

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUMMARY OF REFERENCES TO MINERAL OCCURRENCES
(OTHER THAN MINERAL FUELS AND CONSTRUCTION MATERIALS)
IN THE PORT ALEXANDER QUADRANGLE, ALASKA

By

Edward H. Cobb

Open-file Report 78-787

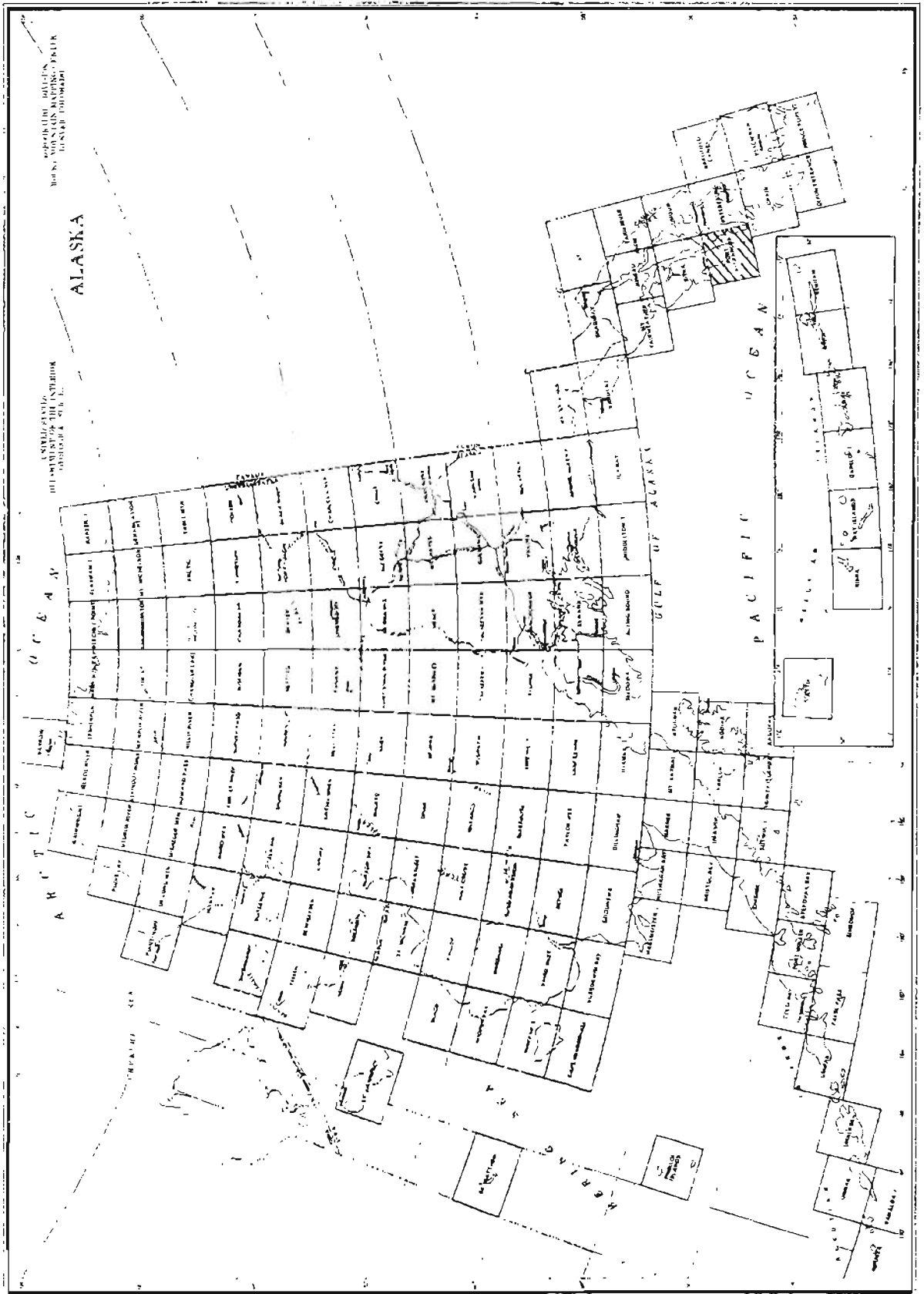
1978

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

Introduction

These summaries of references are designed to aid in library research on metallic and nonmetallic (other than mineral fuels and construction materials) mineral occurrences in the Port Alexander quadrangle, Alaska. All references to reports of the Geological Survey, to most reports of the U.S. Bureau of Mines, and to most reports of the State of Alaska Division of Geological and Geophysical Surveys and its predecessor State and Territorial agencies released before May 1, 1978, are summarized. Certain, mainly statistical, reports such as the annual Minerals Yearbook of the U.S. Bureau of Mines and the biennial and annual reports of the State of Alaska Division of Geological and Geophysical Surveys and its predecessor State and Territorial agencies are not included.

This report is divided into three parts: a section made up of summaries of references arranged alphabetically by occurrence name; a section that lists synonyms for names in the first section, claim names, and the names of operators and owners of mines and prospects; and a section that lists, by author, all references summarized in the first section.



Index map

Summaries of References

For each mineral occurrence there is a page that gives the name of the occurrence; the mineral commodities present (listed alphabetically for metallic commodities and then for nonmetallic commodities); the mining district (Ransome and Kerns, 1954) in which the occurrence is located; the name of the 1:250,000-scale topographic quadrangle (Port Alexander); coordinates (as described by Cobb and Kachadoorian, 1961, p. 3-4); the metallic mineral resources map number (MF-464) and the occurrence number on the map if the occurrence is shown; and the latitude and longitude of the occurrence. This is followed (continued on additional pages, if necessary) by more detailed summaries, arranged chronologically, of all references to the occurrence. Material in brackets is interpretive or explanatory and is not in the summarized reference.

Proper names of mines, prospects, and other mineral occurrences are given if such names appear in the reports summarized. If a deposit does not have such a name, but is near a named geographic feature, the name of that feature is shown in parentheses in lieu of a proper name.

Citations are given in standard bibliographic format with the exception that references to reports and maps in numbered publication series also show, in parentheses, an abbreviation for the report or map series and the report or map number. Abbreviations used are:

- B U.S. Geological Survey Bulletin
- C U.S. Geological Survey Circular
- GR Alaska Division of Geological and Geophysical Surveys
Geologic Report
- IC U.S. Bureau of Mines Information Circular

MF U.S. Geological Survey Miscellaneous Field Studies Map
P U.S. Geological Survey Professional Paper

Summaries are as I made them while reading the cited reports.

I made no attempt to use complete sentences and did not edit for grammatical consistency, although I have tried to edit out ambiguities.

References used only in these introductory paragraphs are:

Cobb, E. H., and Kachadoorian, Reuben, 1961, Index of metallic and nonmetallic mineral deposits of Alaska compiled from published reports of Federal and State agencies through 1959: U.S. Geological Survey Bulletin 1139, 363 p.

Ransome, A. L., and Kerns, W. H., 1954, Names and definitions of regions, districts, and subdistricts in Alaska (used by the Bureau of Mines in statistical and economic studies covering the mineral industry of the Territory): U.S. Bureau of Mines Information Circular 7679, 91 p.

Bauer

Gold

Chichagof district
MF-464, loc. 3

Port Alexander (8.6. 17.0)
56° 58' N, 135° 06' W

Summary: Cryptocrystalline quartzite as much as 16 ft. thick with thin quartz veinlets contains pyrite, pyrrhotite, and auriferous arsenopyrite; said to carry about 0.22 oz. gold per ton. Country rock mainly graywacke. About 1,050 ft. of workings. No record of production or of any activity since early 1900's. Includes references to Haley & Rogers.

Becker, 1898, p. 63. -- Minerals identified include arsenopyrite.

p. 79 -- Country rock is slate. Quartz vein several feet wide strikes N60°W and dips 70°NE; does not follow schistosity of country rock; said to have been a rich streak along footwall. Pyrite present; arsenopyrite on dump carries free gold.

Wright and Wright, 1905 (B 259), p. 53 -- Crosscut 900 ft. long reaches vein, which is 16 ft. wide at a depth of about 400 ft.; also crossed several smaller veins. Main vein said to average \$4.50 [about 0.22 oz.] a ton in gold. Only assessment work in 1904.

Knopf, 1912 (B 504), p. 27-28 -- Crosscut driven 900 ft. through graywacke encountered "several smaller ledges striking parallel with the formation." Main ledge reached at end of tunnel at a depth of 400 ft. below surface; followed for 150 ft. by a drift. Ledge consists of cryptocrystalline quartzite with narrow quartz veinlets; leanly mineralized with pyrrhotite. Hanging wall slate; footwall graywacke.

Bullion

Gold(?)

Chichagof district

Port Alexander (8.5, 17.5) approx.(?)
56°59'N, 135°07'W approx. (?)

Summary: Gold prospect in Silver Bay area; may be in Sitka quad.

Wright and Wright, 1905 (B 259), p. 58 -- Prospect in Silver Bay area.

Knopf, 1912 (B 504), p. 29 -- Quotation [not credited] of above.

Cache

Gold, Silver

Chichagof district
MF-464, loc. 4

Port Alexander (8.7, 17.1)
56°59'N, 135°06'W

Summary: Located in 1872. Irregular body of quartz (average thickness about 10 ft.) followed by 3 drifts (longest 160 ft. long). Unknown amount of ore mined and milled, probably all in 1870's and/or 1880's. Reported to have averaged about 0.36 oz. per ton in gold and some silver. Includes references to Stewart.

Becker, 1898, p. 63 -- Minerals identified include arsenopyrite.

p. 79 -- Stringer lead as much as 15 ft. (average about 8 ft.) wide carries pyrite and arsenopyrite. Ruined mill on property. Could not find out amount of production.

Wright and Wright, 1905 (B 259), p. 57-58 -- Only patented claim in area. Quartz ledge 4-12 ft. wide strikes N70°W, parallel to slate country rock. 3 tunnels 50-150 ft. long. Considerable ore has been stoped out and milled in 10-stamp mill on property. Ore reported to have averaged \$7.50 [about 0.36 oz.] a ton in gold.

Wright and Wright, 1906 (B 284), p. 45 -- Low-grade gold- and silver-bearing ore. No more than assessment work, 1905.

Wright, 1907 (B 314), p. 60 -- Has been development work, but not for a number of years [as of 1906].

Knopf, 1912 (B 504), p. 27 -- Located in 1872, 10-stamp mill built in 1879. 3 drifts with aggregate length of 300 ft. Longest is 160 ft. long, trends S70°E, and follows irregular body of quartz from 4 to 13 ft. (average about 10 ft.) thick; practically no sulfides visible except for pyrite in a streak on one wall. Other tunnels show similar features, but less quartz. Surface improvements in ruins or overgrown in 1910; property in litigation for many years.

Kaufman, 1958 (IC 7844), p. 7 -- Mining began 1877. Not enough water to operate mill on property.

Noel, 1966, p. 53 -- First lode mine in southeastern Alaska.

(Cornwallis Peninsula)

Barite, Witherite

Kupreanof district

Port Alexander (17.2-17.3, 16.35-16.5)
56°55'-56°56'N, 134°12'-134°13'W

Summary: Small bodies of barite and witherite in fractures in volcanic rocks. See also (Kulu I.).

Buddington, 1925 (B 773), p. 136 -- Felsic breccias at NW end of island 3 mi. SE of Point Cornwallis cut by veinlets of barite several inches wide.

Twenhofel and others, 1949 (B 963-A), p. 40-42 -- On mainland bunches of barite as much as 5 ft. in diameter, a barite vein 1-1½ ft. wide and 200 ft. long, and many short barite veinlets occupy fractures in volcanic rocks exposed in a wave-cut bench. Small witherite stringers occupy other fractures, and, rarely, some of the same fractures as barite.

Kaufman, 1958 (IC 7844), p. 9 -- Small fissure veins containing barite in limestone, conglomerate, and volcanic rock at Cornwallis Bay [sic] and Saginaw Bay and on St. Ignace I. [Sitka quad.]

Eureka

Copper, Gold(?)

Chichagof district
MF-464, loc. 2

Port Alexander (8.05, 17.1)
56°59'N, 135°09'W

Summary: Quartz stringer lead in slate contains pyrite and chalcopyrite.
No data on possible gold content. Very little development.

Becker, 1898, p. 62 -- Minerals identified include chalcopyrite.
p. 79 -- Stringer lead of pyritiferous quartz in slate near dikes
and brecciated masses of diorite. Insignificant amount of develop-
ment.

Free Gold

Gold(?)

Chichagof district

Port Alexander (9.1, 16.9)
56°58'N, 135°03'W

Summary: Gold prospect in Silver Bay area.

Wright and Wright, 1905 (B 259), p. 58 -- Prospect in Silver Bay area.
Knopf, 1912 (B 504), p. 29 -- Quotation [not credited] from above.

(Goddard Hot Springs)

Monazite, Rare-earth elements, Tungsten

Chichagof district
MF-464, locs. 18, 19

Port Alexander (6.1-6.2, 14.56-14.8)
56°50'-56°51'N, 135°21'-135°22'W

Summary: Bedrock is granite cut by narrow lamprophyre dikes; 4 hot springs. Heavy-mineral concentrates from slopewash and stream-gravel samples contained as much as 7% allanite and traces of rutile, monazite, and scheelite. Highest eU 0.016%.

West and Benson, 1955 (B 1024-B), p. 47-49 -- Bedrock is granite cut by narrow lamprophyredikes; 4 hot springs. Samples of slopewash from granite and of sand and gravel from streams contained (in heavy-mineral fractions) as much as 7% allanite and traces of rutile, monazite, and scheelite; highest eU was 0.016%.

Overstreet, 1967 (P 530), p. 108-109 -- Data from above.

Cobb, 1973 (B 1374), p. 105 -- Heavy-mineral concentrates contained as much as 7% allanite and traces of monazite and scheelite.

Eakins, 1975 (GR 44), p. 12 -- Reference to West and Benson, 1955 B 1024-B), p. 47-49.

Hill

Chromite

Chichagof district
MF- 464, locs. 6-13

Port Alexander (9.6-10.4, 15.75-16.8)
56°54'-56°57'N, 134°55'-135°00'W

Summary: Small lenses, thin layers, and disseminated grains of chromite occur in small serpentinite bodies (originally dunite and pyroxenite) in a belt in central Baranof Island. Deposits are small, low grade, inaccessible, and not of commercial significance.

Guild and Balsley, 1942 (B 936-G), p. 173-174 -- Claims for chromite staked on serpentine masses in central Baranof I. in 1935, but were abandoned. Chromite occurs as small lenses, thin layers, and disseminated grains in ultramafic rocks that intruded Triassic(?) phyllites and greenstone schists.

p. 177-180 -- Ultramafic masses are sill-like concordant bodies that strike about N50°W, dip steeply NE, and parallel overturned bedding in phyllite. Chromite occurs as small tabular or lenticular masses associated with dunite rather than with pyroxenite. Ultramafic rocks are all serpentinitized now. Chromite deposition began before crystallization of silicate minerals. Chromite bodies are all small and contain probably no more than a few hundred tons in all.

Kennedy and Walton, 1946 (B 947-D), p. 72-73 -- Quotation from above. Ultramafic sills are more numerous and less continuous than inferred by Guild and Balsley; pinch and swell along strike and crop out as lenticular masses. Slight contact metamorphism of surrounding rocks. Chromite is an abundant accessory mineral, occurring as scattered octahedral crystals, as aggregates as much as 3 in. across, and as streaks and seams as much as 3 ft. long and a few inches wide. No concentrations of sufficient size or grade to constitute ore were found.

Berg and Cobb, 1967 (B 1246), p. 145 -- Chromite forms small lenses, thin layers, and disseminated small grains in altered dunite and pyroxenite. Deposits, mostly in dunite, are small; probably contain no more than 100 tons of chromite.

Loney and others, 1975 (P 792), p. 92 -- Small quantities of chromite in a belt of small serpentinite bodies near the center of Baranof I. extending from near Red Bluff Bay to north of Sitka [Sitka quad.]. Deposits are all small, low grade, inaccessible, and "clearly of no commercial significance."

(Keku Islet, metals)

Silver, Zinc

Kupreanof district
MF-464, loc. 16

Port Alexander (17.85, 16.45)
56°56'N, 134°08'W

Summary: Sphalerite in transverse fractures in a basalt dike of probable Tertiary age in gently warped sandstone and conglomerate. Dike next to fractures altered with feldspars partially replaced by calcite. Country rocks next to dike shattered; contain pyrite and marcasite that have been minutely brecciated and the fractures filled with sphalerite. Sample of sphalerite-rich material contained 37.4% zinc, 0.24 oz. silver per ton, and a doubtful trace of gold.

Buddington, 1925 (B 773), p. 137-139 -- Gently warped interbedded sandstone and conglomerate cut by basalt dikes. One dike that splits into two branches separated by conglomerate is crossed by many fractures filled with sphalerite; wall rock altered with calcite partially replacing feldspars; locally sphalerite impregnated altered rock. Veinlets also along contacts between dike and country rock, where sphalerite fills minute cracks in pyrite and marcasite. Sparse pyrite in altered basalt, but only traces in sphalerite veins. Very little gangue (calcite and quartz) in veins. Sample of sphalerite-rich vein material assayed 37.4% zinc, 0.24 oz. a ton silver, and a doubtful trace of gold. Veins probably of same origin and age as nearby barite veins.

Berg and Cobb, 1967 (B 1246), p. 188 -- Argentiferous sphalerite in transverse fractures in a basalt dike of probable Tertiary age. Shattered sandstone and conglomerate wall rocks contain pyrite and marcasite veinlets that have been minutely brecciated and the fractures filled with sphalerite.

Eakins, 1975 (GR 44), p. 39, 41 -- Zinc prospect known for many years.

(Keku Islat, nonmetals)

Lead; Barite, Witherite

Kupreanof district

Port Alexander (18.35, 16.0)
56° 54' N, 134° 05' W

Summary; Veins and veinlets in limestone (some recrystallized) and rarely in basalt dikes contain barite, witherite, and (in one veinlet only) pyrite and a few streaks of galena. Deposits too small to be of commercial interest.

Buddington, 1925 (B 773), p. 136-137 -- Veins in fault zone between limestone and greenstone and along basalt dikes in limestone containing chalcedony with drusy quartz and small, irregular veinlets of barite. Traces of pyrite and galena associated with barite. Veins may have been derived from same source as the basalt dikes.

Twenhofel and others, 1949 (B 963-A), p. 40-41 -- Witherite in limestone. p. 43-44 -- Vein and veinlets in limestone, some of which is recrystallized, and rarely in basalt dikes contain barite, witherite, and (in one veinlet only) anhedral pyrite and a few streaks of galena. Most of witherite seems to be a little younger than barite, but some overlap in time of deposition. Deposits are too small to be of commercial interest.

Eakins, 1975 (GR 44), p. 39, 41 -- Barite and witherite prospects have been known for many years.

(Kuiu I.)

Barite, Witherite

Kupreanof district

Port Alexander (16.35-18.35, 15.6-16.5)
56° 53' - 56° 56' N, 134° 05' - 134° 18' W

Summary: Barite in gash veins, witherite in beach pebbles. See also:
(Cornwallis Peninsula), (Keku Islet, nonmetals), (Saginaw Bay).

Buddington, 1935 (B 773), p. 72 -- Barite veins have been found.

p. 138 -- Large volume of barite in many small gash veins rather than in strong, well-defined fissures. Prospecting may possibly find veins of commercial size.

Buddington and Chapin, 1929 (B800), p. 317 -- Barite in fissure veins.

Smith, 1933 (B 844-A), p. 81-82 -- Witherite beach pebbles found on Kuiu I in 1931; bedrock source not found.

Lower Ledge

Gold(?)

Chichagof district

Port Alexander (8.7, 17.1)
56°59'N, 135°06'W

Summary: Gold prospect in Silver Bay area.

Wright and Wright, 1905 (B 259), p. 58 -- Prospect in Silver Bay area.
Knopf, 1912 (B 504), p. 29 -- Quotation [not credited] of above.

Lucky Chance

Gold, Silver

Chichagof district
MF-464, loc. 5

Port Alexander (9.15, 16.65)
56°57'N, 135°03'W

Summary: Quartz stringers and vein (maximum width 8 ft.); hanging wall slate, footwall graywacke. 600-ft. adit and raise to a surface pit in vein. Sulfides mainly along walls of horses of country rock in vein; pyrite and arsenopyrite that carries free gold. Ore sample carried about 1.45 oz. gold per ton. Was a little production, probably all before 1900.

Becker, 1898, p. 62-63 -- Minerals identified include calcite, arsenopyrite, siderite, and sericite.

p. 79-80 -- Country rock pyroclastic diorite [really graywacke] and included slate fragments. 2 tunnels. Ore is irregular stringers in country rock; aggregate thickness of quartz stringers is about 3 ft.; zone strikes about NW and dips about 80°NE. Sulfides in quartz are concentrated along margins of horses of country rock. Ore contains quartz, calcite, siderite, chlorite, mica, pyrite, and abundant arsenopyrite which carries free gold. Sample said to have assayed \$30 [about 1.45 oz.] a ton in gold. Some ore stoped out between tunnels.

Wright and Wright, 1905 (B 259), p. 58 -- Quartz ledge with maximum width of 8 ft.; in places becomes a series of narrow stringers penetrating slate hanging wall; footwall is massive graywacke. 600-ft. tunnel with raise to surface pit follows vein. High values reported from parts of vein; many specimens of free gold. 10-stamp mill [no data on amount of production].

Wright and Wright, 1906 (B 284), p. 45 -- Ore is low-grade gold- and silver-bearing quartz. No more than assessment work, 1905.

Wright, 1907 (B 314), p. 60 -- Has been much development work, but none for a number of years [as of 1906].

Knopf, 1912 (B 504), p. 29 -- Same data as Wright and Wright, 1905 (B 259), p. 58.

(Port Conclusion)

Gold(?)

Chichagof district

Port Alexander
SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ quad.

Summary: Gold(?) prospects abandoned by 1906.

Wright and Wright, 1906 (B 284), p. 46 -- Prospects in vicinity reported
"to give good assay values."

Wright, 1907 (B 314), p. 60 -- Prospects have been abandoned, 1906.

(Port Lucy)

Gold(?)

Chichagof district

Port Alexander
SE $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ quad.

Summary: Abandoned gold(?) prospect(s).

Wright, 1907 (B 314), p. 60 -- Gold(?) prospect(s) observed, but have been abandoned, 1906.

(Port Malmesbury)

Gold, Lead, Silver, Zinc

Kupreanof district
MF-464, loc. 17

Port Alexander (17.85, 6.0)
56°20'N, 134°10'W

Summary: Zinc-lead deposit said to contain gold and silver.

Berg and Cobb, 1967 (B 1246), p. 188 -- Zinc-lead deposit said to contain gold and silver near Port Malmesbury. Very little information has been made public.

(Red Bluff Bay)

Chromite

Chichagof district
MF-464, loc. 14

Port Alexander (12.4, 15.0)
56°51'N, 134°42'W

Summary: Thin tabular chromite bodies in serpentized dunite in a concordant sill-like body in Triassic(?) phyllite and greenstone schist. 8 known deposits; 5 contain a total of about 570 tons of rock with more than 40% Cr_2O_3 ; the other 3 contain about 29,000 tons of rock carrying 18%-35% Cr_2O_3 . Chrome-iron ratio from 18.65 to 50.56. Discovered in about 1933; little exploration and no production.

Smith, 1937 (B 880-A), p. 88 -- According to newspaper reports claims were staked for chromite in 1935. Samples said to have carried from about 48 to 52 percent Cr_2O_3 .

Smith, 1938 (B 897-A), p. 98-99 -- Newspaper reports of prospecting for chrome-bearing ores, 1936.

Guild and Balsley, 1942 (B 936-G) -- Deposits found in about 1933 and staked, claims lapsed in a few years; has been no mining. Chromite occurs as thin tabular bodies in dunite (now serpentized) parallel to layering in pyroxenite (now also serpentized) in a sill-like concordant body that intruded Triassic(?) phyllite and greenstone schist. Most chromite bodies are too small to be likely to be economic; the largest probably contains only about 250 long tons. Some larger zones may possibly be economic as concentrating ore. In the analyzed samples from all chromite bodies Cr_2O_3 varies from 18.65% to 50.56% for crude ores; top percentage in concentrate is 57.44. Chrome-iron ratio in concentrate would vary between 0.70 and 2.18. Total reserves for 8 deposits are 570 long tons of shipping ore and 29,010 long tons of concentrating ore containing 8,067 long tons of Cr_2O_3 . High iron content makes this chromite look rather unattractive.

Kennedy and Walton, 1946 (B 947-D), p. 73-75 -- Quotation from Guild and Balsley, 1942 (B 936-G). Magnetometer survey suggests either an extension of one chromite body or the presence of another that is not exposed. A sample of a small body containing about 60 tons of chromite contained 43.20% Cr_2O_3 ; chrome-iron ratio of 2.34.

Twenhofel, 1953 (C 252), p. 11 -- Chromite occurrence considered too small to be of economic importance.

Berg and Cobb, 1967 (B 1246), p. 145 -- Chromite-bearing rocks underlie $1\frac{1}{2}$ -sq. mi. area and crop out on several small islands. Of the 8 known deposits, 5 contain a total of about 570 long tons of material averaging more than 40% Cr_2O_3 ; the other 3 deposits aggregate about 29,000 tons of rock carrying 18%-35% Cr_2O_3 .

Loney and others, 1975 (P 792), p. 91-92 -- Data from Guild and Balsley, 1942 (B 936-G).

(Redfish Bay)

Tin(?); Feldspar, Mica, Quartz(?)

Chichagof district

Port Alexander (10.9, 6.35)
56°21'N, 134°43'W

Summary: Pegmatite dike in granodiorite exposed in area about 600 ft. in diameter. Fractured quartz (some may be optical quality) core, muscovite intermediate zone (books as much as 2 in. long and flakes as much as $\frac{1}{2}$ in. in diameter), and 4-10-ft.-thick marginal zone of microcline. Cassiterite doubtfully identified in a stream-bed concentrate.

Sainsburg, 1957 (B 1024-G), p. 142-152 -- Country rock is an intrusive body ranging in composition from muscovite granite to biotite-quartz diorite and containing felsic paragneiss xenoliths; cut by alaskite dikes and a granite dike. Paragneiss, quartzite, slate, and graywacke east and north of igneous body. Pegmatite deposit is about 600 ft. in diameter; consists of 2 or more zoned dike-like bodies that strike northward and dip eastward. Chief mineral of economic interest is microcline perthite in pure or nearly pure bodies from 4 to 10 ft. thick and as much as 60 ft. long. Mica occurs in books as much as 2 in. long and as thin rounded green flakes as much as $\frac{1}{2}$ inch in diameter. Also some large, shattered, clear quartz crystals; one is 27 in. long and some are as much as 5 in. in diameter; some optical-grade quartz might be found. Cassiterite doubtfully identified in a stream-bed concentrate. No beryl or other typical pegmatite minerals.

Skow, 1962 (IC 8125), p. 44 -- Data from above [not cited].

Loney and others, 1975 (P 792), p. 92 -- Pegmatite dike cuts granodiorite. Core of fractured quartz, intermediate zone of muscovite, and 4-10-ft. marginal zone of microcline. Reference to Sainsbury. 1957 (B 1024-G).

(Saginaw Bay)

Barite

Kupreacnof district

Port Alexander (16.35-17.5, 15.45-16.1)
56° 52' - 56° 54' N, 134° 10' - 134° 18' W

Summary: Fissure veins (a few as much as 4 or 5 ft. thick) in limestone, conglomerate, and volcanic rocks contain barite.

Buddington, 1925 (B 773), p. 72 -- Barite veins have been found.

p. 136-138 -- Discovered and staked in 1923. Barite veins as much as 4 or 5 feet wide (most much narrower) in fissures in limestone, conglomerate, and volcanic rocks; one vein was traced for 200 ft. along strike. Barite may have come from the same source as the many basalt dikes that cut the sedimentary and volcanic rocks.

Kaufman, 1958 (IC 7844), p. 9 -- Small fissure veins contain barite.

Eakins, 1975 (GR 44), p. 39, 41 -- Barite and witherite prospects on Keku Islets and around Saginaw Bay have been known for many years.

(Silver Bay)

Copper, Gold

Chichagof district
MF-464, loc. 1

Port Alexander (8.3, 17.4)
57°00'N, 135°08'W

Summary: Auriferous quartz vein in graywacke contains pyrite and chalcop-
pyrite. No work since 1900; no recorded production.

Becker, 1898, p. 79 -- Nearly on strike with Liberty [Sitka quad.];
strikes N70°W, dips 80°S; 8 ft. wide in pyroclastic diorite [gray-
wacke]. Material on dump contains pyrite and chalcopyrite.

Wright and Wright, 1905 (B 259), p. 58 -- Prospect near Silver Bay.

Wright and Wright, 1906 (B 284), p. 45 -- Low-grade gold- and silver-
bearing quartz. No more than assessment work, 1905.

Wright, 1907 (B 314), p. 60 -- Was considerable development work; none
for a number of years [as of 1906].

Knopf, 1912 (B 504), p. 29 -- Same as Wright and Wright, 1905 (B 259),
p. 58.

(Silver Bay)

Gold, Silver

Chichagof district

Port Alexander (8.05-9.15, 16.65-17.4
56°57'-57°00'N, 135°03'-135°09'W)

Summary: An unknown amount (possibly none) of gold and silver was recovered from veins in 1870's and/or 1880's. See also: Bauer, Bullion, Cache, Eureka, Free Gold, Lower Ledge, Lucky Chance, Silver Bay, (Silver Bay) Sitka quad.

Wright, 1908 (B 345), p. 91 -- No more than assessment work on any of the prospects near Silver Bay, 1907.

Wright, 1909 (B 379), p. 73 -- Little, if any, work in area, 1908.

Berg and Cobb, 1967 (B 1246), p. 143 -- First discovery in area in 1872.

By 1880 several other veins had been staked and a mill erected. An unknown amount of gold was recovered.

Loney and others, 1975 (P 792), p. 91 -- Gold-silver deposits in Silver Bay area [including part in Sitka quad.]; extensive prospecting and some development since 1871; little if any production. Ore deposition may have been localized in segment of Sitka fault zone that was more fractured than in most places.

(Snipe Bay)

Copper, Nickel, Silver(?)

Chichagof district
MF-464, loc. 15

Port Alexander (10.15, 7.5)
56°25'N, 134°57'W

Summary: Magnetite, pentlandite, chalcopyrite, pyrite, and pyrrhotite irregularly distributed in a poorly exposed body (probably originally gabbro or norite) now altered mainly to hornblendite that intruded Mesozoic quartzite and schist. Size and grade not known, but probably contains at least 430,000 tons of material averaging not more than 0.3% each of nickel and copper. First staked in 1922. Little exploration and no production. 0.13 oz. a ton silver reported in an old report; not mentioned in later reports.

Brooks, 1925 (B 773), p. 31, 37 -- Nickel found in 1922.

Buddington, 1925 (B 773), p. 72 -- Nickeliferous pyrrhotite lode has been found.

p. 95 -- 4 claims located in 1922.

p. 106-107 -- Elongate body of gabbro or amphibolite that intruded argillaceous and quartzose schist contains disseminated blebs and veinlets of sulfides and a central zone about 7 ft. thick of solid sulfides. Pyrrhotite is principal sulfide; accompanied by chalcopyrite, pyrite, pentlandite, and secondary bravoite(?). Samples contained as much as 3.57% Ni, 3.44% Cu, 0.13 oz. a ton Ag, a trace of gold, and a questionable trace of platinum.

p. 110 -- All surface samples contain more bravoite(?) than pentlandite.

p. 113 -- Host rock made up largely of hornblende.

Buddington and Chapin, 1929 (B 800), p. 337 -- Nickeliferous pyrrhotite deposit in hornblendite.

p. 348 -- Lode in an amphibolite dike with a high percentage of ilmenitic magnetite, which also occurs as residual remnants in sulfides.

p. 351 -- Host rock appears to be made up largely of hornblende.

Smith, 1938 (B 897-A), p. 98 -- Thorough examination of property by foreign engineers reported, 1936. No results made public.

Reed and Gates, 1942 (B 936-M) -- Staked in 1922 and 1939. Only development is several pits in an area about 265 ft. by 125 ft. Mafic intrusive mass that originally was probably gabbro or norite (now altered mainly to hornblende, albite, and magnetite with considerable apatite) in Lower Cretaceous(?) quartzite and quartz schist. Limits of deposit not known. Metallic minerals are magnetite, pyrite, pyrrhotite, chalcopyrite, and pentlandite, all apparently randomly distributed; one small massive sulfide body exposed in a pit. Conservative minimum estimate of resource is 430,000 tons of material averaging not more than 0.3% each of copper and nickel. On the basis of current information does not appear to be economic, but further

(Snipe Bay) -- cont.

exploration is warranted.

Twenhofel, 1953 (C 252), p. 7 -- Nickel deposit.

Kaufman, 1958 (IC 7844), p. 12 -- Reference to Reed and Gates, 1942 (B 936-M).

Noel, 1966, p. 65 -- Reserves estimated at 400,000 tons grading 0.3% each nickel and copper.

Berg and Cobb, 1967 (B 1246), p. 144-145 -- Discovered in 1922. Magnetite, pentlandite, and chalcopyrite irregularly distributed in altered mafic igneous rock that cuts Mesozoic quartzite and schist. Size and grade of this poorly exposed deposit not known; probably contains less than 0.3% each of nickel and copper.

Cornwall, 1968 (B 1223), p. 13, 39 -- References to Reed and Gates, 1942 (B 936-M).

Loney and others, 1975 (P 792), p. 91 -- Reference to Buddington, 1925 (B 773) and Reed and Gates, 1942 (B 936-M).

Synonyms, Claim Names, Operators, and Owners

Many mines and prospects have undergone changes in both their own names and in the names of their operators and owners. All names that appear in the cited references appear in this summary either in the first section as occurrence names or in this section as synonyms.

Barrows -- see (Cornwallis Peninsula)
Comstock -- see (Cornwallis Peninsula), (Kulu I.)
(Conclusion Point) -- see (Port Conclusion)
Haley & Rogers -- see Bauer
Hanlon & Haley -- see (Redfish Bay)

Hanlon & Morgan -- see (Redfish Bay)
Hofstad -- see (Snipe Bay)
Hungerford -- see (Cornwallis Peninsula), (Keku Islet, nonmetals)
Stewart -- see Cache
Vevelstad -- see (Snipe Bay)

- Becker, G. F., 1898, Reconnaissance of the gold fields of southern Alaska, with some notes on general geology: U.S. Geological Survey 18th Annual Report, pt. 3, p. 1-86.
- Berg, H. C., and Cobb, E. H., 1967, Metalliferous lode deposits of Alaska: U.S. Geological Survey Bulletin 1246, 254 p.
- Brooks, A. H., 1925, Alaska's mineral resources and production, 1923: U.S. Geological Survey Bulletin 773, p. 3-52.
- Buddington, A. F., 1925, Mineral investigations in southeastern Alaska: U.S. Geological Survey Bulletin 773, p. 71-139.
- Buddington, A. F., and Chapin, Theodore, 1929, Geology and mineral deposits of southeastern Alaska: U.S. Geological Survey Bulletin 800, 398 p.
- Cobb, E. H., 1972, Metallic mineral resources map of the Port Alexander quadrangle, Alaska: U.S. Geological Survey Miscellaneous Field Studies Map MF-464, 1 sheet, scale 1:250,000.
- Cobb, E. H., 1973, Placer deposits of Alaska: U.S. Geological Survey Bulletin 1374, 213 p.
- Cornwall, H. R., 1968, Nickel deposits of North America: U.S. Geological Survey Bulletin 1223, 62 p.
- Eakins, G. R., 1975, Uranium investigations in southeastern Alaska: Alaska Division of Geological and Geophysical Surveys Geologic Report 44, 62 p.
- Guild, P. W., and Balsley, J. R., Jr., 1942, Chromite deposits of Red Bluff Bay and vicinity, Baranof Island, Alaska: U.S. Geological Survey Bulletin 936-G, p. 171-187.
- Kaufman, Alvin, 1958, Southeastern Alaska's mineral industry: U.S. Bureau of Mines Information Circular 7844, 37 p.
- Kennedy, G. C., and Walton, M. S., Jr., 1946, Geology and associated mineral deposits of some ultrabasic rock bodies in southeastern Alaska: U.S. Geological Survey Bulletin 947-D, p. 65-84.
- Knopf, Adolph, 1912, The Sitka mining district, Alaska: U.S. Geological Survey Bulletin 504, 32 p.
- Loney, R. A., Brew, D. A., Muffler, L. J. P., and Pomeroy, J. S., 1975, Reconnaissance geology of Chichagof, Baranof, and Kruzof Islands, southeastern Alaska: U.S. Geological Survey Professional Paper 792, 105 p.

- Noel, G. A., 1966, The productive mineral deposits of southeastern Alaska, in Alaska Division of Mines and Minerals, Report for the year 1966: Juneau, Alaska, p. 51-57, 60-68.
- Overstreet, W. C., 1967, The geologic occurrence of monazite: U.S. Geological Survey Professional Paper 530, 327 p.
- Reed, J. C., and Gates, G. O., 1942, Nickel-copper deposits at Snipe Bay, Baranof Island, Alaska: U.S. Geological Survey Bulletin 936-M, p. 321-330.
- Sainsbury, C. L., 1957, Some pegmatite deposits in southeastern Alaska: U.S. Geological Survey Bulletin 1024-G, p. 141-161.
- Skow, M. L., 1962, Mica, a materials survey: U.S. Bureau of Mines Information Circular 8125, 240 p.
- Smith, P. S., 1933, Mineral industry of Alaska in 1931: U.S. Geological Survey Bulletin 844-A, p. 1-82.
- Smith, P. S., 1937, Mineral industry of Alaska in 1935: U.S. Geological Survey Bulletin 880-A, p. 1-95.
- Smith, P. S., 1938, Mineral industry of Alaska in 1936: U.S. Geological Survey Bulletin 897-A, p. 1-107.
- Twenhofel, W. S., 1953, Potential Alaskan mineral resources for proposed electrochemical and electrometallurgical industries in the upper Lynn Canal area, Alaska: U.S. Geological Survey Circular 252, 14 p.
- Twenhofel, W. S., Reed, J. C., and Gates, G. O., 1949, Some mineral investigations in southeastern Alaska: U.S. Geological Survey Bulletin 963-A, p. 1-45.
- West, W. S., and Benson, P. D., 1955, Investigations for radioactive deposits in southeastern Alaska: U.S. Geological Survey Bulletin 1024-B, p. 25-57.
- Wright, C. W., 1907, Lode mining in southeastern Alaska: U.S. Geological Survey Bulletin 314, p. 47-72.
- Wright, C. W., 1908, Lode mining in southeastern Alaska, 1907: U.S. Geological Survey Bulletin 345, p. 78-97.
- Wright, C. W., 1909, Mining in southeastern Alaska: U.S. Geological Survey Bulletin 379, p. 67-86.
- Wright, F. E., and Wright, C. W., 1905. Economic developments in southeastern Alaska: U.S. Geological Survey Bulletin 259, p. 47-68.

Port Alexander

Wright, F. E., and Wright, C. W., 1906, Lode mining in southeastern
Alaska: U.S. Geological Survey Bulletin 284, p. 30-54.