thetis	SS			Bedrock mainly gw w/ ar & qz stringers			0.2	81		2	116	2	47	25	3.04	10	40
209	1402	Thetis	SS			Gw & ar bedrock, fest qz boulder float			1	66		14	202	3	53	34	3.38	130	90
209	1450	Thetis	C	5	UW	Gw w/ 3 qz stringers from 0.05' to 0.2' thick	<5		<.2	52		18	70	2	23	10	1.9	<2	60
209	1451	Thetis	C	0.8	UW	Qz vn w/ po & py	<5		<.2	14		4	20	1	9	3	0.58	<2	10
209	1452	Thetis	C	3.0	UW	Qz vn & stringers w/ blebs of sulf	<5		0.2	41		44	122	1	16	7	1.23	2	30
209	1453	Thetis	C	2.3	UW	Fest, sheared gw & qz	<5		0.6	60		80	134	3	18	9	1.1	2	10
210	2576	Blue Lake	G	0.4	FL	Sil gs w/ qz stringers, cp to 2%, py	65		2.8	1950		8	16	7	85	11	0.02	<2	<10
211	2570	Gangola	C	1.5	TP	Qz zone w/ py/po, aspy	80		<0.2	375		<1	28	1	8	26	3.77	8	<10
211	2571	Gangola	Rep	0.4	TP	Sil wall rock w/ po	<5		<0.2	285		<1	21	<1	4	20	1.3	<2	<10
211	2572	Gangola	G		TP	Fest gs w/ sulf	570		0.9	960		<1	18	<1	8	63	1.54	2	<10
211	2573	Gangola	S		MD	Qz w/ py, aspy, fest	85		<0.2	260		<1	42	<1	7	19	2.19	2	<10
211	2574	Gangola	C	1	OC	Qz vn w/ po	140		<0.2	49		<1	5	<1	2	3	0.22	<2	<10

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Pt ppb	Pd ppb
203	2551	<.5	2	0.13	<.5	113	1.64	<10	<10	0.58	<10		0.48	295	0.06		370	<2	3		12			0.1	<10	<10	22	<2				
203	2552	<.5	<2	0.13	<.5	91	1.48	<10	<10	0.54	<10		0.44	265	0.06		370	<2	3		17			0.09	<10	<10	19	<2				
203	2553	<.5	<2	0.14	<.5	78	1.46	<10	<10	0.52	<10		0.44	255	0.04		400	<2	3		10			0.1	<10	<10	21	<2				
203	2554	<.5	2	0.18	<.5	101	1.53	<10	<10	0.47	<10		0.45	250	0.06		340	<2	2		17			0.09	<10	<10	19	<2				
203	2555	<.5	<2	0.09	<.5	4	1.13	<10	30	0.08	<10		0.2	110	0.02		410	<2	1		13			0.04	<10	<10	24	<2				
203	2556	<.5	<2	0.58	0.5	84	1.85	<10	10	0.53	<10		0.54	325	0.06		2330	<2	3		23			0.1	<10	<10	33	<2				
203	2557	<.5	<2	0.15	<.5	2	0.97	<10	60	0.07	<10		0.28	135	0.01		280	<2	1		14			0.06	<10	<10	15	<10				
203	2558	<.5	<2	1.03	<.5	6	1.54	<10	10	0.07	<10		0.6	435	0.01		460	<2	3		77			0.09	<10	<10	25	<10				
203	2559	<.5	2	0.27	<.5	4	1.2	<10	<10	0.09	<10		0.4	385	0.02		220	<2	1		22			0.08	<10	<10	19	<10				
203	2560	<.5	<2	0.19	<.5	6	1.14	<10	30	0.11	<10		0.37	220	0.05		220	<2	1		22			0.07	<10	<10	22	<10				
203	2578	<0.5	<2	0.08	2	67	1.83	<10	<10	0.18	<10		0.15	110	0.02		100	<2	<1		8			0.02	<10	<10	6	4				
203	2718	<.5	<2	0.17	<.5	105	2	<10	<10	0.5	<10		0.45	255	0.05		610	<2	2		13			0.09	<10	<10	26	<10				
203	2719	<.5	<2	0.16	<.5	138	1.95	<10	10	0.6	<10		0.61	320	0.06		530	<2	3		12			0.12	<10	<10	30	<10				
203	2720	<.5	<2	0.44	0.5	108	2.13	<10	<10	0.67	<10		0.54	355	0.06		1340	<2	3		30			0.13	<10	<10	29	<10				
203	2721	<.5	<2	0.31	<.5	173	2.19	<10	<10	0.69	<10		0.62	380	0.12		940	<2	3		29			0.13	<10	<10	36	<10				
203	2722	<.5	<2	0.32	0.5	151	2.68	<10	<10	0.84	<10		0.74	395	0.11		920	6	4		34			0.16	<10	<10	45	<10				
203	2723	<.5	<2	0.21	<.5	159	1.79	<10	<10	0.5	<10		0.5	275	0.11		460	<2	3		23			0.1	<10	<10	28	<10				
203	2724	<.5	<2	0.16	<.5	150	1.72	<10	10	0.46	<10		0.42	230	0.08		410	<2	2		15			0.08	<10	<10	21	<10				
203	2725	<.5	<2	0.13	0.5	262	1.23	<10	<10	0.19	<10		0.07	65	0.01		640	<2	<1		6			0.01	<10	<10	4	<10				
203	2726	<.5	<2	0.14	<.5	124	1.72	<10	<10	0.46	<10		0.39	230	0.06		380	<2	2		13			0.08	<10	<10	17	<10				
203	2727	<.5	<2	0.15	<.5	152	1.65	<10	10	0.49	<10		0.45	250	0.07		440	<2	2		13			0.08	<10	<10	18	<10				
203	2728	<.5	2	0.23	<.5	155	1.71	<10	<10	0.47	<10		0.3	185	0.04		920	<2	1		18			0.06	<10	<10	17	<10				
203	2729	<.5	2	0.18	<.5	113	1.48	<10	<10	0.46	<10		0.38	215	0.08		360	<2	2		16			0.07	<10	<10	17	<10				
203	2730	<.5	<2	0.21	<.5	109	1.7	<10	<10	0.38	<10		0.41	245	0.07		460	2	2		16			0.07	<10	<10	18	<10				
203	2731	<.5	<2	0.22	<.5	134	1.66	<10	10	0.4	<10		0.43	255	0.07		400	<2	2		19			0.08	<10	<10	18	<10				
203	2732	<.5	<2	0.24	<.5	136	1.73	<10	<10	0.42	<10		0.33	215	0.07		520	<2	2		23			0.05	<10	<10	16	<10				
203	2733	<.5	<2	0.07	1	127	2.19	<10	<10	0.33	<10		0.19	105	0.04		250	<2	1		9			0.03	<10	<10	13	<10				
204	2745	<0.5	<2	0.34	<0.5	177	2.49	<10	420	0.42	<10		0.66	285	0.07		390	<2	3		22			0.14	<10	<10	39	4				
205	2736	<.5	2	0.29	<.5	6	1.73	<10	20	0.18	<10		0.47	370	0.24		540	<2	1		49			0.09	<10	10	32	<10				
206	2735	<.5	<2	0.24	<.5	142	1.96	<10	<10	0.5	<10		0.48	325	0.08		560	<2	3		23			0.1	<10	<10	30	<10				
207	2734	<.5	6	0.15	<.5	10	1.77	<10	40	0.4	<10		0.67	400	0.12		750	<2	3		24			0.13	<10	<10	37	<10				
208	2146	<0.5	<2	0.81	<0.5	79	3.04	<10	15490	0.18	<10		0.73	420	0.02		620	2	3		25			0.18	<10	<10	52	<10				
209	1400	<.5	<2	0.65	0.5	202	1.63	<10	<10	0.07	<10		0.39	300	<.01		260	<2	1		24			0.03	<10	<10	16	<10				
209	1401	<.5	<2	0.7	0.5	108	4.57	<10	30	0.12	<10		2.17	780	<.01		560	2	6		51			0.22	<10	<10	100	<10				
209	1402	0.5	<2	0.81	1.5	59	4.76	<10	40	0.21	<10		1.45	960	<.01		1020	2	6		121			0.17	<10	<10	96	<10				
209	1450	<.5	<2	3.03	0.5	101	3.55	<10	10	0.22	<10		1.19	675	<.01		670	<2	3		126			0.08	<10	<10	40	<10				
209	1451	<.5	<2	4.31	<.5	129	1.18	<10	<10	0.05	<10		0.36	730	<.01		170	<2	1		121			0.05	<10	<10	21	<10				
209	1452	<.5	<2	1.31	1.5	145	2.53	<10	10	0.13	<10		0.79	405	<.01		390	<2	2		46			0.08	<10	<10	33	<10				
209	1453	<.5	<2	0.98	1.5	99	3.12	<10	<10	0.07	<10		0.71	395	<.01		430	<2	2		35			0.07	<10	<10	33	<10				
210	2576	<0.5	2	<0.01	<0.5	88	5.24	<10	<10	<0.01	<10		<0.01	40	<0.01		50	<2	<1		<1			<0.01	<10	<10	3	3				
211	2570	0.5	38	4.1	<0.5	71	3.41	<10	<10	<0.01	<10		0.69	230	<0.01		150	<2	6		7			0.04	<10	<10	67	380				
211	2571	0.5	<2	3.25	<0.5	53	1.68	<10	10	0.06	<10		0.12	195	0.03		460	<2	1		113			0.07	<10	<10	18	1010				
211	2572	0.5	60	1.85	1	34	3.46	<10	<10	0.01	<10		0.16	125	0.07		670	<2	3		89			0.08	<10	<10	33	1100				
211	2573	<0.5	12	2.05	<0.5	76	3.52	<10	<10	0.04	<10		1.43	440	<0.01		30	<2	7		12			0.08	<10	<10	100	760				
211	2574	<0.5	86	0.08	<0.5	127	0.8	<10	10	<0.01	<10		0.1	35	<0.01		10	<2	<1		<1			<0.01	<10	<10	12	50				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Location	Sam. type	Sample size (ft)	Sam site	Sample description	Au ppb	Au ppm	Ag ppm	Cu ppm	Cu %	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
211	2575	Gangola	C	0.9	OC	Qz vn w/ sulf	450		0.4	169		<1	12	<1	4	11	0.38	<2	<10
211	2744	Gangola	G		OC	Qz vn w/ fest	65		<0.2	98		14	23	2	4	3	0.19	4	<10
212	2015	Apex area	C	3.3	OC	Qz vn in gw, barren	<5		<.2	12		<2	<2	1	3	<1	0.04	8	<10
212	2016	Apex area	Rep	2x7	OC	Qz vn in fault, parallel to vn in 2015	10		<.2	17		<2	24	1	9	2	0.58	4	40
212	2017	Apex area	S		FL	Qz vn br, cp, trace sl, aspy	<5		1	920		18	78	1	10	3	1.05	6	80
212	2018	Apex area	C	1.7	OC	Qz vn br, aspy, minor cp	<5		0.2	270		17	59	1	12	6	0.92	44	80
212	2106	Apex area	S		FL	Qz w/ minor po, gw clasts	<5		<.2	14		6	42	<1	12	3	0.46	26	10
212	2107	Apex area	C	0.25	OC	Qz vn & sil gw br, fest	40		<.2	18		4	28	1	8	3	0.35	90	30
213	2104	Liberty	S		MD	Qz & qz br, py/po	30		<.2	84		6	46	<1	7	2	0.42	28	20
213	2105	Liberty	C	1.4	OC	Qz vn in slate, fest, no sulf	<5		<.2	12		2	42	<1	6	2	0.86	8	10
213	2235	Liberty	C	3	UW	Qz vn, minor pl, py clots to 1 inch	<5		<0.2	35		4	84	<1	7	3	0.59	106	10
213	2236	Liberty	C	3	UW	Qz vn, py to 2%	60		<0.2	6		8	32	<1	5	2	0.79	398	<10
213	2237	Liberty	Rep	2	UW	Qz vns, py to 2% locally	50		<0.2	21		14	58	<1	12	8	1.14	100	20
213	2238	Liberty	C	1	UW	Qz pods, lenses, no sulf	20		0.4	99		96	100	<1	11	8	1.09	146	20
214	2091	Green Lake Road	S	0.5	OC	Qz vn in slate, py <1%	<5		<0.2	36		4	48	1	26	8	1.18	2	20
215	2161	Edgecumbe Exploration	C	0.7	UW	Ribbon qz w/ py <1%	1170		0.6	9		130	212	<1	9	2	0.41	918	30
215	2162	Edgecumbe Exploration	S		UW	Qz w/ knots of py & aspy to 5%	1810		0.6	<1		16	26	1	10	9	0.08	>10000	20
215	2239	Edgecumbe Exploration	C	2.1	UW	Qz vn, py to 3% locally	50		<0.2	4		42	30	<1	6	2	0.19	880	10
215	2240	Edgecumbe Exploration	C	5	UW	Qz vn, py/aspy locally	70		<0.2	<1		48	30	1	4	1	0.06	2200	<10
215	2241	Edgecumbe Exploration	C	0.75	OC	Qz vnlet in gw, py to 5%, near creek	160		<0.2	14		8	54	1	27	14	1.63	>10000	70
215	2242	Edgecumbe Exploration	C	4	OC	Qz vn, py, aspy to 1%	20		<0.2	<1		14	54	<1	3	<1	0.05	262	<10
216	2163	Eureka	G		OC	Fest qz stringers in gw	<5		<0.2	3		4	20	<1	7	3	1.8	36	20
216	2243	Eureka	Rep		FL	Qz in creek	30		<0.2	2		2	8	<1	5	2	0.21	34	10
216	2244	Eureka	Rep		FL	Qz w/ gw partings, py/aspy to 2%	<5		<0.2	17		2	32	<1	7	2	0.3	38	10
216	2245	Eureka	C	0.25	UW	Qz vnlets in slate, no sulf	27.5	*	3.2	9		16	38	<1	11	4	0.56	4060	30
217	1403	Bonanza No. 1	C	4.5	UW	Interbedded gw & slate, minor qz stringer	5		<.2	28		<2	78	3	20	10	1.98	4	90
217	1404	Bonanza No. 1	C	4.3	UW	Sheared black slate w/ minor qz stringers	10		<.2	50		2	88	2	21	13	2.29	52	170
217	1454	Bonanza No. 1	C	3.0	UW	Gw, slate, & sparse qz stringers	<5		<.2	32		8	90	3	19	12	2.22	30	130
218	1417	Green Lake	G		MD	Fest qz in slate w/ minor py (<1%)	10		<.2	27		8	12	1	7	2	0.33	2	20
218	1465	Green Lake	RC		MD	Qz vn w/ slate ribbon texture	5		<.2	4		<2	2	<1	5	1	0.05	8	<10
218	1466	Green Lake	G	0.5	MD	Vuggy qz vn w/ gs, some ribbons	<5		<.2	1		12	2	<1	3	<1	0.09	6	10
219	1418	Green Lake	C	2	OC	Qz vn w/ minor py in gw, py<<1%	<5		<.2	157		<2	<2	<1	3	<1	0.04	<2	<10
220	2148	Stewart	Rep	2.5x4	OC	Qz vn w/ trace py	265		<0.2	3		2	4	<1	4	1	0.24	78	10
220	2164	Stewart	S		MT	Crushed rock w/in stamp battery	9640		4.2	310		115	175	1	15	11	0.13	1185	30
220	2221	Stewart	Rep		MT	Tailings from below agitator on millsite	12.6	*	4.9	29		200	42	1	7	2	0.17	9680	10
220	2222	Stewart	S		MT	High-grade from concentrates near mill	57.9	*	25.6	215		2000	25	4	13	4	0.07	>10000	20
220	2092	Stewart, Adit #1	C	4	UW	Qz w/ slate/gw partings, py	<5		<0.2	2		<2	4	<1	6	1	0.1	258	10
220	2093	Stewart, Adit #1	C	4.5	UW	Qz vn w/ py black slate/gw	25		<0.2	4		10	56	<1	8	3	0.43	1555	40
220	2094	Stewart, Adit #1	C	4	UW	Qz vn w/ slate/gw partings	240		0.2	4		14	170	1	6	1	0.09	284	10
220	2095	Stewart, Adit #1	C	5.5	UW	Qz, minor partings on hw	15		<0.2	2		4	22	<1	3	1	0.08	172	<10
220	2096	Stewart, Adit #1	C	7	UW	Qz vn, py <1%	20		<0.2	2		<2	22	1	4	<1	0.01	22	<10
220	2097	Stewart, Adit #1	C	5	UW	Qz vn, minor fault gouge	<5		<0.2	1		<2	2	<1	3	<1	0.01	10	<10
220	2098	Stewart, Adit #2	C	4	UW	Br qz, py to 2% locally	370		0.2	6		22	32	1	8	1	0.18	214	20
220	2099	Stewart, Adit #2	S	0.3	UW	Qz vn w/ py to 1%	65		<0.2	7		2	28	<1	8	3	0.32	218	30
220	2100	Stewart, Adit #2	C	5.5	UW	Qz vn w/ ribbon texture, <1% py	150		0.2	2		2	20	1	6	1	0.06	958	10

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Map no.	Sam no.	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
211	2575	<0.5	82	0.05	<0.5	100	1.28	<10	<10	0.02	<10		0.21	80	<0.01		20	<2	1		1			0.01	<10	<10	21	6				
211	2744	<0.5	18	0.07	<0.5	298	0.94	<10	<10	0.01	<10		0.11	35	<0.01		10	<2	<1		<1			0.01	<10	<10	14	180				
212	2015	<.5	<2	0.01	<.5	179	0.24	<10	10	<.01	<10		0.02	15	<.01		20	4	<1		1			<.01	<10	<10	1	<10				
212	2016	<.5	<2	0.09	<.5	341	1.27	<10	<10	0.09	<10		0.29	105	0.02		130	2	1		9			0.04	<10	<10	16	<10				
212	2017	<.5	<2	0.27	0.5	316	2.03	<10	30	0.17	<10		0.52	205	0.01		260	2	2		11			0.12	<10	<10	30	<10				
212	2018	<.5	<2	0.2	<.5	222	2.04	<10	170	0.2	<10		0.45	195	<.01		320	<2	1		12			0.09	<10	<10	23	<10				
212	2106	<.5	<2	0.09	<.5	269	1.2	<10	<10	0.05	<10		0.25	95	0.01		130	<2	<1		9			0.02	<10	<10	12	<10				
212	2107	<.5	<2	1.87	<.5	345	0.95	<10	<10	0.08	<10		0.1	260	<.01		70	<2	<1		154			0.01	<10	<10	7	<10				
213	2104	<.5	<2	2.15	<.5	362	1.17	<10	10	0.06	<10		0.18	235	0.01		110	6	<1		151			0.01	<10	<10	10	<10				
213	2105	<.5	<2	0.15	<.5	182	1.67	<10	10	0.04	<10		0.47	190	<.01		220	<2	<1		10			<.01	<10	<10	14	<10				
213	2235	<0.5	<2	2.18	<0.5	147	1.22	<10	2040	0.04	<10		0.3	285	<0.01		150	<2	<1		177			<0.01	<10	<10	11	<10				
213	2236	<0.5	<2	2.86	<0.5	98	1.59	<10	2370	0.02	<10		0.43	480	<0.01		230	<2	1		221			<0.01	<10	<10	12	<10				
213	2237	<0.5	2	3.6	<0.5	136	2.11	<10	700	0.06	<10		0.62	540	0.01		430	<2	1		199			0.01	<10	<10	22	<10				
213	2238	<0.5	2	3.82	0.5	143	2.27	<10	790	0.08	<10		0.56	565	<0.01		310	<2	1		278			0.01	<10	<10	17	<10				
214	2091	<0.5	2	2.16	<0.5	192	2.09	<10	120	0.07	<10		0.9	405	<0.01		340	<2	1		45			0.15	<10	<10	33	<10				
215	2161	<0.5	<2	1.2	<0.5	184	1.15	<10	170	0.11	<10		0.28	175	<0.01		460	2	<1		44			<0.01	<10	<10	15	<10				
215	2162	<0.5	<2	0.11	<0.5	144	3.07	<10	260	0.02	<10		0.03	45	<0.01		20	16	<1		56			<0.01	<10	<10	4	<10				
215	2239	<0.5	<2	0.89	<0.5	222	0.69	<10	120	0.02	<10		0.12	90	<0.01		520	<2	<1		61			<0.01	<10	<10	7	<10				
215	2240	<0.5	<2	0.28	<0.5	223	0.54	<10	110	0.02	<10		0.02	40	<0.01		<10	2	<1		19			<0.01	<10	<10	2	<10				
215	2241	<0.5	4	2.19	<0.5	56	4.11	<10	70	0.2	<10		1.35	540	0.01		430	<2	2		153			0.04	<10	<10	33	<10				
215	2242	<0.5	<2	0.12	<0.5	226	0.34	<10	20	<0.01	<10		0.03	20	<0.01		360	<2	<1		12			<0.01	<10	<10	2	<10				
216	2163	<0.5	<2	1.71	<0.5	139	1.08	<10	80	0.06	<10		0.38	155	0.01		160	<2	1		12			0.06	<10	<10	36	<10				
216	2243	<0.5	<2	0.02	<0.5	201	0.53	<10	<10	0.02	<10		0.09	185	<0.01		10	<2	<1		2			<0.01	<10	<10	3	<10				
216	2244	<0.5	<2	0.08	<0.5	212	0.93	<10	20	0.05	<10		0.15	50	0.01		120	<2	<1		6			0.03	<10	<10	8	<10				
216	2245	<0.5	<2	8.63	<0.5	133	1.49	<10	460	0.09	<10		0.33	585	<0.01		200	<2	1		944			<0.01	<10	<10	9	<10				
217	1403	<.5	<2	2.31	<.5	47	3.5	<10	170	0.13	<10		1.11	560	<.01		650	<2	3		93			0.16	<10	<10	36	<10				
217	1404	<.5	<2	3.37	<.5	53	4.18	<10	11350	0.29	<10		0.96	650	<.01		690	2	3		330			0.2	<10	<10	27	<10				
217	1454	<.5	<2	1.74	<.5	79	4.77	<10	330	0.32	<10		0.97	900	<.01		700	<2	3		135			0.16	<10	<10	30	<10				
218	1417	<.5	<2	0.28	<.5	304	0.85	<10	<10	0.04	<10		0.15	180	<.01		40	<2	<1		20			0.02	<10	<10	6	<10				
218	1465	<.5	<2	<.01	<.5	312	0.37	<10	<10	0.01	<10		0.01	40	<.01		<10	<2	<1		<1			<.01	<10	<10	1	<10				
218	1466	<.5	<2	0.03	<.5	240	0.36	<10	10	0.01	<10		0.04	45	<.01		<10	<2	<1		1			0.01	<10	<10	3	<10				
219	1418	<.5	<2	0.01	<.5	155	0.25	<10	<10	<.01	<10		0.02	20	<.01		<10	<2	<1		<1			<.01	<10	<10	1	<10				
220	2148	<0.5	<2	0.03	<0.5	185	0.68	<10	2390	0.05	<10		0.13	55	<0.01		80	<2	<1		3			<0.01	<10	<10	5	<10				
220	2164	<0.5	<2	0.01	0.5	156	14.5	<10	48300	0.02	<10		0.05	140	<0.01		560	<2	<1		2			<0.01	<10	<10	14	<10				
220	2221	<0.5	4	0.04	<0.5	214	3.27	<10	>100000	0.04	<10		0.08	45	<0.01		340	2	<1		5			<0.01	<10	<10	11	<10				
220	2222	<0.5	20	0.04	<0.5	105	9.64	<10	>100000	0.03	<10		0.01	35	<0.01		500	42	<1		4			<0.01	<10	<10	5	<10				
220	2092	<0.5	<2	0.01	<0.5	437	0.5	<10	20	0.03	<10		0.02	30	<0.01		<10	<2	<1		2			<0.01	<10	<10	3	<10				
220	2093	<0.5	<2	0.45	<0.5	272	1.03	<10	30	0.1	<10		0.23	135	0.01		140	<2	<1		35			<0.01	<10	<10	10	<10				
220	2094	<0.5	<2	0.09	1	466	0.66	<10	30	0.03	<10		0.02	35	<0.01		40	<2	<1		8			<0.01	<10	<10	3	<10				
220	2095	<0.5	<2	0.42	<0.5	304	0.42	<10	190	0.01	<10		0.04	55	<0.01		420	<2	<1		34			<0.01	<10	<10	2	<10				
220	2096	<0.5	<2	0.01	<0.5	396	0.37	<10	380	<0.01	<10		<0.01	15	<0.01		<10	<2	<1		2			<0.01	<10	<10	1	<10				
220	2097	<0.5	<2	0.32	<0.5	324	0.3	<10	60	<0.01	<10		0.01	40	<0.01		<10	<2	<1		55			<0.01	<10	<10	1	<10				
220	2098	<0.5	<2	0.03	<0.5	432	0.84	<10	30	0.05	<10		0.06	70	0.01		60	<2	<1		6			<0.01	<10	<10	5	<10				
220	2099	<0.5	<2	0.02	<0.5	214	0.86	<10	20	0.08	<10		0.11	65	0.01		60	<2	<1		4			<0.01	<10	<10	7	<10				
220	2100	<0.5	<2	0.16	<0.5	374	0.51	<10	30	0.02	<10		0.02	35	<0.01		<10	<2	<1		13			<0.01	<10	<10	3	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	Au ppm	Ag ppm	Cu ppm	%	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
220	2201	Stewart, Adit #2	C	5	UW	Qz vn w/ minor ribbons, py to 2%	2780		<0.2	2		2	44	<1	4	<1	0.03	566	<10
220	2147	Stewart, Adit #3	C	5	UW	Qz in gw/slate, py <1%	360		0.2	23		12	46	<1	14	5	0.88	706	60
220	2202	Stewart, Adit #3	Rep	3x5	UW	Qz vn on fw of fault, py to 1% in clots	3130		0.2	2		10	16	<1	6	1	0.07	316	10
220	2203	Stewart, Adit #3	C	5	UW	Qz & sheared gw/slate, py <1%	150		<0.2	32		6	82	<1	17	7	1.09	498	80
221	2510	Lower Ledge	C	2	UW	Sheared gw w/ fest	<5		<.2	30		8	96	<1	26	13	2.21	12	100
221	2511	Lower Ledge	C	1	UW	Sheared gw w/ calc stringers	<5		<.2	46		16	112	<1	29	17	2.42	18	70
221	2512	Lower Ledge	C	1.7	UW	Sheared gw	<5		<.2	35		6	98	<1	25	11	2.39	14	120
221	2513	Lower Ledge	C	1.8	UW	Sheared gw w/ qz lens	<5		<.2	39		8	82	<1	16	12	2.09	6	80
221	2514	Lower Ledge	G		FL	Qz w/ aspy, py, chl ribbon texture	<5		<.2	4		6	8	<1	3	1	0.1	306	10
221	2515	Lower Ledge	Rep	2.5x3.7	RC	Qz w/ aspy, py & limonite	<5		<.2	6		2	2	<1	2	2	0.07	452	10
221	2516	Lower Ledge	Rep	15	MD	Qz w/ aspy, py	<5		<.2	2		<2	2	<1	3	<1	0.04	190	<10
221	2517	Lower Ledge	Rep	24	MD	Qz w/ aspy, py	30		<.2	4		2	4	<1	4	1	0.11	692	10
221	2518	Lower Ledge	S		FL	Qz w/ aspy, py & trace gn	2350		0.4	7		74	144	<1	5	2	0.28	1490	30
222	2223	No Name	C	3.5	UW	Qz vn along fault, trace py	60		<0.2	9		6	18	<1	8	2	0.39	632	20
222	2224	No Name	Rep	6	UW	Qz vn, no py	30		<0.2	10		8	34	<1	7	1	0.13	356	10
222	2225	No Name	C	4	UW	Qz & gw, br, w/calc vnlets	40		<0.2	76		8	78	2	65	7	0.26	408	<10
222	2226	No Name	Rep		UW	Sil gs w/ calc ooze, py to 5%	<5		0.2	127		4	54	1	32	8	0.71	222	170
222	2227	No Name	C	2.5	OC	Qz vn w/ gw partings, fest	<5		<0.2	4		2	6	<1	6	1	0.2	184	10
223	2214	Bauer	C	1.5	UW	Qz w/ sheared gw/pl, no sulf	280		<0.2	24		14	62	<1	15	7	1.17	716	100
223	2215	Bauer	Rep	0.5x2	UW	Qz pod along fault, py to 5%	35		<0.2	52		8	28	70	20	6	0.22	344	<10
224	2220	Pinta Lake	Rep	2	OC	Qz vn near trench, no sulf	5		<0.2	3		6	6	<1	4	1	0.15	138	10
225	1405	Wicked Fall	C	1.8	UW	Qz vn in black slate, py + aspy <1%	130		<.2	2		<2	14	1	4	1	0.16	1295	10
225	1406	Wicked Fall	C	1.9	UW	Qz vn + black slate in shear	90		<.2	2		<2	16	1	8	3	0.42	2480	50
225	1407	Wicked Fall	S		UW	Fest qz & black slate	280		<.2	7		2	34	2	11	6	0.57	5390	50
226	2219	Pinta Lake	C	6	OC	Qz vn hosted by gw/pl	45		<0.2	9		24	26	<1	6	1	0.11	300	<10
227	2218	Pinta Lake	Rep	2.5	OC	Qz vn, gs sc, no sulf, near trench	205		0.4	4		68	2	<1	5	1	0.11	2550	10
228	1408	Free Gold	Rep	4.1	OC	Qz vns & stringers in gw, minor py	45		<.2	1		<2	2	<1	10	1	0.09	224	<10
228	1455	Free Gold	G	0.4	MD	Qz vn w/ sparse py	<5		<.2	5		<2	2	<1	6	1	0.08	222	<10
228	2154	Free Gold	C	2	OC	Qz vns w/ limonite, fest	<5		<0.2	1		<2	<2	<1	4	<1	0.02	34	<10
228	2155	Free Gold	S		MD	Qz w/ limonite, sericite, no sulf	<5		<0.2	6		16	4	<1	6	1	0.09	484	<10
228	2156	Free Gold	C	2.8	OC	Qz stringer zone, no visible sulf	<5		0.2	12		12	34	<1	67	11	1.22	256	10
229	2153	Lucky Chance Mtn	S		FL	Fest qz w/ slaty partings, aspy <1%	1180		<0.2	1		<2	2	<1	4	1	0.07	1480	10
230	2151	Lucky Chance Mtn	C	2	UW	Gp fault gouge w/ qz stringers, py <1%	275		<0.2	53		6	94	<1	23	14	2.93	2190	90
230	2152	Lucky Chance Mtn	Rep	0.3	TP	Fest qz lens in fault zone, trace py, aspy	75		<0.2	2		<2	4	<1	4	1	0.17	970	20
231	2210	Lucky Chance	S		MD	Qz vn w/ gw partings, visible gold, aspy	**19.3**	*	3.6	1		78	6	<1	4	1	0.08	1270	<10
231	2211	Lucky Chance	S		MD	Qz w/ gw partings, aspy to 1%	300		<0.2	1		10	16	<1	3	1	0.12	906	10
231	2212	Lucky Chance	S		MD	Qz w/ gw partings, aspy stringers	**16.9**	*	1.8	5		54	32	3	6	2	0.21	2430	20
231	2213	Lucky Chance	S		MT	High-grade from concentrates near mill	**26.5**	*	13	19		1250	61	10	44	38	0.13	>10000	10
232	2159	Lucky Chance Mtn	C	2.4	TP	Fest qz, slaty partings, w/ py, aspy	175		0.4	12		90	6	<1	7	2	0.15	112	<10
232	2160	Lucky Chance Mtn	S		MD	Qz w/ slaty partings, aspy + py <1%	125		0.4	36		128	12	<1	13	4	0.25	550	10
233	2157	Lucky Chance Mtn	C	2.5	TP	Fest qz, sheared gw, py <1%	55		<0.2	22		8	212	<1	13	6	0.82	274	40
233	2158	Lucky Chance Mtn	S		MD	Fest qz & gw w/ gn, py, aspy	2230		5.8	13		924	18	1	5	1	0.25	1248	10
234	2230	Lucky Chance Mtn	C	2	TP	Qz vn w/ trace aspy, fest	<5		<0.2	7		16	12	<1	4	1	0.09	748	10
234	2231	Lucky Chance Mtn	C	2	OC	Qz vn adj to sample 2230, no sulf	<5		<0.2	2		4	12	1	5	1	0.04	270	<10
234	2232	Lucky Chance Mtn	Rep	1.5	UW	Qz vn at face of short adit	<5		<0.2	49		2	12	1	7	2	0.07	312	<10

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
220	2201	<0.5	<2	0.16	<0.5	263	0.37	<10	30	0.01	<10		0.01	25	<0.01		100	<2	<1		25			<0.01	<10	<10	1	<10				
220	2147	<0.5	<2	1.64	<0.5	161	1.89	<10	6210	0.14	<10		0.62	375	0.01		290	<2	<1		161			<0.01	<10	<10	12	<10				
220	2202	<0.5	<2	0.01	<0.5	423	0.51	<10	10	0.02	<10		0.01	35	<0.01		<10	2	<1		2			<0.01	<10	<10	2	<10				
220	2203	<0.5	2	1.34	0.5	159	2.45	<10	20	0.19	<10		0.68	320	0.01		320	<2	1		110			<0.01	<10	<10	16	<10				
221	2510	<.5	<2	0.62	0.5	53	3.9	<10	10	0.19	<10		1.41	555	0.01		720	<2	2		23			0.19	<10	<10	43	<10				
221	2511	<.5	2	1.7	<.5	38	4.27	<10	20	0.15	<10		1.53	645	<.01		820	<2	2		129			0.23	<10	<10	37	<10				
221	2512	<.5	2	1	<.5	30	4.35	<10	2320	0.26	<10		1.26	665	<.01		830	<2	3		40			0.27	<10	<10	33	<10				
221	2513	<.5	2	3.33	0.5	30	3.68	<10	450	0.17	<10		1.16	650	<.01		580	2	2		245			0.23	<10	<10	27	<10				
221	2514	<.5	<2	0.09	<.5	196	0.36	<10	50	0.02	<10		0.04	30	<.01		60	<2	<1		7			<.01	<10	<10	2	<10				
221	2515	<.5	<2	0.03	<.5	174	0.34	<10	10	0.01	<10		0.02	80	<.01		10	<2	<1		4			<.01	<10	<10	2	<10				
221	2516	<.5	<2	0.01	<.5	273	0.31	<10	<10	0.01	<10		0.02	15	<.01		20	<2	<1		1			<.01	<10	<10	2	<10				
221	2517	<.5	<2	0.04	<.5	190	0.59	<10	<10	0.02	<10		0.07	35	<.01		30	2	<1		3			<.01	<10	<10	3	<10				
221	2518	<.5	<2	0.1	1	189	0.79	<10	10	0.06	<10		0.16	40	<.01		320	<2	<1		11			<.01	<10	<10	5	<10				
222	2223	<0.5	<2	0.68	<0.5	303	1.01	<10	1880	0.05	<10		0.22	165	0.01		110	<2	<1		49			<0.01	<10	<10	13	<10				
222	2224	<0.5	<2	1.1	0.5	293	0.56	<10	470	0.02	<10		0.06	190	<0.01		30	<2	<1		94			<0.01	<10	<10	4	<10				
222	2225	<0.5	<2	7.01	<0.5	113	2.22	<10	1600	<0.01	<10		0.24	3850	<0.01		600	<2	<1		92			0.01	<10	<10	49	<10				
222	2226	<0.5	2	4.99	<0.5	98	5.02	<10	410	0.14	<10		0.52	3580	0.01		1500	<2	2		195			0.06	<10	<10	151	<10				
222	2227	<0.5	<2	0.03	<0.5	327	0.68	<10	500	0.04	<10		0.1	70	0.01		30	<2	<1		2			<0.01	<10	<10	9	<10				
223	2214	<0.5	2	9.16	<0.5	101	2.05	<10	1090	0.23	<10		0.6	1115	<0.01		370	<2	1		1100			0.01	<10	<10	18	<10				
223	2215	<0.5	<2	2.85	<0.5	150	1.54	<10	710	<0.01	<10		0.11	755	<0.01		690	<2	<1		180			<0.01	<10	<10	48	<10				
224	2220	<0.5	<2	0.01	<0.5	231	0.53	<10	210	0.02	<10		0.07	45	<0.01		20	<2	<1		1			0.01	<10	<10	5	<10				
225	1405	<.5	<2	0.78	<.5	82	0.77	<10	90	0.02	<10		0.22	230	<.01		100	<2	<1		58			<.01	<10	<10	3	<10				
225	1406	<.5	<2	1.96	<.5	250	1.25	<10	50	0.1	<10		0.27	545	<.01		180	<2	1		130			<.01	<10	<10	8	<10				
225	1407	<.5	<2	2.46	<.5	143	1.73	<10	10	0.1	<10		0.29	675	<.01		400	2	1		189			<.01	<10	<10	8	<10				
226	2219	<0.5	<2	0.03	<0.5	280	0.66	<10	210	0.02	<10		0.06	40	<0.01		20	<2	<1		3			0.01	<10	<10	3	<10				
227	2218	<0.5	<2	<0.01	<0.5	231	0.59	<10	410	0.02	<10		0.06	70	<0.01		<10	<2	<1		1			<0.01	<10	<10	3	<10				
228	1408	<.5	<2	0.43	1	278	0.53	<10	<10	0.01	<10		0.12	110	<.01		30	<2	<1		17			<.01	<10	<10	2	<10				
228	1455	<.5	<2	0.09	1	283	0.47	<10	<10	0.01	<10		0.04	125	<.01		320	<2	<1		6			<.01	<10	<10	2	<10				
228	2154	<0.5	<2	0.03	<0.5	243	0.31	<10	790	<0.01	<10		0.01	90	<0.01		10	<2	<1		3			<0.01	<10	<10	1	<10				
228	2155	<0.5	<2	0.18	<0.5	194	0.68	<10	360	0.01	<10		0.06	185	<0.01		60	<2	<1		6			<0.01	<10	<10	2	<10				
228	2156	<0.5	<2	1.75	<0.5	208	2.02	<10	430	0.05	<10		1.81	375	0.02		150	<2	3		79			<0.01	<10	<10	23	<10				
229	2153	<0.5	<2	<0.01	<0.5	210	0.52	<10	710	0.02	<10		0.01	90	<0.01		<10	<2	<1		2			<0.01	<10	<10	1	<10				
230	2151	<0.5	<2	1.96	<0.5	72	4.75	<10	120	0.23	10		1.36	690	0.02		740	2	3		126			<0.01	<10	<10	44	<10				
230	2152	<0.5	<2	0.18	<0.5	170	0.56	<10	850	0.02	<10		0.11	50	<0.01		50	<2	<1		17			<0.01	<10	<10	3	<10				
231	2210	<0.5	<2	0.06	<0.5	291	0.57	<10	180	0.02	<10		0.03	110	<0.01		60	<2	<1		8			<0.01	<10	<10	2	<10				
231	2211	<0.5	<2	1.49	<0.5	194	1.09	<10	80	0.05	<10		0.31	320	<0.01		150	<2	<1		90			<0.01	<10	<10	2	<10				
231	2212	<0.5	<2	1.04	1.5	247	1.01	<10	40	0.08	<10		0.21	230	<0.01		140	<2	<1		79			<0.01	<10	<10	4	<10				
231	2213	<0.5	14	0.02	5.5	23	>15.00	<10	>100000	0.02	<10		0.04	35	<0.01		250	66	<1		3			<0.01	<10	<10	2	90				
232	2159	<0.5	<2	<0.01	<0.5	184	0.59	<10	120	0.02	<10		0.07	90	<0.01		40	<2	<1		1			<0.01	<10	<10	2	<10				
232	2160	<0.5	<2	0.01	<0.5	210	0.86	<10	690	0.05	<10		0.11	90	<0.01		80	<2	<1		6			<0.01	<10	<10	4	<10				
233	2157	<0.5	<2	0.06	2	189	1.63	<10	200	0.11	<10		0.41	315	0.01		220	<2	1		13			<0.01	<10	<10	20	<10				
233	2158	<0.5	8	0.02	0.5	189	0.82	<10	170	0.05	<10		0.14	140	<0.01		110	<2	<1		4			<0.01	<10	<10	8	<10				
234	2230	<0.5	<2	<0.01	2.5	258	0.52	<10	90	0.03	<10		0.03	30	<0.01		<10	<2	<1		2			<0.01	<10	<10	3	<10				
234	2231	<0.5	<2	<0.01	<0.5	391	0.43	<10	110	0.02	<10		0.01	20	<0.01		<10	<2	<1		<1			<0.01	<10	<10	2	<10				
234	2232	<0.5	<2	0.01	<0.5	464	0.78	<10	50	0.02	<10		0.02	60	<0.01		10	2	<1		1			<0.01	<10	<10	3	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam. no.	Location	Sam. type	Sample size (ft)	Sam. site	Sample description	Au ppb	ppm	Ag ppm	Cu ppm	%	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
234	2233	Lucky Chance Mtn	C	1.5	UW	Qz vn w/ trace py/aspy	<5		<0.2	1		2	6	1	5	1	0.02	450	<10
234	2234	Lucky Chance Mtn	C	3	UW	Qz vn at face of short adit	<5		0.8	3		178	14	1	6	1	0.17	2380	20
235	2228	Lucky Chance Mtn	C	6	TP	Qz vn in black pl, aspy to 2%, py	820		0.2	1		34	4	<1	5	1	0.08	3200	<10
235	2229	Lucky Chance Mtn	S		OC	Sulf-rich qz w/ pl partings	4840		0.2	13		30	34	1	7	3	0.66	3530	20
236	2781	Hill	G		FL	Mag/chromite serpentinite	<5		<0.2	20		<2	52	<1	805	32	0.34	24	<10
237	1410	Hill	S		RC	Pyroxenite w/ po (1-2%) & minor cp (<1%)	<5		<.2	680		<2	32	1	174	86	2.33	<2	<10
237	1411	Hill	S		OC	Pyroxenite w/ dissem cp (~1%)	<5		<.2	680		<2	14	1	370	98	1.57	<2	<10
237	1457	Hill	G		RC	Qz vn w/ ribbons & sulf along ribbons	<5		<.2	12		<1	4	<1	7	1	0.18	<2	40
238	1409	Hill	G		FL	Pyroxenite w/ po & cp ~1%	10		0.8	3050		<2	50	1	1100	196	2.07	18	<10
238	1456	Hill	G		RC	Pyroxenite w/ cp & py	<5		<.2	1150		<1	42	1	265	186	2.62	<2	<10
239	2712	Goddard Hot Springs	C	0.5	OC	Qz vn xcut Sitka Gw, feldspar, micas	<5		<.2	3		16	6	<1	2	<1	0.22	6	<10
239	2713	Goddard Hot Springs	RC	2.5	OC	Monz-peg dike	<5		<.2	6		10	16	<1	4	1	0.35	<2	<10
239	2714	Goddard Hot Springs	G	0.25	OC	Sil zone in hn, 1% po	<5		<.2	60		2	28	<1	24	8	6.33	32	140
240	2519	Goddard Hot Springs	Rep		OC	Fest gd w/ blebs of py	<5		<.2	58		4	44	<1	7	6	0.75	8	270
241	2520	Goddard Hot Springs	C	0.2	OC	Qz vn in gw w/ po to 1%	465		<.2	13		<2	32	4	5	3	0.74	92	160
242	2521	Goddard Hot Springs	C	0.4	OC	Qz lens near gd/gw contact	<5		<.2	4		<2	32	<1	5	2	0.89	6	100
243	2037	Red Bluff Bay	PL	0.1 yd^3		Chromite/mag in concentrate	<5		<.2	47		4	88	<1	309	41	1.68	8	30
244	2539	Red Bluff Bay	Rep	0.8	RC	Pyroxenite	<5		<.2	13		<2	12	<1	356	37	0.22	14	<10
245	2717	Red Bluff Bay	S	10x10	RC	Chromite layers in dunite	<5		<.2	22		<1	7	<1	1140	26	0.29	4	<10
246	2036	Red Bluff Bay	PC	8 pans		Chromite/mag in concentrate	<5		<.2	9		2	122	<1	209	42	0.19	4	<10
247	2537	Red Bluff Bay	Rep	0.5	OC	Dunite	36		<.2	17		<2	4	<1	992	48	0.11	86	<10
248	2538	Red Bluff Bay	Rep	20	RC	Qz vn on beach, po to 1%	160		<.2	46		<1	1	<1	8	3	0.11	54	<10
249	2532	Patterson Bay area	SS				10		<.2	92		5	71	1	45	22	2.8	14	20
250	1419	Patterson Bay area	G		FL	Fest qz w/ limonite in gs	20		0.2	31		<2	16	1	18	9	0.79	12	10
251	2531	Patterson Bay area	SS				<5		0.2	102		10	43	1	20	11	1.71	16	10
252	2035	Patterson Bay area	Rep		FL	Sulf stringers/coatings in amphibolite	<5		<.2	66		<2	86	1	17	13	2.91	<2	170
253	1468	Patterson Bay	Rep	0.4	OC	Sil band in tonalite w/ cp & ml stain	20		0.6	2150		<2	30	10	2	6	5.17	<2	<10
254	1422	Patterson Bay	G		RC	Alt gs inclusion in tonalite, cp <1%	<5		<.2	534		<2	54	2	36	19	2.27	6	120
255	2533	Patterson Bay	G	0.3	RC	Tonalite w/ sil zone, cp & ml	45		<.2	3100		2	43	23	4	11	1.25	32	60
255	2715	Patterson Bay	S		FL	Sil gs, <1% cp, gp	50		<.2	730		2	51	109	3	10	2.53	4	20
256	2534	Patterson Bay	SS				<5		<.2	36		4	94	<1	32	12	2.47	8	220
257	2535	Patterson Bay	SS				90		<.2	28		6	53	1	7	15	2.57	112	80
257	2536	Patterson Bay	G		FL	Sil rock w/ dissem po	970		<.2	50		2	60	<1	4	11	0.6	4820	40
257	2716	Patterson Bay	S		FL	Tonalite, <1% cp, ml, fest	20		<.2	1400		<1	60	2	4	6	3.16	<2	10
258	2034	Patterson Bay area	Rep	3	OC	Qz vns in sil gw, py	<5		<.2	72		<2	96	1	20	26	2.73	2	120
259	2033	Patterson Bay area	S	0.7	FL	Chert, qz br, cp to 1%, py/po	<5		<.2	60		2	58	<1	14	9	0.41	4	70
260	2434	Deep Cove	SS			Gw float in stream	<5		<0.2	25		6	730	2	49	15	3.13	<5	192
261	2435	Deep Cove	SS			Gw & minor gs float in stream	<5		0.4	50		11	135	2	30	24	2.29	25	138
262	2436	Deep Cove	SS			Stream in gw	<5		0.4	42		9	154	2	32	25	3.03	9	249
263	2316	Deep Cove	SS			Stream in gw	<5		<0.2	29		5	117	1	29	15	2.92	<5	256
264	2317	Deep Cove	SS			Stream in gw	<5		<0.2	22		6	85	2	42	11	2.88	6	270
265	2318	Deep Cove	SS			Stream in gw	<5		<0.2	19		5	107	1	18	17	2.46	19	156
266	2437	Deep Cove	SS			Gw float in stream	<5		<0.2	45		8	122	2	32	16	2.78	36	245
267	2319	Deep Cove	SS			Gw float in stream	<5		<0.2	14		8	69	2	16	9	1.92	5	122
268	1531	Mt. Muravief area	SS			River 20' wide where sampled	<5		<.2	47		2	114	<1	23	13	2.79	22	250

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
234	2233	<0.5	<2	<0.01	<0.5	423	0.46	<10	100	<0.01	<10		<0.01	100	<0.01		<10	<2	<1		2			<0.01	<10	<10	2	<10				
234	2234	<0.5	<2	0.02	1.5	339	0.78	<10	80	0.05	<10		0.07	70	<0.01		80	<2	<1		7			<0.01	<10	<10	6	<10				
235	2228	<0.5	<2	0.01	0.5	256	0.74	<10	220	0.03	<10		0.02	40	<0.01		30	<2	<1		8			<0.01	<10	<10	2	<10				
235	2229	<0.5	<2	0.1	2	245	2.06	<10	130	0.06	<10		0.42	140	<0.01		440	2	<1		14			<0.01	<10	<10	9	<10				
236	2781	<0.5	<2	0.21	<0.5	6080	3.35	<10	10	<0.01	<10		7.22	570	<0.01		<10	<2	2		<1			0.01	<10	<10	28	<10				
237	1410	<.5	<2	1.12	<.5	128	5.46	<10	<10	0.01	<10		2.01	470	0.07		<10	<2	9		46			0.21	<10	<10	109	<10			5	4
237	1411	<.5	<2	0.49	<.5	488	4.05	<10	<10	<.01	<10		2.95	165	<.01		<10	<2	3		1			0.01	<10	<10	50	<10			5	10
237	1457	<.5	<2	0.06	<.5	381	0.63	<10	<10	0.05	<10		0.09	75	0.01		70	<2	<1		3			0.01	<10	<10	8	<10			<5	<2
238	1409	<.5	6	0.05	0.5	325	8.47	<10	<10	<.01	<10		12.3	580	<.01		<10	<2	16		1			<.01	<10	<10	134	<10			55	68
238	1456	<.5	<2	1.45	<.5	72	7.24	<10	10	<.01	<10		2.1	465	0.12		<10	<2	11		59			0.25	<10	<10	106	<10			<30	<12
239	2712	0.5	<2	0.52	<.5	58	0.19	<10	<10	0.11	<10		0.06	150	0.09		90	<2	<1		47			<.01	<10	<10	2	<10				
239	2713	0.5	2	0.1	<.5	117	0.56	<10	<10	0.16	<10		0.12	120	0.06		40	<2	1		6			0.01	<10	<10	4	<10				
239	2714	0.5	2	4.27	<.5	110	1.14	10	<10	0.2	<10		0.26	65	0.42		790	4	1		323			0.1	<10	<10	32	<10				
240	2519	<.5	<2	0.07	<.5	56	1.87	<10	<10	0.54	<10		0.48	230	0.02		220	2	5		2			0.14	<10	<10	32	<10				
241	2520	<.5	32	0.15	<.5	165	1.44	<10	<10	0.56	<10		0.47	215	0.02		230	<2	5		12			0.13	<10	<10	43	<10				
242	2521	<.5	<2	0.06	<.5	121	1.31	<10	<10	0.56	10		0.34	230	0.03		190	<2	4		4			0.1	<10	<10	30	<10				
243	2037	<.5	8	1.24	<.5	**4.8** *	9.19	<10	10	0.04	<10		3.4	880	0.11		160	<2	11		26			0.13	<10	<10	115	<10				
244	2539	<.5	4	0.26	<.5	717	2.77	<10	<10	<.01	<10		6.34	325	<.01		<10	<2	6		3			<.01	<10	<10	43	<10			90	84
245	2717	<.5	8	0.07	<.5	1720	1.87	<10	<10	<.01	<10		12.5	325	<.01		<10	<2	3		<1			<.01	<10	<10	8	<10			20	28
246	2036	<.5	2	0.07	<.5	**34.4** *	2.84	<10	10	<.01	<10		2.21	460	<.01		20	<2	1		1			0.02	<10	<10	30	<10			60	24
247	2537	<.5	6	0.04	<.5	465	2.57	<10	<10	<.01	<10		10.95	495	<.01		20	<2	2		2			<.01	<10	<10	6	<10			10	4
248	2538	<.5	2	0.06	<.5	216	0.77	<10	<10	0.02	<10		0.11	40	<.01		40	<2	<1		4			<.01	<10	<10	7	<10			<5	<2
249	2532	<.5	2	0.71	<.5	115	4.46	<10	20	0.12	<10		2.15	725	0.11		1050	<2	8		37			0.25	<10	10	116	<10				
250	1419	<.5	<2	2.4	<.5	208	2.53	<10	<10	0.14	<10		0.52	435	<.01		80	<2	3		27			0.03	<10	<10	40	<10				
251	2531	<.5	4	0.8	<.5	31	2.81	<10	60	0.17	<10		1.28	440	0.33		1260	2	5		96			0.19	<10	10	76	<10				
252	2035	<.5	<2	0.49	<.5	87	4.23	<10	10	1.4	<10		1.44	365	0.09		740	<2	14		18			0.25	<10	<10	146	<10				
253	1468	0.5	<2	5.91	<.5	118	2.44	10	40	0.01	<10		0.71	440	<.01		240	2	6		14			0.09	<10	<10	71	<10				
254	1422	<.5	<2	1.63	<.5	165	3.08	<10	<10	0.24	<10		0.77	280	0.08		500	<2	9		50			0.33	<10	<10	96	<10				
255	2533	<.5	<2	1.89	<.5	78	2.78	<10	30	0.26	10		0.34	345	<.01		520	<2	2		20			<.01	<10	<10	18	<10				
255	2715	<.5	4	2.86	<.5	44	3.46	<10	320	0.16	<10		1.23	620	0.02		530	4	7		39			0.14	<10	<10	75	<10				
256	2534	<.5	2	0.87	<.5	69	3.95	<10	20	0.07	10		1.89	1210	<.01		780	<2	8		27			0.27	<10	<10	90	<10				
257	2535	<.5	<2	0.65	<.5	9	3.12	<10	90	0.08	<10		0.78	1185	0.11		1110	<2	3		49			0.05	<10	<10	45	10				
257	2536	<.5	2	3.76	<.5	39	3.26	<10	70	0.19	<10		1.19	795	0.02		600	<2	3		188			<.01	<10	<10	11	<10				
257	2716	<.5	<2	2.74	<.5	73	2.71	<10	50	0.05	<10		1.13	650	0.03		420	<2	3		34			0.12	<10	<10	60	<10				
258	2034	<.5	4	4.04	0.5	20	5.33	<10	<10	0.24	<10		2.87	425	0.03		1840	<2	14		110			0.05	<10	<10	142	<10				
259	2033	<.5	4	6.41	<.5	67	4.05	<10	<10	0.17	<10		1.93	1140	0.03		470	<2	6		279			<.01	<10	<10	28	<10				
260	2434		<5	0.38	0.4	54	4.08	8	29	0.42	11	60	1.45	622	0.04	2		<5	6	<20	23	<10	<10	0.17			112	<20	5	<1		
261	2435		<5	0.31	0.4	36	4.77	4	73	0.25	11	25	1.04	1458	0.03	2		<5	<5	<20	25	<10	<10	0.07			73	<20	5	<1		
262	2436		<5	0.35	0.3	47	5.04	6	44	0.48	11	30	1.54	1165	0.04	3		<5	7	<20	25	<10	<10	0.15			116	<20	6	<1		
263	2316		<5	0.33	<0.2	61	3.93	8	44	0.5	9	33	1.52	717	0.04	3		<5	7	<20	27	<10	<10	0.17			108	<20	4	<1		
264	2317		<5	0.12	<0.2	105	3.81	9	15	0.53	9	25	1.72	481	0.03	3		<5	6	<20	14	<10	<10	0.21			96	<20	4	<1		
265	2318		<5	0.48	0.3	29	3.13	6	63	0.33	5	25	1.04	848	0.02	3		<5	<5	<20	31	<10	<10	0.17			67	<20	4	<1		
266	2437		<5	0.31	<0.2	63	4.02	8	14	0.93	10	46	1.6	755	0.1	2		<5	6	<20	29	<10	<10	0.22			87	<20	4	<1		
267	2319		<5	0.16	<0.2	40	2.9	7	36	0.33	5	19	1.11	497	0.02	3		<5	<5	<20	18	<10	<10	0.17			66	<20	3	<1		
268	1531	<.5	<2	0.17	<.5	54	4.94	10	29	0.77	<10		1.46	485	<.01		730	<2	7		8			0.15	<10	<10	109	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sample no.	Location	Sample type	Sample size (ft)	Sample site	Sample description	Au ppb	ppm	Ag ppm	Cu ppm	%	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
269	9511	Deep Cove, W of	SS			Stream in gw & slate	<5		0.2	81		9	143	1	30	24	2.86	44	198
270	9512	Deep Cove, N of	SS			In muskeg	<5		<0.1	27		5	105	<1	32	15	2.47	18	383
271	2357	Deep Cove, NW of	C	0.8	FL	Qz vn	<5		<0.1	3		<2	2	2	14	1	0.05	8	7
272	9564	Cliff Lake, N of	RC	0.3	FL	Qz vn	<5		<0.1	11		3	15	<1	12	4	0.6	<5	77
273	9563	Cliff Lake, N of	RC	0.5	FL	Qz vn	<5		<0.1	8		<2	5	<1	8	1	0.65	<5	5
274	2355	Deep Cove, NW of	C	0.6	RC	Msv qz vn	<5		<0.1	6		<2	2	2	8	<1	0.02	<5	2
274	2356	Deep Cove, NW of	C	0.2	OC	Qz vn	<5		<0.1	5		<2	4	<1	9	<1	0.09	<5	10
275	2477	Deep Cove, N of	SS			Gw float in stream	20		<0.1	26		7	86	<1	39	14	2.35	21	434
276	2465	Deep Cove, W of	SS			Stream in meta gw	<5		<0.1	70		12	141	1	23	16	2.96	42	145
277	1420	Mt. Muravief area	G		FL	Sc & gw w/ minor sulf	<5		<.2	106		<1	124	1	65	31	2.96	<2	160
278	1421	Mt. Muravief area	S		FL	Metased w/ minor sulf, cp <1%	<5		<.2	630		<1	46	<1	33	17	2.09	<2	100
278	1467	Mt. Muravief area	G	0.3	FL	Fest qz vn w/ gw wallrock, sparse po	<5		<.2	45		<2	72	3	22	11	1.71	<2	90
279	1482	Mt. Muravief area	SS			Gs sc, pl & gs	<5		<.2	72		4	124	1	38	23	2.83	34	160
280	1492	Mt. Muravief area	SS			Pl, gw, minor qz	<5		<.2	84		8	126	1	29	21	2.81	26	150
281	1483	Mt. Muravief area	SS			Pl & gs float	<5		<.2	67		4	126	1	34	18	2.93	28	150
282	1493	Mt. Muravief area	SS			Mainly pl or slate	<5		<.2	92		8	146	1	42	28	2.68	28	120
282	1494	Mt. Muravief area	SS			Mainly pl-slate, some gw	<5		<.2	86		6	130	1	29	22	2.76	20	160
283	1495	Mt. Muravief area	SS			Interlayered pl & gw	<5		0.2	102		10	146	1	38	27	2.76	50	110
284	1485	Mt. Muravief area	SS			Gw & pl	<5		<.2	47		2	108	<1	21	17	2.4	12	160
285	1484	Mt. Muravief area	SS			Pl & gw outcrops	<5		<.2	55		4	110	1	23	17	2.72	14	140
286	1486	Mt. Muravief area	SS			Pl & gw outcrops	<5		<.2	76		8	110	2	29	20	2.58	22	180
286	1487	Mt. Muravief area	SS			Gw & pl	<5		0.2	80		14	130	1	31	25	2.46	28	140
286	1496	Mt. Muravief area	G		RC	Pl w/ dissem & seams of po & py, 1-2%	<5		<.2	55		<1	100	<1	27	14	2.68	<2	310
287	1488	Mt. Muravief area	SS			Fest pl & gw outcrops	<5		0.2	97		12	156	2	44	29	3.01	30	110
288	1489	Mt. Muravief area	SS			Pl & gw outcrops	<5		<.2	95		14	170	1	55	45	2.63	42	70
288	9560	Mt. Muravief area	Rep	3.2	OC	Gp sc w/ dissem sulf	<5		<0.1	39		5	88	2	16	13	2.1	<5	181
289	1498	Mt. Muravief area	SS			Interbedded pl & gw	<5		<.2	83		12	146	1	46	32	2.3	42	30
289	1499	Mt. Muravief area	SS			Pl w/ interbedded gw	<5		<.2	78		10	154	1	45	32	2.48	44	50
289	2348	Mt. Muravief area	Rep	0.4	OC	Fest sil gw w/ py	<5		<0.1	35		6	118	3	24	15	2.3	7	207
289	2349	Mt. Muravief area	Rep	1.2	OC	Fest zone in gw w/ clay & sulf	<5		0.2	35		9	62	2	12	8	1.98	7	128
289	2350	Mt. Muravief area	SS			Stream in fest gw	6		0.3	92		18	145	2	38	29	2.63	39	53
290	2351	Mt. Muravief area	Rep	0.05	RC	Fest qz vn w/ qz crystals & trace ml	<5		0.3	25		23	14	2	16	4	0.32	<5	121
291	9561	Mt. Muravief area	RC		RC	Heavily fest gp sc	<5		0.2	49		8	97	3	20	12	2.21	<5	92
292	2352	Mt. Muravief area	Rep	0.4	RC	Fest gw w/ sulf	<5		<0.1	49		10	99	2	25	16	2.04	6	199
293	1497	Mt. Muravief area	SS			Mainly pl w/ interbedded gw	<5		<.2	60		14	106	1	25	17	3.03	32	90
294	1510	Mt. Muravief area	SS			Pl w/ interbedded gw	<5		<.2	83		10	134	1	40	29	2.89	30	150
295	1490	Mt. Muravief area	SS			Gw & pl outcrops	<5		<.2	47		6	106	1	26	17	2.52	14	160
296	1511	Mt. Muravief area	G		OC	Fest gs	<5		<.2	145		<1	132	<1	33	24	3.28	26	140
296	1512	Mt. Muravief area	G		OC	Fest, alt, sil gs w/ minor cp (<1%)	<5		1	1300		<1	144	<1	109	28	2.49	72	120
297	1491	Mt. Muravief area	SS			Pl, gs, & gw in float	<5		<.2	68		6	140	1	38	22	3.06	22	180
297	1530	Mt. Muravief area	G		FL	Sil fest gs w/ sparse po & trace cp	<5		<.2	18		<1	56	1	5	4	1.53	2	200
298	2353	Mt. Muravief area	C	0.4	OC	Fest qz vn w/ py	<5		<0.1	37		11	72	2	14	7	2.48	118	144
298	2354	Mt. Muravief area	C	0.2	OC	Fest qz vn w/ sulf	<5		<0.1	16		4	34	2	19	6	1.26	<5	128
299	9562	Mt. Muravief area	RC		RC	Fest alt volc	<5		<0.1	44		6	96	3	20	13	2.49	6	216
300	1429	Mt. Muravief area	G		OC	Iron seep clay	<5		<.2	66		<1	86	2	11	6	1.81	26	70

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
269	9511		<5	0.19	<0.2	47	5.87	<2	36	0.69	10	50	1.45	766	0.02	4		<5	7	<20	15	<10	<10	0.14			92	<20	9	<1		
270	9512		<5	0.34	<0.2	62	3.59	<2	14	0.6	6	34	1.41	463	0.04	4		<5	10	<20	21	<10	<10	0.18			102	<20	6	<1		
271	2357		<5	0.02	<0.2	243	0.27	<2	<10	0.01	<1	<1	0.02	31	<0.01	<1		<5	<5	<20	1	<10	<10	<0.01			1	<20	<1	<1		
272	9564		<5	0.08	<0.2	258	1.09	<2	38	0.25	3	13	0.28	171	0.04	1		<5	<5	<20	6	<10	<10	0.06			23	<20	1	<1		
273	9563		<5	0.98	<0.2	287	0.4	<2	30	0.02	<1	<1	0.03	68	<0.01	1		<5	<5	<20	2	<10	<10	<0.01			5	<20	1	<1		
274	2355		<5	0.01	<0.2	290	0.29	<2	<10	<0.01	<1	<1	<0.01	27	<0.01	<1		<5	<5	<20	<1	<10	<10	<0.01			<1	<20	<1	<1		
274	2356		<5	0.04	<0.2	270	0.36	<2	<10	0.03	<1	<1	0.02	54	0.01	<1		<5	<5	<20	2	<10	<10	<0.01			1	<20	<1	<1		
275	2477		<5	0.36	<0.2	73	3.29	<2	<10	0.77	8	32	1.43	509	0.04	3		<5	9	<20	18	<10	<10	0.21			82	<20	7	<1		
276	2465		<5	0.16	<0.2	49	5.86	<2	25	0.54	8	47	1.51	624	0.02	3		<5	7	<20	12	<10	<10	0.14			89	<20	9	<1		
277	1420	<.5	<2	0.23	<.5	211	5.76	10	<10	1.18	<10		1.88	675	<.01		970	<2	21		5			0.13	<10	<10	160	<10				
278	1421	<.5	<2	1.56	<.5	165	2.92	<10	<10	0.2	<10		0.77	265	0.07		480	<2	8		44			0.32	<10	<10	92	<10				
278	1467	<.5	<2	3.18	<.5	78	2.85	<10	<10	0.33	<10		1.08	825	<.01		840	<2	6		135			0.06	<10	<10	80	<10				
279	1482	<.5	<2	0.24	<.5	55	5.45	10	10	0.57	<10		1.4	650	0.01		960	<2	5		20			0.1	<10	<10	89	<10				
280	1492	<.5	<2	0.17	<.5	49	5.91	<10	25	0.52	<10		1.43	590	<.01		960	4	5		13			0.12	<10	<10	92	<10				
281	1483	<.5	<2	0.19	<.5	53	5.87	10	<10	0.63	<10		1.53	615	<.01		1050	<2	5		13			0.1	<10	<10	88	<10				
282	1493	<.5	<2	0.22	<.5	46	5.99	<10	10	0.42	<10		1.39	650	<.01		1100	<2	5		16			0.1	<10	<10	84	<10				
282	1494	<.5	<2	0.18	<.5	48	6.02	<10	32	0.57	<10		1.46	605	<.01		960	<2	5		11			0.13	<10	<10	94	<10				
283	1495	<.5	<2	0.2	<.5	46	6.96	<10	14	0.41	<10		1.36	650	<.01		1170	2	4		20			0.1	<10	<10	83	<10				
284	1485	<.5	<2	0.17	<.5	45	5.2	<10	10	0.57	<10		1.39	525	<.01		870	<2	4		9			0.1	<10	<10	78	<10				
285	1484	<.5	<2	0.18	<.5	50	5.91	<10	11	0.55	<10		1.49	605	<.01		990	2	4		11			0.1	<10	<10	84	<10				
286	1486	<.5	<2	0.24	<.5	48	5.8	<10	35	0.64	<10		1.34	565	<.01		1050	<2	4		19			0.11	<10	<10	83	<10				
286	1487	<.5	<2	0.22	<.5	45	6.01	<10	10	0.47	<10		1.34	645	<.01		980	4	4		10			0.1	<10	<10	82	<10				
286	1496	<.5	<2	0.28	<.5	120	4.25	<10	10	1.16	<10		1.52	470	0.02		1230	<2	6		15			0.15	<10	<10	92	<10				
287	1488	<.5	<2	0.11	0.5	44	7.85	<10	41	0.34	<10		1.18	895	<.01		1420	<2	3		7			0.1	<10	<10	79	<10				
288	1489	<.5	<2	0.3	0.5	38	5.83	<10	23	0.17	<10		1.18	1145	<.01		1100	4	4		14			0.07	<10	<10	71	<10				
288	9560		<5	0.21	<0.2	94	3.62	<2	111	0.73	8	37	1.27	388	0.06	4		<5	6	<20	18	<10	<10	0.14			70	<20	9	<1		
289	1498	<.5	<2	0.17	<.5	31	5.71	<10	36	0.07	<10		1.21	940	<.01		1090	<2	2		7			0.05	<10	<10	47	<10				
289	1499	<.5	<2	0.18	<.5	36	5.51	<10	32	0.14	<10		1.27	870	<.01		1050	4	3		8			0.07	<10	<10	57	<10				
289	2348		<5	0.22	<0.2	100	3.82	<2	<10	0.77	7	43	1.34	496	0.06	4		<5	6	<20	15	<10	<10	0.15			73	<20	7	<1		
289	2349		<5	0.12	<0.2	91	5.36	<2	<10	0.33	13	42	0.99	378	0.03	3		<5	<5	<20	8	<10	<10	0.03			44	<20	7	<1		
289	2350		<5	0.12	<0.2	28	5.47	<2	52	0.11	10	37	1.14	979	<0.01	3		<5	<5	<20	10	<10	<10	0.07			40	<20	11	<1		
290	2351		<5	0.05	<0.2	232	1.84	<2	<10	0.05	1	5	0.16	318	0.02	<1		<5	<5	<20	4	<10	<10	0.03			6	<20	2	<1		
291	9561		<5	0.26	<0.2	81	3.89	<2	102	0.33	9	36	1.32	374	0.03	3		<5	<5	<20	24	<10	<10	0.11			46	<20	10	<1		
292	2352		<5	0.24	<0.2	63	3.7	<2	<10	0.32	7	32	1.22	367	0.03	2		<5	<5	<20	17	<10	<10	0.09			42	<20	9	<1		
293	1497	<.5	<2	0.1	<.5	44	5.92	<10	32	0.31	<10		1.25	600	<.01		1090	<2	4		7			0.11	<10	<10	83	<10				
294	1510	<.5	<2	0.2	<.5	47	5.27	<10	14	0.44	<10		1.41	705	<.01		1020	<2	5		15			0.12	<10	<10	95	<10				
295	1490	<.5	<2	0.16	<.5	47	4.95	<10	11	0.53	<10		1.35	590	<.01		950	<2	5		9			0.1	<10	<10	86	<10				
296	1511	<.5	<2	0.56	<.5	187	8.38	<10	<10	0.24	<10		1.66	635	0.01		1480	2	12		21			0.14	<10	<10	150	<10				
296	1512	<.5	<2	0.58	<.5	143	10.55	<10	<10	0.22	<10		1.18	2270	<.01		2320	2	10		20			0.06	<10	<10	323	<10				
297	1491	<.5	<2	0.15	<.5	50	5.48	10	49	0.62	<10		1.41	520	<.01		1100	<2	5		20			0.12	<10	<10	92	<10				
297	1530	<.5	<2	0.13	<.5	141	2.11	<10	20	0.61	<10		0.91	260	0.04		480	<2	7		16			0.1	<10	<10	71	<10				
298	2353		<5	0.57	0.3	138	3.27	3	<10	0.45	5	40	1.14	455	0.15	5		<5	7	<20	41	<10	<10	0.12			82	<20	6	<1		
298	2354		<5	0.21	<0.2	218	2.08	<2	<10	0.39	4	20	0.53	349	0.09	2		<5	<5	<20	20	<10	<10	0.09			40	<20	4	<1		
299	9562		<5	0.2	<0.2	97	4.12	<2	153	0.8	11	39	1.47	521	0.03	4		<5	<5	<20	17	<10	<10	0.13			64	<20	10	<1		
300	1429	0.5	<2	0.18	<.5	57	14.95	<10	10	0.25	<10		0.82	450	<.01		1000	<2	3		13			0.07	<10	<10	55	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	Au ppm	Ag ppm	Cu ppm	Cu %	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
301	1427	Mt. Muravief, W Ridge	SC	18 @ .5	OC	Fel sc w/ bornite, cp	<5		3.6	**1.63**	*	14	560	9	32	106	3.06	<2	50
301	1428	Mt. Muravief, W Ridge	S		OC	Leached mineralized fel sc	80		4.1	5100		72	40	272	9	38	0.59	6	10
301	1470	Mt. Muravief, W Ridge	C	0.3	OC	Msv sulf, 50% gossan, w/ po, cp	65		12	**2.79**	*	24	700	35	12	27	2.38	<2	40
301	1471	Mt. Muravief, W Ridge	C	2.7	OC	Msv po, & cp	50		9.5	**2.88**	*	90	1300	22	105	505	0.08	<2	<10
301	1472	Mt. Muravief, W Ridge	Rep	2.5	OC	Msv po & cp	80		11.5	**3.19**	*	170	1400	26	90	467	0.09	<2	<10
301	1473	Mt. Muravief, W Ridge	S	0.4	OC	Msv cp, po	100		20	**6.33**	*	56	1900	30	79	420	0.3	<2	<10
301	1474	Mt. Muravief, W Ridge	Rep	0.2	OC	Msv sulf, po, py, cp, & sl	10		14.5	**4.79**	*	12	2200	18	80	328	1.31	24	10
301	1475	Mt. Muravief, W Ridge	C	0.4	OC	Qz ser sc w/ 20% sulf, po, py, cp	<5		1.2	3450		9	115	2	13	30	3.23	<2	70
301	2377	Mt. Muravief, W Ridge	G		OC	Gw; for whole rock: see Table B-3	10		<0.2	21		<2	81	2	9	6	2.12	<5	169
301	2378	Mt. Muravief, W Ridge	G		OC	Gs; for whole rock: see Table B-3	8		<0.2	90		<2	73	<1	56	31	6.2	26	9
301	2379	Mt. Muravief, W Ridge	G		OC	Alt sc; for whole rock: see Table B-3	<5		0.3	1687		6	164	8	59	38	1.43	<5	18
301	2380	Mt. Muravief, W Ridge	G		OC	Alt gw w/ dissem & patchy cp & po	<5		0.8	3119		35	1381	1	33	34	5.59	<5	15
301	9574	Mt. Muravief, W Ridge	G	1.3	OC	Hn gw @ alt contact zone w/ gs	<5		0.3	1145		15	346	4	44	68	4.99	<5	31
301	9706	Mt. Muravief, W Ridge	Rep	3	OC	Sil gw w/ py & cp	7		0.7	2139		37	271	11	17	52	3.81	<5	32
301	9707	Mt. Muravief, W Ridge	G	0.3	OC	Sil gw w/ cp	147		4.6	10535		21	351	5	30	51	2.37	<5	13
301	9708	Mt. Muravief, W Ridge	Rep	12	OC	Sil gw w/ py & cp	<5		0.5	893		23	574	10	19	30	5.39	10	220
302	1433	Mt. Muravief, N Face	G		OC	Gp pl w/ gw clasts, minor py + po	600		<.2	73		<1	107	1	29	15	2.72	<2	290
302	1435	Mt. Muravief, N Face	S		OC	Gs w/ minor sulf, po 3%	<5		0.5	1070		4	171	22	328	71	2.73	1125	40
302	1436	Mt. Muravief, N Face	G		OC	Sil gs w/ 10-15% sulf, mainly po	320		0.3	1000		1	123	31	238	49	1.98	1685	40
302	2392	Mt. Muravief, N Face	Rep	5	OC	Fest gs	<5		<0.1	43		4	40	<1	33	26	1.99	12	61
302	9576	Mt. Muravief, N Face	Rep	4.4	OC	Fest gw at contact w/ gs	<5		<0.1	88		7	127	3	42	25	2.82	49	287
303	1434	Mt. Muravief, N Face	Rep		OC	Qz vns in gw, <1% sulf	<5		<.2	4		<1	2	<1	3	<1	0.07	2	<10
303	1444	Mt. Muravief, N Face	G		OC	Gs w/ dissem cp (1-2%)	110		1.8	3900		<1	370	1	59	50	5.31	12	170
303	1445	Mt. Muravief, N Face	S		OC	Fest gs w/ 1-2% cp	<5		<.2	1700		<1	73	<1	45	32	2.55	60	120
303	1446	Mt. Muravief, N Face	S		OC	Gs w/ seams of cp (2%), copper staining	90		<.2	3000		<1	160	<1	28	28	2.96	8	70
303	1447	Mt. Muravief, N Face	S		OC	Alt gs w/ cp to 3%	<5		0.5	4000		<1	890	17	22	44	3.71	18	40
303	2393	Mt. Muravief, N Face	S		OC	Min zone at gs-gw contact	16		1	6917		15	2125	29	60	122	6.31	<5	8
304	1423	Mt. Muravief, SW Cirque	C	3.5	OC	Fel sc w/ dissem py & cp (1-2%)	<5		1.3	1600		<1	400	7	7	7	3.23	<2	70
304	1424	Mt. Muravief, SW Cirque	S		OC	Sericite sc w/ cp (<1%)	<5		0.7	2500		<1	1380	4	24	29	3.48	<2	110
304	1425	Mt. Muravief, SW Cirque	Rep		OC	Qz stringers in gs	130		<.2	18		48	10	<1	7	3	0.22	<2	<10
304	1426	Mt. Muravief, SW Cirque	G		RC	Metavolc br w/ cp (to 5%)	20		4.8	8800		<1	380	18	36	71	2.47	<2	70
305	2366	Mt. Muravief, SW Cirque	S		OC	Qz vn in gs w/ cp & py	<5		0.2	131		3	12	4	29	4	0.21	11	4
306	9536	Mt. Muravief, area	SS				<5		<0.1	121		6	157	<1	30	22	2.64	46	193
307	1441	Mt. Muravief area	SS			Pl w/ interbedded gw & gs in area	<5		<.2	106		6	106	<1	63	32	3.07	22	80
307	1479	Mt. Muravief area	SS			Fest pl outcrops in area	<5		<.2	234		12	104	2	25	18	2.72	38	170
308	1430	Mt. Muravief area	S		FL	Qz-mica sc to semi-sc w/ minor sulf	<5		<.2	145		<1	175	<1	87	37	3.67	58	320
308	1431	Mt. Muravief area	G		FL	Gs & gs-sc w/ minor sulf (po ~1%)	<5		<.2	150		<1	175	<1	117	56	3.68	254	260
308	1432	Mt. Muravief area	G		FL	Sil sc w/ minor sulf, po <1%	<5		0.3	95		2	140	<1	14	8	3	<2	70
309	1476	Mt. Muravief area	Rep	2.5	OC	Qz vn	<5		<.2	190		3	14	<1	5	3	0.29	<2	<10
310	1480	Mt. Muravief area	SS			Pl & gs in float	<5		<.2	105		2	94	1	85	35	2.61	36	100
310	1481	Mt. Muravief area	SS			Pl, gs, & gw in float	<5		<.2	64		4	152	<1	34	28	3.25	38	200
311	1442	Mt. Muravief area	SS			Mostly pl w/ gw, minor gs	<5		<.2	95		6	134	<1	29	22	2.97	40	230
311	1443	Mt. Muravief area	SS			Pl, gw & gs	<5		<.2	96		6	116	<1	44	29	2.91	22	130
312	2490	Mt. Muravief area	SS			Gw float in stream	<5		<0.1	26		16	120	<1	24	21	2.49	15	174
312	9537	Mt. Muravief area	SS				<5		<0.1	37		10	117	<1	19	17	2.85	20	244

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
301	1427	<.5	<2	0.29	3	274	8.09	10	10	0.88	<10		2.48	735	0.05		500	<2	26		19			0.18	<10	<10	201	<10				
301	1428	<.5	12	0.01	<.5	178	8.94	<10	<10	0.15	<10		0.52	205	<.01		420	<2	3		3			0.01	<10	<10	104	<10				
301	1470	<.5	<2	0.28	3	132	14	<10	<10	1.05	<10		1.37	470	0.04		510	<2	11		17			0.13	<10	<10	128	<10				
301	1471	<.5	<2	<.01	5	7	>15.00	<10	<10	0.01	<10		0.01	45	<.01		<10	<2	<1		<1			<.01	<10	10	8	<10				
301	1472	<.5	<2	0.01	3.5	9	>15.00	<10	10	0.01	<10		0.03	150	<.01		<10	<2	<1		<1			<.01	<10	10	12	<10				
301	1473	<.5	<2	0.05	7.5	24	>15.00	<10	10	0.04	<10		0.05	110	<.01		<10	<2	2		1			<.01	<10	10	35	<10				
301	1474	<.5	Intf*	0.44	11	69	>15.00	<10	10	0.56	<10		0.57	380	0.1		Intf*	<2	7		23			0.06	<10	<10	68	<10				
301	1475	<.5	<2	0.5	<.5	269	10.4	10	<10	1.1	<10		2.2	635	0.18		330	<2	29		34			0.14	<10	<10	172	<10				
301	2377		<5	0.13	<0.2	104	3.46	<2	13	0.62	12	33	1.22	641	0.06	2		<5	6	<20	24	<10	<10	0.12			57	<20	7	<1		
301	2378		<5	3.85	<0.2	236	6.76	6	25	0.05	<1	58	3.32	812	0.27	4		<5	13	<20	166	<10	<10	0.11			140	<20	10	<1		
301	2379		<5	0.31	0.6	101	4.25	<2	<10	0.55	11	28	1.29	572	0.09	5		<5	13	<20	30	<10	<10	0.11			98	<20	18	<1		
301	2380		<5	1.75	1.2	281	7.5	4	<10	1.31	<1	43	2.02	587	0.54	12		<5	20	<20	90	<10	<10	0.16			191	<20	5	<1		
301	9574		<5	0.86	<0.2	247	8.6	<2	178	0.76	1	57	3.94	1231	0.25	10		<5	31	<20	61	<10	<10	0.32			193	<20	17	<1		
301	9706		<5	0.86	<0.2	246	12.6	<2	30	1.33	2	48	1.95	1058	0.38	10		<5	26	<20	67	<10	<10	0.17			210	<20	10	<1		
301	9707		<5	0.37	1.2	163	7.25	<2	27	1.13	4	65	1.93	1134	0.08	8		<5	21	<20	10	<10	<10	0.12			116	<20	10	<1		
301	9708		<5	0.36	<0.2	288	16.24	<2	19	0.66	<1	64	4.09	1174	0.13	10		<5	27	<20	32	<10	<10	0.16			212	<20	5	<1		
302	1433	<.5	<2	0.21	<.5	114	4.3	<10	<10	1.02	<10		1.48	725	0.02		840	2	8		11			0.13	<10	<10	110	<10				
302	1435	<.5	<2	1.69	<.5	98	14.1	<10	10	0.34	10		1.22	1425	0.02		5530	2	5		36			0.06	<10	<10	272	<10				
302	1436	<.5	<2	1.43	<.5	59	10.4	<10	<10	0.39	10		0.92	3910	0.01		5390	<2	3		48			0.06	<10	<10	188	<10				
302	2392		<5	2.09	<0.2	176	3.33	<2	696	0.44	<1	37	1.66	569	0.15	5		<5	10	<20	16	<10	<10	0.28			85	<20	11	<1		
302	9576		<5	0.27	<0.2	86	4.59	<2	16	1.78	12	52	1.47	687	0.08	4		<5	7	<20	14	<10	<10	0.2			91	<20	9	<1		
303	1434	<.5	<2	0.01	<.5	145	0.27	<10	<10	0.02	<10		0.02	45	<.01		<10	<2	<1		<1			<.01	<10	<10	1	<10				
303	1444	<.5	<2	0.28	0.5	262	9.84	10	<10	1.3	<10		3.47	420	0.01		480	<2	10		5			0.18	<10	<10	216	<10				
303	1445	<.5	2	1.3	<.5	131	9.63	<10	<10	0.49	<10		0.99	600	0.1		540	<2	5		51			0.1	<10	<10	95	<10				
303	1446	<.5	<2	1.38	<.5	151	4.86	<10	<10	0.47	<10		1.9	355	0.09		790	2	10		22			0.14	<10	<10	120	<10				
303	1447	<.5	<2	0.23	5	299	11.5	10	<10	1.42	<10		1.72	275	0.08		360	<2	25		12			0.2	<10	<10	245	<10				
303	2393		<5	2.37	41.1	335	17.3	<2	693	1.45	<1	41	1.68	298	0.66	11		<5	35	<20	113	<10	<10	0.19			248	<20	4	<1		
304	1423	<.5	<2	0.15	<.5	312	10.35	10	10	0.29	<10		2.58	310	<.01		270	<2	14		4			0.23	<10	<10	224	<10				
304	1424	<.5	<2	0.13	4.5	310	10.1	10	<10	0.71	<10		2.82	370	<.01		350	<2	13		3			0.17	<10	<10	231	<10				
304	1425	<.5	<2	0.03	<.5	245	0.59	<10	10	<.01	<10		0.18	125	<.01		20	<2	1		<1			<.01	<10	<10	12	<10				
304	1426	<.5	<2	0.31	1.5	300	9.13	<10	<10	0.53	<10		2.11	280	<.01		330	<2	9		4			0.29	<10	<10	168	<10				
305	2366		<5	0.05	<0.2	299	0.94	<2	<10	<0.01	<1	3	0.15	73	<0.01	<1		<5	<5	<20	1	<10	<10	<0.01			9	<20	<1	<1		
306	9536		<5	0.32	<0.2	63	4.39	<2	<10	0.51	7	43	1.38	615	0.03	3		<5	8	<20	16	<10	<10	0.16			84	<20	7	<1		
307	1441	<.5	<2	0.37	<.5	157	5.06	<10	11	0.4	<10		1.8	740	<.01		580	<2	8		13			0.18	<10	<10	109	<10				
307	1479	<.5	<2	0.15	<.5	59	5.16	<10	35	0.53	<10		1.27	500	<.01		870	<2	6		11			0.12	<10	<10	97	<10				
308	1430	<.5	<2	0.27	<.5	367	7.45	10	10	1.36	<10		1.58	825	0.06		580	<2	25		23			0.15	<10	<10	212	<10				
308	1431	<.5	<2	0.71	<.5	416	7.49	10	10	0.96	<10		1.3	845	0.12		540	<2	22		51			0.13	<10	<10	187	<10				
308	1432	<.5	<2	0.1	<.5	327	6.78	<10	<10	0.18	<10		1.82	910	0.02		740	<2	11		11			0.08	<10	<10	98	<10				
309	1476	<.5	<2	0.14	<.5	245	0.87	<10	10	0.03	<10		0.11	55	0.01		200	<2	<1		5			0.01	<10	<10	6	<10				
310	1480	<.5	<2	0.75	<.5	174	3.97	<10	11	0.36	<10		1.56	780	<.01		570	<2	6		14			0.19	<10	<10	93	<10				
310	1481	<.5	<2	0.37	<.5	65	4.69	10	16	0.5	<10		1.55	850	<.01		570	<2	7		17			0.22	<10	<10	107	<10				
311	1442	<.5	<2	0.26	<.5	66	4.56	10	10	0.57	<10		1.45	630	<.01		640	<2	7		14			0.16	<10	<10	104	<10				
311	1443	<.5	<2	0.39	<.5	102	4.67	<10	16	0.41	<10		1.59	695	<.01		650	2	6		14			0.17	<10	<10	100	<10				
312	2490		<5	0.4	<0.2	36	3.56	<2	60	0.34	8	32	1.01	960	0.02	4		<5	6	<20	25	<10	<10	0.11			71	<20	8	<1		
312	9537		<5	0.17	<0.2	41	4.59	<2	27	0.68	9	34	1.32	608	0.02	3		<5	8	<20	20	<10	<10	0.17			92	<20	7	<1		

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	ppm	Ag ppm	Cu ppm	%	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
313	1437	Mt. Muravief area	SS			Pl & gw float	<5		<.2	81		8	142	1	47	29	3.16	28	230
314	1477	Mt. Muravief area	SS	0.4		Pl outcrops in area	<5		<.2	31		8	92	1	18	11	2.62	26	240
315	1438	Mt. Muravief area	SS			Pl outcrops in area	<5		<.2	50		10	122	1	22	20	3.24	22	290
315	1478	Mt. Muravief area	SS			Fest pl outcrops in area	<5		<.2	71		12	112	1	25	26	3.08	38	240
316	1439	Mt. Muravief area	SS			Pl & sc in area	<5		<.2	39		6	102	1	25	15	2.91	36	380
317	2481	Mt. Muravief area	SS			Stream in gw & slate	<5		<0.1	113		9	135	1	70	35	3.43	22	233
317	2482	Mt. Muravief area	SS			Stream in gw & gs	10		<0.1	83		10	125	<1	61	35	3.33	21	257
318	1440	Mt. Muravief area	SS			Pl & gw float	<5		<.2	38		10	102	<1	25	21	3.55	26	170
319	2374	Mt. Muravief area	C		OC	Fest qz vn in gw	<5		<0.1	31		<2	3	2	10	1	0.07	<5	5
320	9524	Mt. Muravief area	SS				<5		<0.1	46		8	188	<1	32	26	3.34	44	233
321	9525	Mt. Muravief area	SS			Stream in gw	<5		<0.1	44		8	121	<1	35	23	2.97	13	411
322	9526	Mt. Muravief area	SS			Gw float in stream	<5		<0.1	41		7	109	<1	32	19	2.81	19	341
322	9527	Mt. Muravief area	SS				<5		0.5	54		7	115	<1	36	18	3.23	28	363
323	2478	Mt. Muravief area	SS			Stream was dry	<5		0.03	27		12	87	<1	21	10	2.75	22	163
324	2432	Deep Cove	SS			Gw float in stream	<5		<0.2	13		7	55	2	15	6	2.03	<5	143
325	2315	Deep Cove	SS			Stream in gw	<5		<0.2	36		5	102	1	29	15	2.84	<5	288
326	9528	Deep Cove	SS			Stream in muskeg	<5		0.2	14		10	124	<1	14	9	2.49	9	163
327	2479	Deep Cove	SS			Stream in slate	<5		<0.1	16		8	97	<1	15	11	2.48	14	208
327	2480	Deep Cove	SS				<5		<0.1	9		11	63	<1	12	8	2.15	11	120
328	9529	Deep Cove	SS				<5		0.2	28		11	137	<1	45	18	2.65	11	390
329	2433	Deep Cove	SS			Gw float in stream	<5		<0.2	10		4	48	2	12	5	1.66	<5	85
330	2483	Fawn Lake, NE of	SS			Gw float in stream	<5		<0.1	22		12	110	2	23	17	2.51	43	200
331	9530	Jerry Harbor, N of	SS				<5		<0.1	40		11	155	<1	64	27	3.3	25	433
332	9531	Elev. 607 Lake	SS				<5		0.2	46		8	142	<1	30	17	2.75	17	279
333	9535	Elev. 524 Lake	SS				<5		<0.1	76		9	132	<1	42	26	2.88	26	224
334	2464	Big Branch Bay Creek	SS			Gw float in stream	21		0.3	76		9	134	1	34	20	2.95	18	170
334	9509	Big Branch Bay Creek	SS			Stream in gw	<5		0.2	70		7	160	2	35	19	2.77	15	182
335	9510	Big Branch Bay Creek	Rep	0.46	OC	Msv qz vn in metaseds	<5		<0.1	4		<2	15	<1	6	3	0.37	<5	5
336	9508	Big Branch Bay Creek	SS				<5		<0.1	62		8	152	<1	46	20	2.8	15	175
337	2495	Snipe Bay, NE of	SS			Gw float in stream	<5		<0.1	33		10	126	<1	25	17	2.15	21	147
337	9543	Snipe Bay, NE of	SS				<5		<0.1	37		7	116	<1	22	20	2.11	15	145
338	2525	Snipe Bay	SS				<5		<.2	19		4	76	<1	14	10	1.68	4	140
339	2524	Snipe Bay	SS				<5		<.2	13		4	78	1	10	13	2.08	2	230
340	2523	Snipe Bay	SS				<5		<.2	28		6	98	1	20	11	2.37	<2	350
341	2522	Snipe Bay	S		RC	Norite w/ po, cp, pentlandite, to 20%	40		11	**4.7**	*	16	252	<1	7910	456	1.46	22	<10
342	2019	Snipe Bay	Rep	1x3	RC	Qz vn w/ sc partings, py <1%	<5		<.2	19		<2	18	<1	7	2	1.23	<2	50
342	2020	Snipe Bay	Rep		RC	Qz vn w/ qz-bt-sc partings, trace py	<5		<.2	11		<2	12	<1	6	1	0.61	2	40
342	2108	Snipe Bay	Rep		OC	Bt sc w/ py stringer, clots, fest	<5		<.2	37		<2	94	2	21	10	2.42	<2	450
343	2021	Snipe Bay	Rep		OC	Qz vn w/ sc partings	<5		<.2	13		2	22	<1	4	2	0.62	6	120
344	2526	Snipe Bay	SS				<5		0.2	48		8	116	1	32	33	2.41	22	210
345	2466	Snipe Bay, NE of	SS			Gw float in stream	64		<0.1	40		10	162	<1	22	19	2.29	13	194
345	9513	Snipe Bay, NE of	SS				<5		<0.1	29		6	101	<1	20	15	2.08	11	274
346	9709	Snipe Bay, NE of	G	0.8	FL	Fest qz vn w/ slate fragments & py	<5		<0.1	32		8	18	<1	10	2	0.36	<5	45
347	2494	Snipe Bay, NE of	SS			Gw float in stream	<5		0.2	80		11	164	<1	41	25	2.46	22	112
347	9542	Snipe Bay, NE of	SS				<5		0.2	120		10	167	<1	52	31	2.61	30	81

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
313	1437	<.5	<2	0.36	<.5	60	4.93	10	23	0.62	<10		1.57	715	0.01		730	<2	7		26			0.17	<10	<10	115	<10				
314	1477	<.5	<2	0.13	<.5	47	4.29	<10	10	0.69	<10		1.27	440	<.01		750	<2	6		10			0.13	<10	<10	95	<10				
315	1438	<.5	<2	0.15	0.5	51	5.34	10	21	0.73	<10		1.48	680	<.01		820	<2	8		11			0.18	<10	<10	116	<10				
315	1478	<.5	<2	0.15	<.5	52	5.12	10	35	0.7	<10		1.34	675	<.01		960	<2	7		13			0.15	<10	<10	103	<10				
316	1439	<.5	<2	0.22	<.5	66	4.44	10	<10	0.72	<10		1.53	550	0.01		760	<2	9		14			0.16	<10	<10	124	<10				
317	2481		<5	0.59	<0.2	135	4.88	<2	28	0.46	4	37	1.62	850	0.09	4		<5	12	<20	35	<10	<10	0.18			110	<20	7	<1		
317	2482		<5	0.61	<0.2	103	4.21	<2	46	0.5	4	33	1.49	919	0.1	4		<5	9	<20	45	<10	<10	0.15			100	<20	7	<1		
318	1440	<.5	<2	0.13	<.5	59	4.5	10	43	0.42	<10		1.39	620	<.01		640	<2	7		11			0.15	<10	<10	111	<10				
319	2374		<5	0.09	<0.2	344	0.68	<2	<10	0.02	<1	<1	0.02	48	0.02	<1		<5	<5	<20	3	<10	<10	<0.01			3	<20	<1	<1		
320	9524		<5	0.52	<0.2	53	5.3	<2	30	0.58	9	51	1.59	674	0.03	5		<5	9	<20	29	<10	<10	0.18			109	<20	9	<1		
321	9525		<5	0.38	<0.2	76	4.38	<2	20	0.71	7	42	1.77	650	0.04	4		<5	10	<20	22	<10	<10	0.2			113	<20	7	<1		
322	9526		<5	0.33	<0.2	74	3.98	<2	13	0.61	7	35	1.53	543	0.04	4		<5	9	<20	23	<10	<10	0.17			105	<20	7	<1		
322	9527		<5	0.33	<0.2	79	4.38	<2	22	0.62	7	37	1.63	557	0.05	4		<5	11	<20	26	<10	<10	0.18			115	<20	7	<1		
323	2478		<5	0.16	<0.02	58	3.76	3	60	0.35	9	23	1.25	358	0.03	5		<5	8	<20	21	<10	<10	0.15			95	<20	6	<1		
324	2432		<5	0.1	<0.2	53	3.1	7	52	0.33	5	16	1.13	317	0.02	3		<5	<5	<20	11	<10	<10	0.13			80	<20	3	<1		
325	2315		<5	0.26	<0.2	72	4.04	8	16	0.67	11	30	1.71	656	0.04	2		<5	6	<20	19	<10	<10	0.2			102	<20	4	<1		
326	9528		<5	0.08	<0.2	38	3.05	<2	30	0.34	8	24	1.05	351	0.02	6		<5	6	<20	10	<10	<10	0.19			74	<20	5	<1		
327	2479		<5	0.14	<0.2	37	3.53	<2	28	0.56	8	25	1.04	515	0.02	4		<5	6	<20	11	<10	<10	0.18			69	<20	6	<1		
327	2480		<5	0.07	<0.2	32	3.82	<2	38	0.28	7	18	0.86	291	0.02	5		<5	5	<20	9	<10	<10	0.16			63	<20	4	<1		
328	9529		<5	0.42	<0.2	88	3.57	<2	35	0.6	6	35	1.55	898	0.03	4		<5	8	<20	17	<10	<10	0.18			86	<20	6	<1		
329	2433		<5	0.07	<0.2	36	2.93	8	70	0.24	5	13	0.93	282	0.03	3		<5	<5	<20	8	<10	<10	0.12			92	<20	2	<1		
330	2483		<5	0.19	<0.2	45	4.87	<2	29	0.38	8	29	1.03	1480	0.02	4		<5	6	<20	11	<10	<10	0.13			80	<20	9	<1		
331	9530		<5	0.39	<0.2	116	4.26	<2	43	0.66	6	55	1.96	1331	0.03	4		<5	11	<20	21	<10	<10	0.19			104	<20	7	<1		
332	9531		<5	0.28	<0.2	57	4.24	<2	<0.01	0.72	8	40	1.46	587	0.03	3		<5	8	<20	17	<10	<10	0.16			92	<20	8	<1		
333	9535		<5	0.41	<0.2	59	4.62	<2	15	0.59	6	44	1.58	742	0.03	4		<5	8	<20	20	<10	<10	0.17			102	<20	8	<1		
334	2464		<5	0.23	<0.2	61	5.05	<2	15	0.56	8	47	1.55	602	0.02	4		<5	7	<20	15	<10	<10	0.15			88	<20	9	<1		
334	9509		<5	0.23	<0.2	59	5.3	<2	20	0.62	7	47	1.48	649	0.02	3		<5	6	<20	18	<10	<10	0.13			83	<20	8	<1		
335	9510		<5	0.1	<0.2	140	0.87	<2	<10	0.02	<1	8	0.25	122	<0.01	<1		<5	<5	<20	2	<10	<10	<0.01			7	<20	1	<1		
336	9508		<5	0.56	<0.2	69	5	<2	12	0.58	6	37	1.64	674	0.07	4		<5	6	<20	28	<10	<10	0.18			86	<20	7	<1		
337	2495		<5	0.47	<0.2	30	3.69	<2	24	0.34	8	33	1.17	702	0.02	4		<5	<5	<20	21	<10	<10	0.14			59	<20	8	<1		
337	9543		<5	0.35	<0.2	33	3.61	<2	13	0.39	7	33	1.21	706	0.02	3		<5	<5	<20	18	<10	<10	0.16			61	<20	7	<1		
338	2525	<.5	<2	0.19	<.5	32	2.77	<10	10	0.43	<10		1.01	400	0.04		540	<2	4		17			0.13	<10	<10	59	<10				
339	2524	<.5	<2	0.15	<.5	36	3.34	<10	20	0.79	<10		1.03	630	0.01		410	<2	6		10			0.2	<10	<10	79	<10				
340	2523	<.5	2	0.2	<.5	40	4.43	<10	10	1.28	<10		1.33	640	<.01		620	<2	7		26			0.22	<10	<10	87	<10				
341	2522	<.5		0.29	2	2260	18.9	<10	<10	0.03	<10		1.73	105	0.07		480	16	6		10			0.21	<10	<10	341	<10				
342	2019	<.5	2	0.76	<.5	267	0.92	<10	10	0.12	<10		0.24	110	0.15		320	2	1		42			0.01	<10	<10	22	10				
342	2020	<.5	<2	0.51	<.5	376	0.78	<10	<10	0.1	<10		0.16	175	0.06		280	<2	1		34			0.01	<10	<10	17	<10				
342	2108	<.5	2	0.34	<.5	86	3.68	<10	<10	1.31	<10		1.42	380	0.04		900	<2	10		13			0.15	<10	<10	111	<10				
343	2021	<.5	<2	0.21	<.5	246	1.01	<10	10	0.24	<10		0.3	135	0.06		520	2	1		19			0.02	<10	<10	18	<10				
344	2526	<.5	4	0.25	<.5	48	4.14	<10	10	0.61	<10		1.32	1160	0.2		1010	<2	7		37			0.14	<10	10	93	<10				
345	2466		<5	0.4	<0.2	34	3.83	<2	22	0.47	8	32	1.24	710	0.02	4		<5	5	<20	26	<10	<10	0.16			65	<20	7	<1		
345	9513		<5	0.35	<0.2	36	3.35	<2	<10	0.6	7	31	1.24	545	0.02	3		<5	6	<20	22	<10	<10	0.16			64	<20	7	<1		
346	9709		<5	0.06	<0.2	262	0.77	<2	<10	0.06	2	6	0.18	92	0.02	<1		<5	<5	<20	3	<10	<10	<0.01			9	<20	<1	<1		
347	2494		<5	0.3	<0.2	41	5.36	<2	14	0.32	6	43	1.3	691	0.02	3		<5	<5	<20	21	<10	<10	0.12			64	<20	8	<1		
347	9542		<5	0.36	<0.2	46	5.62	<2	18	0.2	5	43	1.4	881	0.02	3		<5	5	<20	21	<10	<10	0.11			82	<20	9	<1		

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	Au ppm	Ag ppm	Cu ppm	Cu %	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
348	2463	Big Branch Bay Creek	SS			Gw float in stream	15		0.3	60		10	121	<1	39	22	2.79	21	166
348	9507	Big Branch Bay Creek	SS			Gw float in stream	<5		<0.1	38		7	120	<1	25	16	2.69	11	197
349	9506	Big Branch Bay Creek	SS			Stream in gw w/ qz stringers	<5		<0.1	42		13	135	<1	41	20	3.02	19	175
350	2462	Big Branch Bay Creek	SS			Gw float in stream	<5		<0.1	55		9	128	<1	31	20	2.97	12	227
351	9538	Big Branch Bay Creek, E of	SS				<5		<0.1	77		10	141	<1	61	24	3.41	8	151
352	2491	Big Branch Bay Creek, E of	SS			Stream in slate & gw	<5		<0.1	52		11	138	<1	55	24	3.11	17	177
353	9534	Nakvassin Lake, NW of	SS				<5		<0.1	95		8	165	<1	70	33	3.35	25	202
353	9704	Nakvassin Lake, NW of	G	0.6	FL	Sil bt sc w/ po & cp	17		0.3	138		29	248	3	92	50	5.12	<5	61
354	2338	Nakvassin Lake, NW of	Rep	0.4	RC	Sil zone w/ bt & dissem po	<5		<0.1	177		9	160	9	116	43	4.75	<5	153
355	2489	Nakvassin Lake, N of	SS			Gw float in stream	<5		<0.1	44		9	115	<1	44	18	2.76	14	282
356	2488	Nakvassin Lake, NE of	SS			Meta gw float in stream	<5		<0.1	22		6	94	<1	30	15	2.48	9	309
357	2485	Port Herbert, N of	SS			Gw float in stream	<5		<0.1	22		10	119	<1	46	17	2.92	22	319
358	2484	Port Herbert, N of	SS				<5		<0.1	25		10	133	1	31	18	2.74	16	302
359	2314	Port Herbert	SS			Gw float in stream	<5		<0.2	16		12	66	1	29	15	2.3	<5	156
360	2431	Port Herbert	SS			Gw float in stream	<5		<0.2	23		5	77	<1	31	14	2.42	<5	190
361	2487	Port Herbert, N of	SS				<5		<0.1	36		7	122	<1	58	19	2.89	12	434
362	2486	Port Herbert, N of	SS			Gw float in stream	<5		<0.1	26		9	113	<1	52	16	2.8	9	316
362	9532	Port Herbert, N of	SS				<5		<0.1	45		9	118	<1	45	22	2.96	13	307
363	2430	Port Herbert	SS			Gw float in stream	<5		<0.2	30		8	118	3	38	16	3.04	<5	270
364	2429	Port Herbert	SS			Gw float in stream	<5		<0.2	15		5	86	2	33	10	2.59	<5	310
365	9533	Port Herbert, N of	SS				<5		<0.1	23		7	115	<1	45	15	2.86	11	384
366	2428	Port Herbert	SS			Gw float in stream	<5		<0.2	17		9	88	2	35	12	2.58	<5	300
367	9705	Port Herbert, N of	G	0.5	RC	Fest qz vn	<5		<0.1	5		16	12	<1	7	<1	0.03	<5	79
368	2461	Big Branch Bay Creek	SS			Gw & gs float in stream	9		<0.1	38		10	108	<1	20	14	2.38	29	90
368	9505	Big Branch Bay Creek	SS			Gw float in stream	<5		<0.1	47		8	139	<1	33	20	2.57	15	189
369	9544	Rudakof Mtn, SE of	SS			Stream in gw	<5		<0.1	46		10	112	<1	23	18	2.3	11	191
370	2496	Rudakof Mtn, S of	SS			Stream in gw	<5		<0.1	39		12	126	<1	26	17	2.27	13	151
371	9710	Rudakof Mtn, S of	G	0.8	FL	Qz br vn w/ fragments of gw & po blebs	<5		<0.1	23		23	58	3	14	8	1.34	1346	144
371	9711	Rudakof Mtn, S of	G	0.3	FL	Fest qz vn w/ slate fragments & sulf	<5		<0.1	9		9	18	<1	12	1	0.18	<5	17
372	9712	Rudakof Mtn, S of	G		RC	Fest ribbon qz	<5		0.3	14		14	13	2	10	2	0.41	<5	41
372	9713	Rudakof Mtn, S of	SS			Stream in gw	8		0.3	90		23	145	3	42	26	2.23	38	82
373	2493	Snipe Bay, W of	SS			Stream in slate & ar	<5		<0.1	31		13	126	<1	26	19	2.93	11	219
374	2492	Elev. 1520 Lake, SW of	SS			Stream in gw	43		<0.1	28		15	138	<1	21	27	2.69	9	256
374	9540	Elev. 1520 Lake, SW of	SS				<5		<0.1	29		12	125	<1	25	23	2.58	7	278
375	9541	Byron Bay, NE of	SS				<5		<0.1	18		7	100	<1	17	13	2.35	7	246
376	2467	Byron Bay, head of	SS				<5		<0.1	2		6	59	<1	8	7	1.69	<5	202
376	9514	Byron Bay, head of	SS				<5		<0.1	12		6	93	<1	13	14	2.39	<5	278
377	2468	Byron Bay, S	Rep	0.4	OC	Qz feldspar vn dike w/ garnets	<5		<0.1	<1		3	13	3	4	1	0.4	<5	7
377	2469	Byron Bay, S	Rep	0.4	OC	Qz lens w/ pinkish red stain	<5		<0.1	9		<2	12	5	7	2	0.5	<5	82
377	9515	Byron Bay, S	C	2.75	OC	Qz vn in deformed gw	<5		<0.1	3		<2	2	4	7	<1	0.05	<5	6
378	2470	Byron Bay, E of	SS				6		<0.1	2		7	40	<1	6	4	1.11	<5	55
379	2471	Troller Bay, head of	SS			Granite float in stream	<5		<0.1	<1		10	13	<1	3	2	0.35	<5	41
379	9516	Troller Bay, head of	SS			Stream in gs & fel int	<5		<0.1	7		3	34	<1	7	10	1.3	<5	103
380	2606	Redfish Bay	Rep	2	OC	Peg	<5		<0.2	<1		2	<2	<1	<1	<1	0.16	<2	<10
380	2607	Redfish Bay	Rep	3	OC	Qz/peg zone	<5		<0.2	1		<2	<2	<1	2	<1	0.06	<2	<10

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
348	2463		<5	0.31	<0.2	78	4.98	<2	20	0.5	8	37	1.48	656	0.04	4		<5	6	<20	19	<10	<10	0.18			96	<20	8	<1		
348	9507		<5	0.24	<0.2	43	4.03	<2	<10	0.56	6	37	1.33	528	0.02	3		<5	6	<20	20	<10	<10	0.16			75	<20	7	<1		
349	9506		<5	0.34	<0.2	77	4.56	<2	18	0.49	7	44	1.6	714	0.02	3		<5	8	<20	17	<10	<10	0.17			92	<20	7	<1		
350	2462		<5	0.31	<0.2	60	4.56	<2	13	0.62	8	46	1.53	619	0.03	4		<5	7	<20	16	<10	<10	0.18			93	<20	9	<1		
351	9538		<5	0.4	<0.2	117	4.91	<2	17	0.41	5	48	1.82	626	0.02	3		<5	10	<20	25	<10	<10	0.19			102	<20	6	<1		
352	2491		<5	0.32	<0.2	97	4.72	<2	24	0.48	7	41	1.73	933	0.02	4		<5	10	<20	19	<10	<10	0.15			102	<20	7	<1		
353	9534		<5	0.64	<0.2	133	5.24	<2	20	0.5	3	54	1.94	982	0.04	4		<5	11	<20	25	<10	<10	0.17			110	<20	6	<1		
353	9704		<5	1.66	<0.2	415	7.01	<2	32	1.84	1	67	1.12	614	0.5	7		<5	19	<20	136	<10	<10	0.24			138	<20	5	<1		
354	2338		<5	1.45	<0.2	375	6.03	<2	<10	1.68	<1	61	1.25	678	0.43	4		<5	19	<20	72	<10	<10	0.2			133	<20	4	3		
355	2489		<5	0.41	<0.2	85	3.92	<2	<10	0.52	6	34	1.48	604	0.03	4		<5	9	<20	21	<10	<10	0.17			100	<20	7	<1		
356	2488		<5	0.38	<0.2	60	3.56	<2	<10	0.61	8	28	1.39	584	0.02	3		<5	8	<20	17	<10	<10	0.21			80	<20	7	<1		
357	2485		<5	0.33	<0.2	83	4.02	<2	26	0.59	8	36	1.55	881	0.02	4		<5	8	<20	15	<10	<10	0.18			88	<20	8	<1		
358	2484		<5	0.35	<0.2	47	4.15	<2	37	0.54	7	37	1.25	1375	0.02	3		<5	7	<20	17	<10	<10	0.17			86	<20	7	<1		
359	2314		<5	0.21	0.2	66	2.93	7	99	0.28	6	19	1.17	1239	0.03	3		<5	<5	<20	16	<10	<10	0.12			71	<20	4	<1		
360	2431		<5	0.26	0.3	67	3.21	7	64	0.31	8	25	1.29	764	0.03	3		<5	<5	<20	19	<10	<10	0.13			81	<20	4	<1		
361	2487		<5	0.42	<0.2	108	4.07	<2	12	0.66	8	40	1.87	690	0.02	3		<5	9	<20	16	<10	<10	0.22			92	<20	8	<1		
362	2486		<5	0.32	<0.2	95	3.72	<2	16	0.64	7	33	1.59	752	0.03	3		<5	9	<20	14	<10	<10	0.18			90	<20	7	<1		
362	9532		<5	0.25	<0.2	83	4.11	<2	25	0.53	9	35	1.57	717	0.02	4		<5	8	<20	13	<10	<10	0.18			89	<20	8	<1		
363	2430		<5	0.25	0.4	85	4.68	9	20	0.55	10	28	1.9	770	0.05	2		<5	7	<20	15	<10	<10	0.19			111	<20	5	<1		
364	2429		<5	0.27	<0.2	79	3.5	8	29	0.62	8	22	1.61	671	0.03	3		<5	6	<20	13	<10	<10	0.23			83	<20	4	<1		
365	9533		<5	0.27	<0.2	90	3.59	<2	11	0.59	8	33	1.58	486	0.02	4		<5	9	<20	12	<10	<10	0.21			86	<20	7	<1		
366	2428		<5	0.28	0.3	75	3.24	8	34	0.57	9	24	1.44	900	0.03	2		<5	5	<20	13	<10	<10	0.19			72	<20	5	<1		
367	9705		<5	0.01	<0.2	249	0.26	<2	<10	<0.01	<1	<1	<0.01	27	<0.01	<1		<5	<5	<20	2	<10	<10	<0.01			<1	<20	<1	<1		
368	2461		<5	0.18	<0.2	43	4.26	<2	21	0.25	7	33	1.26	570	0.01	4		<5	<5	<20	13	<10	<10	0.13			70	<20	6	<1		
368	9505		<5	0.32	<0.2	61	4.31	<2	14	0.56	7	37	1.42	638	0.03	3		<5	6	<20	17	<10	<10	0.16			84	<20	7	<1		
369	9544		<5	0.2	<0.2	41	3.9	<2	15	0.46	7	32	1.22	621	0.01	3		<5	<5	<20	16	<10	<10	0.13			64	<20	7	<1		
370	2496		<5	0.23	<0.2	43	3.68	<2	17	0.34	7	34	1.23	636	0.01	3		<5	5	<20	17	<10	<10	0.14			66	<20	7	<1		
371	9710		<5	3.51	4.1	110	2.35	<2	<10	0.55	9	28	0.78	828	0.05	3		<5	<5	<20	125	<10	<10	0.07			46	<20	10	<1		
371	9711		<5	1.16	<0.2	270	0.79	<2	<10	0.01	<1	1	0.04	281	<0.01	<1		<5	<5	<20	56	<10	<10	<0.01			2	<20	2	<1		
372	9712		<5	0.05	<0.2	295	0.84	<2	<10	0.11	2	6	0.17	82	0.02	1		<5	<5	<20	4	<10	<10	0.02			11	<20	1	<1		
372	9713		<5	0.31	0.2	40	4.87	<2	97	0.2	12	40	1.26	897	0.01	4		<5	<5	<20	16	<10	<10	0.11			55	<20	10	<1		
373	2493		<5	0.2	<0.2	49	4.26	<2	13	0.5	9	32	1.25	687	0.02	4		<5	6	<20	19	<10	<10	0.19			85	<20	8	<1		
374	2492		<5	0.28	<0.2	42	3.7	<2	35	0.59	7	32	1.23	1156	0.02	4		<5	6	<20	22	<10	<10	0.18			73	<20	7	<1		
374	9540		<5	0.45	<0.2	48	3.87	<2	26	0.7	6	39	1.34	999	0.02	3		<5	6	<20	32	<10	<10	0.19			76	<20	7	<1		
375	9541		<5	0.21	<0.2	40	3.37	<2	13	0.6	8	30	1.15	473	0.02	4		<5	6	<20	15	<10	<10	0.18			71	<20	6	<1		
376	2467		<5	0.12	<0.2	32	2.48	<2	13	0.54	8	25	0.8	294	0.03	3		<5	<5	<20	13	<10	<10	0.16			55	<20	4	<1		
376	9514		<5	0.2	<0.2	41	3.56	<2	16	0.85	8	32	1.2	608	0.03	4		<5	7	<20	14	<10	<10	0.22			79	<20	6	<1		
377	2468		<5	0.04	<0.2	89	0.4	<2	<10	0.18	3	6	0.05	312	0.1	<1		<5	<5	<20	3	<10	<10	<0.01			3	<20	4	2		
377	2469		<5	0.11	<0.2	165	0.94	<2	<10	0.21	2	12	0.21	128	0.05	1		<5	<5	<20	16	<10	<10	0.04			18	<20	1	<1		
377	9515		<5	<0.01	<0.2	240	0.37	<2	<10	0.02	<1	1	0.02	20	<0.01	<1		<5	<5	<20	3	<10	<10	<0.01			2	<20	<1	<1		
378	2470		<5	0.04	<0.2	20	1	<2	43	0.13	6	7	0.33	116	0.02	3		<5	<5	<20	8	<10	<10	0.12			29	<20	2	<1		
379	2471		<5	0.08	<0.2	11	0.47	<2	35	0.09	3	7	0.15	67	0.02	1		<5	<5	<20	6	<10	<10	0.05			13	<20	1	<1		
379	9516		<5	0.21	<0.2	18	1.68	<2	<10	0.25	3	39	0.56	380	0.04	2		<5	<5	<20	12	<10	<10	0.1			38	<20	2	<1		
380	2606	<0.5	<2	<0.01	<0.5	42	0.07	<10	30	0.17	<10		<0.01	5	0.02		10	<2	<1		<1			<0.01	<10	<10	<1	<10				
380	2607	<0.5	<2	<0.01	<0.5	193	0.2	<10	30	0.05	<10		<0.01	35	0.01		10	<2	<1		<1			<0.01	<10	<10	<1	<10				

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	ppm	Ag ppm	Cu ppm	%	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
380	2782	Redfish Bay	RC	5x10	OC	Peg w/ qz, mica, microcline	<5		<0.2	7		2	<2	<1	7	<1	0.23	<2	<10
380	2783	Redfish Bay	RC	10x10	OC	Peg w/ qz, mica, microcline	<5		<0.2	7		<2	4	<1	8	<1	0.33	<2	<10
381	2325	Redfish Bay, head of	SS			Gw & tonalite float in stream	<5		<0.2	18		4	60	<1	14	7	1.86	<5	181
381	2444	Redfish Bay, head of	SS			Gw & peg float in stream	<5		<0.2	17		5	62	2	14	7	1.89	<5	183
381	2445	Redfish Bay, head of	SS			Gw float in stream	<5		<0.2	14		11	63	2	13	6	1.86	<5	182
382	2324	Redfish Bay, head of	SS			Small drainage, gw & tonalite float	<5		<0.2	4		8	35	2	7	3	1.12	<5	108
383	2443	Redfish Bay	SS			Gw & tonalite float in stream	<5		<0.2	2		4	20	<1	4	2	0.6	<5	102
384	2442	Redfish Bay	SS			Tonalite & hn gw float in stream	<5		<0.2	14		6	75	1	13	18	2.25	<5	289
385	2446	Big Branch Bay	SS			Gw & hn gw float in stream	<5		<0.2	49		10	160	3	44	19	2.89	<5	280
386	2326	Big Branch Bay	SS			Gw float w/ some qz in stream	<5		0.3	28		10	119	2	26	15	2.85	<5	320
387	2447	Big Branch Bay	SS			Gw & hn gw float in stream	<5		0.4	42		11	182	2	35	21	2.99	<5	232
388	2328	Big Branch Bay	SS			Gw & minor slate float in stream	<5		<0.2	26		7	117	<1	28	12	3.12	<5	307
389	2327	Big Branch Bay	SS			Gw float in stream	<5		<0.2	27		8	111	2	29	13	2.78	<5	292
390	2500	Tumakof Lake, N of	SS			Gw float in stream	<5		<0.1	16		12	96	<1	15	13	2.6	13	264
390	9548	Tumakof Lake, N of	SS				<5		<0.1	19		8	112	<1	20	23	2.52	9	258
391	2448	Big Branch Bay, head of	SS			Stream in gw	<5		<0.2	36		5	104	2	24	12	2.38	<5	178
392	2457	Big Branch Bay, head of	SS			Gw outcrop in vicinity	6		<0.1	46		9	145	1	29	18	2.43	12	364
393	2458	Big Branch Bay Creek	SS			Gw & slate float in stream	38		<0.1	68		9	130	<1	28	17	2.57	22	180
393	9500	Big Branch Bay Creek	SS				<5		<0.1	56		8	136	<1	30	18	2.93	14	198
394	9501	Big Branch Bay Creek	SS				<5		<0.1	15		10	120	1	21	14	2.42	18	355
395	2459	Big Branch Bay Creek	SS			Gw float in stream	<5		<0.1	43		7	116	<1	28	14	2.7	15	181
395	9502	Big Branch Bay Creek	SS			Gw exposed nearby	<5		0.2	23		11	110	<1	18	21	2.54	8	236
396	9549	Baturin Lake	SS				<5		<0.1	25		11	105	<1	19	16	2.49	10	401
397	9539	Baturin Lake	SS				<5		<0.1	35		10	109	<1	21	15	2.29	10	190
398	9503	Big Branch Bay Creek	SS			Gw float in stream	<5		0.3	89		12	159	1	43	27	2.76	32	199
399	2460	Big Branch Bay Creek	SS			Gw float in stream	10		<0.1	49		10	125	<1	44	20	2.96	13	261
399	9504	Big Branch Bay Creek	SS			Gw float in stream	<5		<0.1	35		8	117	<1	26	15	2.48	10	199
400	2313	Port Herbert	SS			Dry stream w/ gs float	<5		<0.2	135		6	108	2	64	41	2.85	<5	146
400	2427	Port Herbert	SS			Gw & gs float in stream	<5		<0.2	66		4	108	2	56	29	3.03	<5	119
401	2426	Port Herbert	SS			Stream in gw	<5		<0.2	16		4	74	1	24	8	2.19	<5	164
402	9545	Port Herbert, S of	SS				<5		<0.1	43		16	129	<1	32	18	2.46	13	229
403	2312	Port Herbert	SS			Msv qz float in stream	23		<0.2	28		9	101	1	44	13	2.82	13	380
404	2311	Port Herbert	SS			Gw & qz float in stream	<5		<0.2	23		6	103	1	25	12	2.59	<5	264
405	2425	Port Herbert	SS			Stream in gw	<5		<0.2	50		4	114	1	46	16	2.82	<5	192
406	2424	Port Herbert	SS			Gw float in stream	<5		<0.2	39		9	115	2	40	15	2.67	23	220
407	2423	Port Herbert	SS			Gw float in stream	<5		<0.2	45		8	127	1	53	17	2.97	26	255
408	2332	Port Herbert, S of	SS				<5		<0.1	27		12	114	1	37	15	2.86	19	211
409	2422	Port Herbert	SS			Gw float in stream	<5		0.2	43		15	145	2	45	23	3.09	23	210
410	2421	Codfish Cove	SS			Gw float in stream	<5		<0.2	5		4	51	<1	16	5	1.72	<5	81
411	2497	Lake Osprey, W of	SS			Stream in gw	<5		<0.1	56		7	113	<1	43	21	2.73	8	231
411	9546	Lake Osprey, W of	SS				<5		<0.1	47		8	119	<1	42	20	2.59	7	228
412	2420	Big Port Walter	SS			Gw float in stream	<5		<0.2	30		6	99	3	29	14	2.65	<5	189
413	2498	Elev. 1525 Lake	SS			Gw float in stream	<5		<0.1	47		12	118	<1	26	16	2.44	13	171
414	2418	Big Port Walter	SS			Gw float in stream	<5		<0.2	29		8	111	2	25	15	2.69	<5	159
414	2419	Big Port Walter	SS			Stream in gw	<5		<0.2	31		8	99	2	21	12	2.55	<5	130

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
380	2782	<0.5	2	<0.01	<0.5	145	0.35	<10	20	0.15	<10		0.04	20	0.02		40	<2	<1		<1			<0.01	<10	<10	<1	<10				
380	2783	<0.5	2	0.01	<0.5	247	0.32	<10	100	0.14	<10		0.05	160	0.05		80	<2	<1		<1			<0.01	<10	<10	1	<10				
381	2325		<5	0.15	<0.2	33	2.61	5	14	0.6	7	19	1.05	389	0.02	2		<5	<5	<20	10	<10	<10	0.15			59	<20	4	<1		
381	2444		<5	0.11	<0.2	34	2.81	6	14	0.62	7	22	1.06	388	0.02	2		<5	<5	<20	9	<10	<10	0.16			62	<20	3	<1		
381	2445		<5	0.17	<0.2	40	2.54	7	48	0.58	5	29	1.11	290	0.16	3		<5	<5	<20	28	<10	<10	0.17			69	<20	2	<1		
382	2324		<5	0.07	<0.2	25	1.3	5	26	0.3	3	11	0.7	202	0.02	2		<5	<5	<20	11	<10	<10	0.12			37	<20	2	<1		
383	2443		<5	0.05	<0.2	16	0.72	4	14	0.32	<1	10	0.34	141	0.02	2		<5	<5	<20	7	<10	<10	0.09			22	<20	1	<1		
384	2442		<5	0.19	<0.2	42	3.3	8	12	0.99	9	29	1.2	1024	0.05	3		<5	<5	<20	18	<10	<10	0.2			76	<20	3	<1		
385	2446		<5	0.39	<0.2	48	4.16	8	11	0.79	10	37	1.54	811	0.03	2		<5	6	<20	28	<10	<10	0.21			84	<20	5	<1		
386	2326		<5	0.41	0.2	52	4.11	8	23	0.83	9	26	1.51	748	0.03	3		<5	6	<20	31	<10	<10	0.22			92	<20	5	<1		
387	2447		<5	0.41	0.2	47	4.6	8	32	0.59	12	37	1.58	1022	0.03	3		<5	5	<20	36	<10	<10	0.19			87	<20	6	<1		
388	2328		<5	0.17	<0.2	52	4.11	9	12	0.81	10	24	1.62	664	0.02	2		<5	5	<20	20	<10	<10	0.22			88	<20	5	<1		
389	2327		<5	0.4	0.3	48	3.57	8	29	0.76	9	33	1.36	732	0.02	3		<5	5	<20	31	<10	<10	0.2			77	<20	5	<1		
390	2500		<5	0.15	<0.2	38	3.41	<2	37	0.67	8	28	1.11	519	0.02	5		<5	6	<20	13	<10	<10	0.18			73	<20	6	<1		
390	9548		<5	0.21	<0.2	41	3.37	<2	20	0.58	8	28	1.06	698	0.03	4		<5	6	<20	18	<10	<10	0.18			72	<20	7	<1		
391	2448		<5	0.2	<0.2	49	4.08	6	<10	0.57	8	26	1.57	606	0.05	2		<5	<5	<20	17	<10	<10	0.16			76	<20	5	<1		
392	2457		<5	0.33	<0.2	46	3.99	<2	13	0.88	7	39	1.39	612	0.03	4		<5	7	<20	19	<10	<10	0.18			81	<20	8	<1		
393	2458		<5	0.28	<0.2	44	4.58	<2	21	0.51	7	43	1.39	590	0.02	3		<5	6	<20	16	<10	<10	0.15			75	<20	7	<1		
393	9500		<5	0.27	<0.2	54	4.63	<2	15	0.53	8	43	1.54	539	0.03	4		<5	7	<20	18	<10	<10	0.18			91	<20	8	<1		
394	9501		<5	0.22	<0.2	47	3.71	<2	<10	0.8	7	30	1.25	556	0.02	4		<5	7	<20	13	<10	<10	0.19			78	<20	6	<1		
395	2459		<5	0.21	<0.2	53	4.56	<2	12	0.49	7	39	1.4	471	0.03	4		<5	6	<20	15	<10	<10	0.16			82	<20	7	<1		
395	9502		<5	0.21	<0.2	39	3.88	<2	19	0.58	9	35	1.36	779	0.03	3		<5	6	<20	18	<10	<10	0.16			76	<20	8	<1		
396	9549		<5	0.26	<0.2	43	3.33	<2	32	0.79	7	31	1.27	715	0.03	4		<5	7	<20	18	<10	<10	0.16			73	<20	7	<1		
397	9539		<5	0.19	<0.2	38	3.59	<2	24	0.48	7	30	1.18	553	0.02	3		<5	<5	<20	15	<10	<10	0.14			65	<20	6	<1		
398	9503		<5	0.27	<0.2	47	5.26	<2	24	0.6	7	42	1.41	791	0.02	4		<5	6	<20	20	<10	<10	0.15			78	<20	8	<1		
399	2460		<5	0.37	<0.2	88	4.46	<2	15	0.56	7	43	1.76	677	0.02	4		<5	9	<20	15	<10	<10	0.18			100	<20	7	<1		
399	9504		<5	0.26	<0.2	53	4.13	<2	12	0.58	6	39	1.39	575	0.03	3		<5	6	<20	14	<10	<10	0.15			75	<20	6	<1		
400	2313		<5	0.86	<0.2	98	4.42	5	57	0.35	8	31	1.86	1403	0.03	1		<5	6	<20	19	<10	<10	0.15			98	<20	6	<1		
400	2427		<5	0.64	<0.2	132	4.82	7	11	0.43	10	30	2.2	816	0.04	1		<5	8	<20	17	<10	<10	0.19			108	<20	4	<1		
401	2426		<5	0.1	<0.2	61	3	7	11	0.52	8	28	1.45	409	0.03	2		<5	<5	<20	10	<10	<10	0.17			71	<20	4	<1		
402	9545		<5	0.33	<0.2	62	4.38	<2	12	0.58	7	39	1.48	573	0.02	3		<5	7	<20	14	<10	<10	0.17			95	<20	7	<1		
403	2312		<5	0.58	<0.2	94	3.8	9	30	0.63	8	23	1.86	902	0.02	2		<5	7	<20	23	<10	<10	0.2			95	<20	5	<1		
404	2311		<5	0.53	<0.2	50	3.76	7	14	0.59	8	22	1.66	806	0.03	2		<5	5	<20	23	<10	<10	0.22			77	<20	4	<1		
405	2425		<5	0.3	0.3	86	4.12	7	<10	0.59	12	40	1.79	749	0.11	1		<5	7	<20	26	<10	<10	0.17			96	<20	5	<1		
406	2424		<5	0.75	<0.2	76	3.97	8	16	0.68	10	35	1.75	757	0.16	1		<5	6	<20	50	<10	<10	0.18			84	<20	5	<1		
407	2423		<5	0.52	<0.2	86	4.39	8	25	0.59	14	32	1.9	1008	0.04	2		<5	7	<20	26	<10	<10	0.18			92	<20	6	<1		
408	2332		<5	0.22	<0.2	71	3.89	<2	29	0.45	9	34	1.52	491	0.02	4		<5	8	<20	14	<10	<10	0.18			84	<20	8	<1		
409	2422		<5	0.48	0.3	69	4.72	7	52	0.44	9	30	1.8	1598	0.03	3		<5	6	<20	35	<10	<10	0.15			95	<20	7	<1		
410	2421		<5	0.1	<0.2	42	2.06	8	45	0.25	7	19	0.96	280	0.04	2		<5	<5	<20	15	<10	<10	0.09			47	<20	4	<1		
411	2497		<5	0.5	<0.2	87	4.79	<2	<10	0.51	5	37	1.76	562	0.02	4		<5	9	<20	19	<10	<10	0.23			119	<20	8	<1		
411	9546		<5	0.47	<0.2	84	4.57	<2	<10	0.52	4	34	1.65	536	0.02	3		<5	8	<20	17	<10	<10	0.21			107	<20	7	<1		
412	2420		<5	0.3	<0.2	70	4.12	7	<10	0.49	9	27	1.69	691	0.05	2		<5	5	<20	18	<10	<10	0.2			90	<20	6	<1		
413	2498		<5	0.23	<0.2	44	4.12	<2	13	0.52	6	37	1.33	573	0.01	3		<5	5	<20	15	<10	<10	0.14			70	<20	7	<1		
414	2418		<5	0.2	<0.2	59	4.27	7	<10	0.52	10	29	1.67	762	0.03	2		<5	<5	<20	15	<10	<10	0.16			83	<20	5	<1		
414	2419		5	0.19	<0.2	52	4.23	6	26	0.37	7	23	1.57	600	0.02	3		<5	<5	<20	15	<10	<10	0.15			77	<20	5	<1		

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Location	Sam type	Sample size (ft)	Sam site	Sample description	Au ppb	ppm	Ag ppm	Cu ppm	%	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
415	9547	Elev. 1525 Lake drainage	SS				<5		<0.1	70		10	151	<1	35	29	2.49	30	245
416	2323	Big Branch Bay	SS			Gw, slate & qz float in stream	<5		<0.2	49		5	131	2	31	15	2.71	8	313
416	2329	Big Branch Bay	SS			Gw & minor slate float in stream	<5		<0.2	43		5	129	2	32	16	2.67	<5	307
416	2449	Big Branch Bay	SS			Hned gw float in stream	<5		<0.2	35		5	120	1	28	14	2.51	<5	292
417	2330	Big Branch Bay	SS			Stream in gw w/ qz stringers	<5		0.6	10		<2	60	<1	9	11	1.13	93	110
418	2322	Big Branch Bay	SS			Gw+G809 & minor slate float in stream	<5		0.3	25		10	101	2	21	15	2.67	<5	301
418	2441	Big Branch Bay	SS			Stream in gw	<5		<0.2	15		7	86	2	16	9	2.32	<5	272
419	2499	Borodino Lake	SS			Slate & gw float in stream	<5		<0.1	28		10	117	<1	23	19	2.78	11	264
420	2417	Sashin Creek	SS			Gw float in stream	<5		<0.2	11		5	75	2	23	7	1.9	<5	87
421	9550	Toledo Harbor, SW of	SS				<5		<0.1	12		11	75	<1	19	15	2.14	19	64
422	9552	Sashin Lake, E of	SS				<5		<0.1	55		14	87	<1	39	14	2.11	31	136
423	2333	Sashin Lake	SS			Gw float in stream	8		<0.1	44		12	115	<1	37	18	3.14	24	200
423	2334	Sashin Lake	SS			Gw float in stream	8		<0.1	65		11	145	<1	44	23	2.9	20	205
424	9551	Sashin Lake	SS				<5		<0.1	59		13	125	<1	40	18	2.49	18	180
425	9553	Sashin Lake, SE of	SS				<5		<0.1	12		9	88	<1	15	12	2.06	14	116
426	2530	Port Lucy	Rep		OC	Qz stringers to 4 inches wide	<5		<.2	9		2	12	<1	12	2	0.24	4	10
427	2310	Port Lucy	SS			Stream in gw w/ qz float	<5		<0.2	20		5	90	2	27	11	2.35	<5	156
428	9554	Clarks Pond, E of	SS				<5		<0.1	47		7	145	<1	31	17	2.69	16	203
429	2416	Port Lucy	SS			Gw float in stream	<5		<0.2	21		6	83	2	22	12	2.42	<5	154
430	2309	Port Lucy	SS			Stream in gw	<5		<0.2	65		5	126	2	26	21	3.08	13	163
430	2529	Port Lucy	C	3	OC	Qz vn in gw	<5		<.2	11		<2	2	<1	5	<1	0.08	2	<10
431	2415	Port Lucy	SS			Gw & fest gs float in stream	<5		0.2	26		7	92	2	18	13	2.55	<5	96
432	2414	Port Lucy	SS			Gw float in stream	<5		<0.2	31		7	103	2	17	11	2.92	<5	173
433	9555	Port Lucy, N of	SS				<5		0.2	79		10	140	<1	23	27	3.23	9	177
434	2336	Port Lucy, N of	SS			Stream in slate & gw	8		<0.1	22		11	102	<1	18	15	2.6	14	252
435	2335	Clarks Pond	SS			Gw float in stream	42		<0.1	57		26	144	<1	23	17	3.17	11	245
436	9557	Elev. 1015 Lake	SS				<5		<0.1	18		19	102	<1	14	12	2.4	6	260
437	2321	Little Branch Bay	SS			Gw float in stream	<5		0.5	50		11	125	3	31	21	2.84	7	209
438	2439	Little Branch Bay	SS			Stream in gw	<5		<0.2	37		6	101	1	28	28	2.64	<5	244
439	2320	Little Branch Bay	SS			Gw, slate & qz float in stream	<5		<0.2	18		8	68	2	14	18	2.53	<5	155
440	2438	Little Branch Bay	SS			Stream in gw	<5		<0.2	22		7	74	2	16	20	2.22	<5	189
441	2337	Little Branch Bay	SS				<5		<0.1	18		9	97	<1	17	13	2.72	6	336
442	2440	Little Branch Bay	SS			Stream in gw	<5		<0.2	18		6	62	3	13	11	2.42	<5	172
443	9556	Driftwood Cove, NE of	SS				<5		<0.1	24		9	99	1	12	11	2.71	<5	218
444	2456	Puffin Bay	SS			Stream in hn gw	<5		<0.2	20		8	64	2	16	17	2.37	<5	202
445	2455	Puffin Bay	SS			Gw & tonalite float in stream	<5		<0.2	33		9	111	3	28	18	3.21	<5	352
446	2453	Puffin Bay	SS			Gw float in stream	<5		<0.2	9		7	60	2	10	5	2.07	<5	131
446	2454	Puffin Bay	SS			Gw & tonalite float in stream	<5		<0.2	14		8	66	2	13	6	2.08	<5	177
447	2307	Port Lucy	SS			Gw float in stream	<5		<0.2	20		8	65	1	12	12	2.36	47	158
447	2308	Port Lucy	SS			Gw & qz float in stream	<5		<0.2	14		7	76	1	14	7	2.4	<5	189
448	2413	Port Lucy	SS			Stream in gw	<5		<0.2	24		10	99	1	19	15	3.07	<5	235
448	2528	Port Lucy	C	2	OC	Qz vn w/ 1% po hosted in gw	<5		<.2	197		2	4	<1	45	3	0.07	4	<10
449	2412	Port Lucy	SS			Gw float in stream	<5		<0.2	26		6	104	2	22	17	2.48	<5	110
450	2411	Port Lucy	SS			Gw float in stream	<5		<0.2	39		5	105	2	17	11	3.07	100	107
451	2410	Port Lucy	SS			Gw & gs float in stream	<5		<0.2	18		8	83	2	20	7	2.8	<5	151

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no	Sam no	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
415	9547		<5	0.33	<0.2	42	4.2	<2	18	0.6	7	43	1.41	823	0.02	4		<5	7	<20	27	<10	<10	0.16			76	<20	9	<1		
416	2323		<5	0.31	0.3	45	4.08	9	<10	0.96	13	37	1.62	729	0.03	1		<5	6	<20	22	<10	<10	0.21			85	<20	5	<1		
416	2329		<5	0.33	<0.2	47	4.28	7	14	0.84	9	30	1.69	749	0.03	2		<5	6	<20	21	<10	<10	0.21			86	<20	5	<1		
416	2449		<5	0.33	<0.2	47	3.84	7	12	0.78	9	26	1.56	685	0.02	1		<5	5	<20	20	<10	<10	0.2			80	<20	4	<1		
417	2330		<5	0.23	1.5	23	2	<2	52	0.15	<1	9	0.88	491	<0.01	3		37	<5	<20	13	34	19	0.1			44	<20	3	<1		
418	2322		<5	0.22	<0.2	51	3.94	9	32	0.79	10	26	1.44	711	0.03	3		<5	6	<20	21	<10	<10	0.21			91	<20	4	<1		
418	2441		<5	0.18	<0.2	45	3.12	8	17	0.84	9	44	1.31	536	0.04	2		<5	<5	<20	14	<10	<10	0.2			77	<20	3	<1		
419	2499		<5	0.41	<0.2	45	3.86	<2	23	0.64	7	35	1.32	649	0.03	4		<5	7	<20	29	<10	<10	0.16			83	<20	8	<1		
420	2417		<5	0.17	<0.2	46	2.72	6	23	0.29	6	24	1.33	360	0.02	2		<5	<5	<20	14	<10	<10	0.12			48	<20	4	<1		
421	9550		<5	0.3	<0.2	33	2.98	<2	38	0.12	5	20	0.81	1894	0.02	3		<5	<5	<20	23	<10	<10	0.11			59	<20	4	<1		
422	9552		<5	0.19	<0.2	33	3.16	<2	13	0.09	11	26	1.07	627	<0.01	2		<5	<5	<20	12	<10	<10	0.06			29	<20	8	<1		
423	2333		<5	0.35	<0.2	73	4.4	<2	40	0.42	8	35	1.52	814	0.03	4		<5	7	<20	32	<10	<10	0.18			92	<20	8	<1		
423	2334		<5	0.51	<0.2	62	4.49	<2	23	0.44	6	42	1.56	696	0.04	4		<5	7	<20	34	<10	<10	0.16			95	<20	8	<1		
424	9551		<5	0.42	<0.2	67	4.26	<2	<10	0.4	5	35	1.38	572	0.04	3		<5	6	<20	26	<10	<10	0.16			119	<20	7	<1		
425	9553		<5	0.22	<0.2	31	2.92	<2	19	0.32	7	22	1.02	477	0.01	3		<5	<5	<20	16	<10	<10	0.17			49	<20	5	<1		
426	2530	<.5	<2	0.06	<.5	224	0.51	<10	<10	0.03	<10		0.21	60	0.01		70	2	<1		2			<.01	<10	<10	9	<10				
427	2310		<5	0.25	<0.2	59	3.39	6	<10	0.39	8	22	1.49	621	0.02	2		<5	<5	<20	16	<10	<10	0.17			68	<20	5	<1		
428	9554		<5	0.35	<0.2	51	4.23	<2	21	0.44	7	37	1.4	575	0.02	3		<5	7	<20	19	<10	<10	0.15			83	<20	8	<1		
429	2416		<5	0.09	<0.2	57	3.5	8	20	0.42	7	25	1.46	543	0.03	3		<5	5	<20	11	<10	<10	0.15			85	<20	4	<1		
430	2309		<5	0.22	<0.2	50	4.95	6	34	0.63	12	35	1.58	831	0.02	2		<5	<5	<20	18	<10	<10	0.16			91	<20	5	<1		
430	2529	<.5	<2	0.02	<.5	241	0.3	<10	<10	<.01	<10		0.03	15	<.01		<10	2	<1		1			<.01	<10	<10	3	<10				
431	2415		<5	0.15	0.3	46	4.45	7	47	0.32	11	22	1.35	809	0.02	3		<5	<5	<20	18	<10	<10	0.13			80	<20	5	<1		
432	2414		<5	0.23	<0.2	47	4.35	8	39	0.59	12	30	1.51	638	0.03	3		<5	<5	<20	22	<10	<10	0.19			89	<20	5	<1		
433	9555		<5	0.32	<0.2	49	5.12	2	38	0.59	8	44	1.44	780	0.02	4		<5	6	<20	26	<10	<10	0.14			86	<20	9	<1		
434	2336		<5	0.33	<0.2	42	3.43	<2	26	0.56	8	31	1.15	563	0.03	4		<5	7	<20	27	<10	<10	0.19			78	<20	6	<1		
435	2335		<5	0.34	<0.2	56	5.02	<2	17	0.73	9	51	1.65	630	0.02	4		<5	7	<20	22	<10	<10	0.18			97	<20	9	<1		
436	9557		<5	0.23	<0.2	38	3.45	<2	21	0.68	7	25	1.1	484	0.02	4		<5	6	<20	16	<10	<10	0.2			72	<20	6	<1		
437	2321		<5	0.37	0.6	44	4.33	8	37	0.54	11	24	1.49	764	0.03	3		<5	<5	<20	33	<10	<10	0.16			81	<20	8	<1		
438	2439		<5	0.36	<0.2	55	3.65	6	45	0.63	10	27	1.22	1157	0.07	2		<5	<5	<20	34	<10	<10	0.18			94	<20	5	<1		
439	2320		<5	0.23	<0.2	36	3.02	6	65	0.34	6	14	0.97	692	0.02	3		<5	<5	<20	21	<10	<10	0.17			67	<20	4	<1		
440	2438		<5	0.28	<0.2	34	3.26	6	43	0.59	9	24	0.98	956	0.04	3		<5	<5	<20	26	<10	<10	0.16			62	<20	5	<1		
441	2337		<5	0.22	<0.2	48	3.92	<2	22	0.8	8	31	1.24	467	0.03	4		<5	8	<20	18	<10	<10	0.25			92	<20	5	<1		
442	2440		<5	0.16	<0.2	37	3.23	7	40	0.52	7	21	1.05	520	0.03	3		<5	<5	<20	13	<10	<10	0.19			71	<20	3	<1		
443	9556		<5	0.06	<0.2	45	4.12	<2	24	0.59	11	24	1.15	435	0.02	5		<5	7	<20	8	<10	<10	0.21			89	<20	5	<1		
444	2456		<5	0.2	0.2	41	3.27	7	79	0.56	12	18	0.97	636	0.03	4		<5	<5	<20	26	<10	<10	0.18			75	<20	3	<1		
445	2455		<5	0.24	<0.2	61	4.27	10	19	1.01	19	31	1.49	670	0.04	3		<5	6	<20	27	<10	<10	0.21			98	<20	3	<1		
446	2453		<5	0.09	0.3	33	2.89	8	35	0.42	7	20	1.06	331	0.02	4		<5	<5	<20	16	<10	<10	0.19			68	<20	2	<1		
446	2454		<5	0.18	<0.2	37	3.41	8	50	0.49	7	17	1.11	391	0.02	4		<5	<5	<20	22	<10	<10	0.19			75	<20	3	<1		
447	2307		<5	0.16	0.6	33	3.04	6	53	0.46	7	22	1.05	585	0.03	3		21	<5	<20	17	13	<10	0.17			67	<20	3	<1		
447	2308		<5	0.18	0.3	40	3.19	7	25	0.55	8	22	1.31	460	0.03	3		<5	<5	<20	25	<10	<10	0.21			74	<20	4	<1		
448	2413		<5	0.48	0.3	47	3.93	9	32	0.68	8	27	1.5	729	0.03	3		<5	6	<20	41	<10	<10	0.19			88	<20	4	<1		
448	2528	<.5	<2	0.02	<.5	278	0.44	<10	<10	0.01	<10		0.02	15	0.01		20	<2	<1		3			<.01	<10	<10	4	<10				
449	2412		<5	0.28	<0.2	56	3.8	7	27	0.41	10	29	1.39	598	0.04	2		<5	<5	<20	21	<10	<10	0.14			76	<20	4	<1		
450	2411		<5	0.16	1	55	5	7	44	0.44	11	40	1.65	658	0.02	3		40	<5	<20	15	30	19	0.14			93	<20	6	<1		
451	2410		<5	0.08	<0.2	65	4.24	9	33	0.48	9	27	1.58	460	0.02	3		<5	5	<20	10	<10	<10	0.18			98	<20	4	<1		

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam. no.	Location	Sam. type	Sample size (ft)	Sam. site	Sample description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	Mo ppm	Ni ppm	Co ppm	Al %	As ppm	Ba ppm
452	2409	Port Lucy	SS			Gw float in stream	<5	<0.2	36	9	95	3	34	21	2.65	<5	113
453	2408	Port Lucy	SS			Stream in gw	<5	<0.2	16	7	88	1	26	11	2.5	<5	162
454	2407	Port Lucy	SS			Gw float in stream	<5	<0.2	43	10	122	2	41	17	2.53	33	63
455	2527	Port Lucy	C	1	OC	Qz vn in gw	<5	<.2	120	<2	2	<1	25	1	0.02	<2	<10
456	2406	Miner Cove	SS			Stream in gw	<5	<0.2	24	6	97	<1	33	11	2.34	6	80
457	2024	Port Armstrong	Rep	1	OC	Qz vn, py/po <1%	<5	<.2	11	2	6	<1	7	1	0.2	4	70
458	2023	Port Armstrong	C	0.8x3	OC	Qz vn w/ ar partings, py along margins	<5	<.2	20	<2	16	<1	8	2	0.52	4	<10
459	2022	Port Armstrong	Rep	0.5	OC	Qz vn in gw w/ po in clots, locally	<5	<.2	8	4	10	<1	6	1	0.23	<2	<10
460	2405	Port Armstrong, head of	SS			Gw & qz float in stream	<5	<0.2	14	6	71	2	15	7	2.12	<5	117
461	9523	Betty Lake, SW of	SS				<5	<0.1	35	10	126	<1	20	17	2.97	<5	284
462	2331	Puffin Bay	SS			Gw float in stream	<5	<0.2	17	6	81	2	16	9	2.35	<5	151
462	2452	Puffin Bay	SS			Gw & tonalite float in stream	<5	<0.2	14	8	88	3	13	8	2.63	<5	178
463	2450	Puffin Bay	SS			Stream in hn gw	<5	<0.2	17	8	76	2	16	16	2.57	<5	214
463	2451	Puffin Bay	SS			Stream in hn gw	<5	<0.2	8	5	65	2	13	7	2.15	<5	212
464	2472	Puffin Bay	SS				<5	<0.1	11	7	53	<1	10	11	1.59	<5	196
464	2473	Puffin Bay	SS			Granite float in stream	<5	<0.1	6	9	40	<1	8	5	1.3	<5	130
464	9517	Puffin Bay	SS			Stream in gw w/ qz vns	<5	<0.1	17	8	88	<1	14	18	2.55	<5	259
465	9518	Little Puffin Bay, head of	SS				<5	<0.1	79	8	120	<1	40	18	2.75	10	339
466	2476	Leona Lake, S of	SS			Stream in gw	<5	<0.1	33	13	135	<1	23	20	3.16	<5	253
467	9522	Leona Lake, W creek	SS				<5	<0.1	28	9	110	<1	18	17	2.94	<5	283
468	2404	John Bay	SS			Stream in gw	<5	<0.2	30	13	71	2	16	9	4.07	<5	81
469	2305	John Bay	SS			Stream in gw w/ some qz vns	<5	0.3	18	4	65	<1	14	28	2.04	149	106
469	2306	John Bay	Rep	1	OC	Qz w/ ar partings, cp & po	<5	1.5	359	122	46	2	12	3	0.13	<5	36
470	2304	Port Conclusion	SS			Stream in gw	<5	<0.2	6	5	49	2	13	5	1.65	<5	103
471	2032	Port Conclusion	S	5.3	OC	Qz vns w/ gw selvage, up to 5% py	<5	0.2	455	44	238	1	6	13	0.19	<2	<10
472	2303	Port Conclusion	SS			Stream in gw	<5	<0.2	14	9	53	2	14	8	1.9	<5	100
473	2031	Port Conclusion	S	0.25x15	OC	Qz vn w/ ar selvage, py/po	45	0.2	188	6	60	12	76	16	0.48	<2	10
474	2403	Port Conclusion	SS			Stream in gw	<5	<0.2	24	6	94	2	18	11	2.49	<5	143
475	2030	Port Conclusion	Rep	30	OC	Qz vns w/ gw partings, py/po to 1%	<5	<.2	25	<2	18	<1	9	4	0.41	2	30
476	9521	Port Conclusion, W of	SS				<5	<0.1	24	9	105	<1	20	11	2.77	<5	180
477	9519	Larch Bay, head of	SS				<5	0.2	27	7	98	<1	21	16	2.81	<5	251
478	2402	Port Conclusion	SS			Stream in gw	<5	<0.2	31	6	102	2	21	17	2.68	<5	155
479	2302	Port Conclusion	SS			Stream in gw w/ qz float	<5	<0.2	45	13	150	2	34	19	3.26	<5	123
479	2401	Port Conclusion	SS			Gw & qz float in stream	<5	<0.2	27	10	95	3	21	14	2.74	<5	118
480	2029	Port Conclusion	Rep	40	OC	Qz vns w/ qz br, ar, py/po <1%	<5	<.2	24	2	20	<1	8	2	0.81	<2	10
481	2027	Port Conclusion	Rep	20	OC	Sil gw sc w/ qz vns, py to 1%, fest	<5	<.2	26	2	22	<1	8	3	1.13	10	10
482	2026	Port Conclusion	Rep		OC	Qz vns w/ gw partings, trace py/po	<5	<.2	3	2	4	<1	4	1	0.07	2	<10
483	2025	Port Conclusion	Rep	75	OC	Qz vns w/ minor py	<5	<.2	6	2	8	<1	5	1	0.12	18	<10
484	2301	Port Alexander	G		OC	Sil volc w/ py, aspy & cp?	<5	0.2	160	6	21	2	29	5	0.31	1249	130
485	2300	Port Alexander	G		OC	Metavolc w/ minor sulf	3220	0.5	141	11	161	2	47	16	3.34	64	76
486	2474	Larch Bay, S of	SS			Stream in granite	<5	0.2	11	56	74	<1	12	11	1.77	6	169
487	2475	Cape Ommaney	SS	0.2	OC	Gs w/ 15% po	<5	0.6	1148	4	34	<1	72	116	2.21	<5	11
487	9520	Cape Ommaney	Rep		OC	Gs	<5	<0.1	82	3	41	2	21	20	1.32	<5	3

Table B-1. Analytical results of samples from mines, prospects, and occurences

Map no.	Sam no.	Be ppm	Bi ppm	Ca %	Cd ppm	Cr ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Na %	Nb ppm	P ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zr ppm	Pt ppb	Pd ppb
452	2409		<5	0.47	0.2	69	3.85	7	53	0.31	6	24	1.45	885	0.03	2		<5	5	<20	22	<10	<10	0.15			93	<20	5	<1		
453	2408		<5	0.23	<0.2	61	3.11	7	36	0.47	7	20	1.41	665	0.03	3		<5	<5	<20	26	<10	<10	0.17			66	<20	4	<1		
454	2407		<5	0.39	0.4	54	3.83	6	19	0.22	8	29	1.59	822	0.02	2		<5	<5	<20	41	<10	<10	0.12			65	<20	5	<1		
455	2527	<.5	<2	0.06	<.5	261	0.29	<10	<10	<.01	<10		0.01	20	<.01		<10	<2	<1		1			<.01	<10	<10	2	<10				
456	2406		<5	0.18	<0.2	55	3.49	6	<10	0.28	8	28	1.52	583	0.02	2		<5	<5	<20	21	<10	<10	0.13			61	<20	4	<1		
457	2024	<.5	<2	0.09	<.5	340	0.55	<10	10	0.06	<10		0.07	55	0.03		90	<2	<1		7			0.01	<10	<10	6	<10				
458	2023	<.5	<2	0.23	<.5	326	0.98	<10	<10	0.02	<10		0.23	95	0.02		120	<2	1		2			0.01	<10	<10	16	<10				
459	2022	<.5	<2	0.1	<.5	272	0.61	<10	<10	0.02	<10		0.12	50	0.02		170	<2	<1		6			<.01	<10	<10	7	<10				
460	2405		<5	0.15	<0.2	39	3.05	8	23	0.46	9	30	1.17	427	0.03	3		<5	<5	<20	17	<10	<10	0.16			65	<20	4	<1		
461	9523		<5	0.44	<0.2	45	4.16	<2	22	0.74	9	39	1.36	560	0.03	4		<5	8	<20	39	<10	<10	0.19			87	<20	7	<1		
462	2331		<5	0.22	<0.2	34	3.14	7	24	0.41	7	18	1.24	501	0.02	3		<5	<5	<20	27	<10	<10	0.19			69	<20	3	<1		
462	2452		<5	0.35	<0.2	40	3.41	8	18	0.59	8	26	1.29	547	0.03	3		<5	<5	<20	28	<10	<10	0.2			75	<20	3	<1		
463	2450		<5	0.18	<0.2	45	3.54	6	53	0.52	7	21	1.2	641	0.03	4		<5	<5	<20	20	<10	<10	0.19			81	<20	3	<1		
463	2451		<5	0.08	<0.2	45	3.44	8	23	0.55	5	18	1.22	454	0.02	3		<5	<5	<20	11	<10	<10	0.23			87	<20	2	<1		
464	2472		<5	0.21	<0.2	27	2.18	<2	27	0.51	7	21	0.79	399	0.03	4		<5	<5	<20	15	<10	<10	0.13			54	<20	4	<1		
464	2473		<5	0.13	<0.2	26	2.52	<2	42	0.32	5	13	0.59	198	0.03	4		<5	<5	<20	13	<10	<10	0.11			58	<20	2	<1		
464	9517		<5	0.3	<0.2	38	3.43	<2	33	0.73	6	32	1.07	620	0.03	4		<5	6	<20	21	<10	<10	0.18			79	<20	4	<1		
465	9518		<5	0.32	<0.2	52	4.03	<2	16	0.85	8	53	1.38	568	0.03	4		<5	8	<20	25	<10	<10	0.23			94	<20	6	<1		
466	2476		<5	0.59	<0.2	47	4.15	<2	23	0.69	9	39	1.32	596	0.03	4		<5	7	<20	64	<10	<10	0.18			86	<20	7	<1		
467	9522		<5	0.5	<0.2	41	4.11	<2	35	0.79	7	36	1.29	539	0.03	4		<5	7	<20	36	<10	<10	0.18			85	<20	6	<1		
468	2404		<5	1.84	0.3	37	2.42	9	<10	0.44	6	21	0.99	451	0.05	<1		<5	<5	<20	128	<10	<10	0.1			56	<20	2	<1		
469	2305		<5	0.49	2.2	36	3.39	<2	64	0.26	1	22	1.14	950	0.03	3		61	<5	<20	42	51	30	0.12			63	<20	4	<1		
469	2306		<5	0.1	<0.2	294	0.46	<2	<10	0.04	<1	1	0.03	149	<0.01	<1		<5	<5	<20	3	<10	<10	<0.01			4	<20	1	1		
470	2304		<5	0.09	<0.2	43	2.5	8	34	0.29	5	18	1.09	299	0.02	2		<5	<5	<20	13	<10	<10	0.14			64	<20	3	<1		
471	2032	<.5	<2	0.04	0.5	204	1.42	<10	<10	0.04	<10		0.07	40	<.01		50	<2	<1		3			0.01	<10	<10	6	<10				
472	2303		<5	0.17	<0.2	48	2.77	7	54	0.25	4	14	1	370	0.02	3		<5	<5	<20	23	<10	<10	0.13			64	<20	2	<1		
473	2031	<.5	<2	0.63	<.5	188	3.94	<10	<10	0.03	10		0.12	4400	0.02		1300	<2	1		42			0.03	<10	<10	49	<10				
474	2403		<5	0.34	<0.2	52	3.51	7	17	0.48	9	32	1.42	581	0.03	1		<5	<5	<20	24	<10	<10	0.16			78	<20	3	<1		
475	2030	<.5	<2	0.66	<.5	347	0.9	<10	<10	0.11	<10		0.17	135	0.04		230	4	1		35			0.02	<10	<10	15	<10				
476	9521		<5	0.37	<0.2	44	4.23	2	24	0.43	9	31	1.13	297	0.03	4		<5	6	<20	45	<10	<10	0.15			80	<20	5	<1		
477	9519		<5	0.41	<0.2	41	3.29	<2	46	0.53	6	33	1.02	424	0.03	5		<5	6	<20	41	<10	<10	0.15			75	<20	4	<1		
478	2402		<5	0.42	<0.2	42	3.59	7	41	0.49	11	32	1.27	660	0.04	2		<5	<5	<20	39	<10	<10	0.16			78	<20	4	<1		
479	2302		<5	0.3	<0.2	44	3.98	8	61	0.32	10	30	1.25	597	0.03	3		<5	<5	<20	54	<10	<10	0.14			74	<20	5	<1		
479	2401		<5	0.3	<0.2	44	3.76	8	40	0.42	12	35	1.29	600	0.04	2		<5	<5	<20	42	<10	<10	0.15			77	<20	4	<1		
480	2029	<.5	<2	1.99	<.5	341	0.89	<10	<10	0.08	<10		0.2	300	0.05		350	<2	1		37			0.01	<10	<10	16	<10				
481	2027	<.5	<2	1.27	<.5	149	0.92	<10	10	0.05	<10		0.25	205	0.09		810	2	1		46			0.01	<10	<10	18	<10				
482	2026	<.5	<2	0.07	<.5	249	0.34	<10	<10	<.01	<10		0.04	20	<.01		20	2	<1		2			<.01	<10	<10	3	<10				
483	2025	<.5	<2	0.32	<.5	287	0.47	<10	<10	0.01	<10		0.07	135	<.01		60	<2	<1		8			0.01	<10	<10	6	<10				
484	2301		<5	0.14	<0.2	138	4.47	<2	<10	0.2	9	2	0.07	999	0.03	<1		<5	<5	<20	37	<10	<10	0.01			60	<20	3	<1		
485	2300		8	0.46	<0.2	199	8.04	7	13	0.27	22	36	1.6	820	0.04	1		<5	6	<20	41	<10	<10	0.05			63	<20	5	<1		
486	2474		<5	0.19	<0.2	29	2.52	<2	36	0.38	7	21	0.76	395	0.02	4		<5	<5	<20	16	<10	<10	0.15			57	<20	4	<1		
487	2475		<5	0.31	<0.2	41	10	<2	<10	0.08	<1	18	1.6	350	0.06	2		<5	<5	<20	12	<10	<10	0.04			44	<20	<1	2		
487	9520		<5	0.96	<0.2	118	3.65	<2	<10	0.13	<1	10	1.25	258	0.11	2		<5	7	<20	40	<10	<10	0.15			67	<20	6	2		

Table B-2. Analytical results of REE samples

Map no.	Sam no.	Location	Sam type	Sample size (ft)	Sam site	Sample description	La ppm	Ce ppm	Nd ppm	Sm ppm	Eu ppm	Tb ppm	Yb ppm	Lu ppm	Th ppm	U ppm
27	1388	Salt Lake Bay	S		TP	K-spar peg dike w/ py seams (1%)	22	43	15	2.9	<.5	<.5	2.6	0.4	22	7
31	1386	Salt Lake Bay	S	0.5	TP	Hem in clay gouge in sheared gd	10	18	<5	0.7	0.4	<.5	0.5	0.1	15	6
112	1224	Kadashan Bay	Rep		TP	Syenite w/ little to no qz; minor py	55	94	29	4.7	0.6	0.8	5.4	0.8	41	22
112	1373	Kadashan Bay	Rep	2	TP	Alt syenite along shear	42	76	25	4.3	<.5	0.7	4.8	0.8	30	18
114	1233	Trap Bay	Rep		OC	Minor py, trace cp, in aplite dike in hn	13	25	9	1.5	0.2	<.5	2.1	0.4	31	15
116	1225	Corner Creek	Rep	1	TP	Alt syenite inclusion in di; py to 2%	49	88	31	5.3	1.1	0.9	3.6	0.5	25	11
117	1377	Corner Creek	Rep		TP	Highly fractured syenite	19	38	16	3.6	0.8	<.5	1.6	0.3	3.8	3
118	1378	Kook Lake	SS			Syenite, metavolc, & ls float	67	125	46	7	1.6	0.8	3	0.5	10.1	8
119	1379	Kook Lake	SS			Volc and syenite float	44	87	37	6.2	1.5	0.6	2.7	0.4	7.8	9
120	1228	Kook Lake	SS			Gd, syenite & mafic dike rock as float	49	93	37	5.8	1.3	0.5	3.8	0.6	10.4	13
121	1226	Kook Lake	Rep		TP	Py & cp in clots to 5% in syenite	31	69	31	5	1	0.6	1.7	0.3	4.1	3
122	1227	Kook Lake	SS			Gd, syenite, & volc as float	65	119	40	6.3	1.2	0.9	6.4	1.1	13.9	19
123	1362	Sitkoh Bay	SS			Area of intrusives w/ minor marble	40	75	34	5.9	1.4	0.8	2.6	0.4	6.4	8
124	1363	Sitkoh Bay	Rep		OC	Felsic dike in hn & tonalite	11	22	8	1.3	<.5	<.5	0.5	<.1	5.5	3
125	1217	Sitkoh Bay	S		RC	Clots of py/po in trondhjemite	20	40	18	3.2	1.2	0.5	1.6	0.2	3.6	3
128	1215	Sitkoh Bay	Rep	2	OC	Syenite w/ thin black silicate veinlets	21	37	18	2.6	1.2	<.5	1.2	0.2	3.6	2
128	1359	Sitkoh Bay	Rep	2.6	OC	Diabase dike in alkalic int; po <1%	13	30	18	4	1.3	0.6	1.9	0.3	2	2
129	1214	Sitkoh Bay	Rep		OC	K-spar-rich syenite	33	59	21	3.3	1.4	0.5	2.1	0.3	7.6	5
129	1358	Sitkoh Bay	S		RC	Alkalic intrusive w/ py ~1%	32	55	15	2.9	1.4	<.5	1.8	0.3	9.1	14
130	1213	Sitkoh Bay	S	0.1	OC	Alt tonalite in shear w/ py/po to 10%	22	51	28	6	1.7	0.7	1.6	0.3	2.7	<1
133	1211	Sitkoh Bay	Rep		OC	Cg bt-hnbd tonalite w/ finely dissem py	14	30	18	4.5	1.1	0.9	3	0.5	1.1	<1

Table B-3. Analytical results of carbonate/whole rock samples

Map no.	Sam no.	Location	Sam type	Sample size (ft)	Sam site	Sample description	Al_2O_3 %	CaO %	Cr_2O_3 %	Fe_2O_3 %	K_2O %	MgO %	MnO %	Na_2O %	P_2O_5 %	SiO_2 %	TiO_2 %	LOI %	$CaCO_3$ %	TOTAL %
4	LS9	Westport			OC		0.75	46.06	0.02	0.66	0.14	4.76	0.02	0.06	0.01	5.27	0.03	41.4	82.25	99.43
5	LS8	Westport			OC		0.59	50.09	<.01	0.39	0.12	2.19	0.02	0.03	0.01	4.23	0.03	41.7	89.45	99.47
6	LS7	Westport			OC		0.31	51.92	0.01	0.42	0.07	2.32	0.03	0.03	0.01	1.05	0.03	43.5	92.71	99.42
7	LS5	Westport	SC	150 @ 10	OC	Dark gray, fg, bedded	0.58	51.9	<.01	0.45	0.13	1.45	0.01	0.03	0.05	2.55	0.03	42.1	92.68	99.10
8	LS4	Westport	SC	150 @ 10	OC	Dark gray, fg, fossiliferous	0.71	51.5	<.01	0.37	0.14	1.79	<.01	0.01	0.08	2.48	0.03	42.3	91.96	99.70
56	LS1	False Bay	SC	200 @ 10	TP	Micritic, clots of organics	0.6	51.17	<0.01	0.58	0.18	2.08	0.01	0.11	<0.01	1.73	0.02	42.21	91.38	98.69
56	LS2	False Bay	SC	200 @ 10	TP	Micritic, clots of organics	0.41	50.11	<0.01	0.45	0.12	3.25	0.02	0.08	<0.01	1.16	0.01	42.87	89.48	98.48
74	LS3	Seal Creek			OC	Gray-white banded, some sulf	0.18	48.97	<.01	0.12	0.06	6.18	<.01	<.01	<.01	1.85	0.01	43	87.45	99.29
301	2377	Mt. Muravief, W. Ridge	Rep		OC	Greenstone	15.08	2.23	0.02	5.22	1.62	2.14	0.16	2.96	0.16	65.31	0.72	2.25		98.00
301	2378	Mt. Muravief, W. Ridge	Rep		OC	Graywacke	16.86	8.53	0.06	10.99	0.31	6.28	0.16	0.70	0.14	46.79	1.45	6.80		99.12
301	2379	Mt. Muravief, W. Ridge	Rep		OC	Altered schist	1.48	0.03	0.02	1.68	0.35	0.08	0.02	<.01	0.01	89.57	0.14	4.19		97.59

Table B-4. Detection limits by analytical technique

Fire assay

Element	Minimum, ppm	Finish Method
Au	0.005	AA (Chemex & Bondar Clegg)
Au	0.005 oz/t	gravimetric (Bondar Clegg)
Au	0.07 oz/t	gravimetric (Chemex)
Pd	0.002	ICP (Chemex)
Pt	0.005	ICP (Chemex)

Atomic absorption spectrophotometry (AA)

Element	Min, ppm Chemex	Min, ppm Bondar Clegg
Ag	0.2	0.1
Cu	1	1
Pb	1	2
Zn	1	1
Mo	1	1
Co	1	1
Ni	1	1
Hg	0.01	0.01

Element	Min, % Chemex	Min, % Bondar Clegg
Cu, ore-grade	0.01	0.01
Pb, ore-grade	0.01	N/A
Zn, ore-grade	0.01	N/A
Ni, ore-grade	0.01	N/A

Inductively coupled argon plasma atomic emission spectroscopy (ICP)

Element	Min, ppm Chemex	Min, ppm Bondar Clegg
Ag	0.2	0.2
Cu	1	1
Pb	2	2
Zn	2	1
Mo	1	1
Ni	1	1
Co	1	1
Al	100	100
As	2	5
Ba	10	1
Be	0.5	
Bi	2	5
Ca	100	100
Cd	0.5	0.2
Cr	1	1

Element	Min, ppm Chemex	Min, ppm Bondar Clegg
Fe	100	100
Ga	10	2
K	100	100
La	10	1
Li	N/A	1
Mg	100	100
Mn	5	1
Na	100	100
Nb	N/A	1
P	10	N/A
Sb	2	5
Sc	1	5
Sn	N/A	20

ICP Spectroscopy continued

Element	Min, ppm Chemex	Min,ppm Bondar Clegg	Element	Min, ppm Chemex	Min,ppm Bondar Clegg
Sr	1	1	U	10	N/A
Ta	N/A	10	V	1	1
Te	N/A	10	W	10	20
Ti	100	100	Y	N/A	1
Tl	10	N/A	Zr	N/A	1

Detection Limits - Neutron activation analysis

Element	Min, ppm
La	1
Ce	2
Nd	5
Sm	0.1
Eu	0.5
Tb	0.5
Yb	0.5
Lu	0.1
Th	0.5
U	1

X-ray fluorescence spectroscopy (XRF)

Element	Min, %	Max, %
Al_2O_3	0.01	100
CaO	0.01	100
Cr_2O_3	0.01	100
Fe_2O_3	0.01	100
K_2O	0.01	100
MgO	0.01	100
MnO	0.01	100
Na_2O	0.01	100
P_2O_5	0.01	100
SiO_2	0.01	100
TiO_2	0.01	100
LOI	0.01	100

Titration

Element	Min, %	Max, %
$CaCO_3$	0.01	100

Appendix C - Alphabetical List of Mines, Prospects, and Mineral Occurrences

Table C-1. List of mines, prospects, and mineral occurrences

Name	Prospect no. (Plate 1)	Map no. (Plate 2, Table B-1)
Alaska Chichagof	P71	
American Gold Company	P69	
Anderson	P83	
Andy	P79	
Apex	P120	212
Apex El Nido	P17	
Baldy Lode	P25	103
Baney	P67	
Baranof Queen	P122	
Basket Bay	P30	
Basoiniuer	P62	
Bauer	P64	
Bauer	P132	223
Bertha Bay	P41	
Big Ledge	P24	106
Black Hawk & Susie Groups	P104	
Bohemia Basin	P11	
Bon Tara Mine	P12	
Bonanza	P2	
Boston Claim	P116	
Bullion	P119	
Cable Claims	P32	
Calcium Carbonate Time	P55	
Camel Gypsum	P20	
Cascade	P114	
Chichagof Star	P86	
Chichagof Prosperity	P63	
Chichagof	P75	141
Cobol Mine	P91	
Columbia Point	P27	
Columbine Group	P16	
Column Point	P7	
Congress	P52	
Cox Brothers	P48	
Crow Point	P3	
Cub Mountain	P35	

Name	Prospect no. (Plate 1)	Map no. (Plate 2, Table B-1)
Deep Bay	P97	152-155
Discovery on 1st Teer	P56	
Eagle Group	P58	
East Point Pit	P23	104
Edgecumbe Exploration	P125	215
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Table C-1. List of mines, prospects, and mineral occurrences

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