

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

By

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Open-File Report 78-922

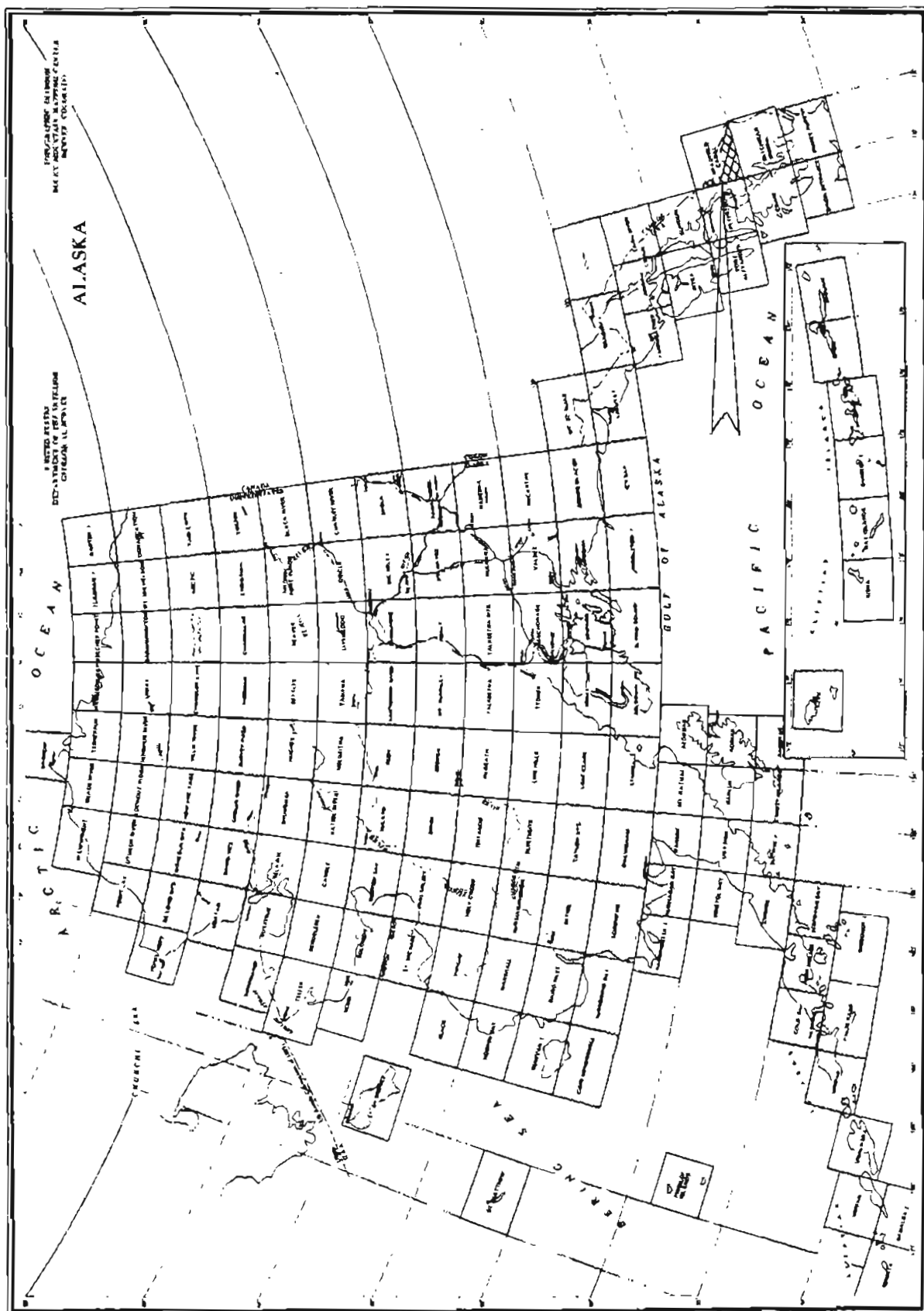
1978

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

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 Bradfield Canal quadrangle, Alaska. All references to reports of the Geological Survey and 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 July 1, 1978, are summarized. Certain, mainly statistical, reports such as the annual Minerals Yearbook of the U.S. Bureau of Mines and most 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 first 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.



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) [RE is used for all rare-earth elements in minerals other than monazite]; the mining district (Ransome and Kerns, 1954) in which the occurrence is located; the name of the 1:250,000-scale topographic quadrangle; coordinates (as described by Cobb and Kachadoorian, 1961, p. 3-4); the metallic mineral resources map number (MF-418) and the occurrence number on that map if the occurrence is shown; and the latitude and longitude of the occurrence. These data, presented at the top of the page, are followed by a short, general summary of the published information on 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 usually are given if such names appear in the reports summarized. If a deposit does not have such a name or has been known by many names, but is near a named geographic feature, the name of that feature is shown in parentheses in lieu of a proper name. If a part of a proper name is not always used in a reference, that part of the name is shown in parentheses. This is most common in company names and in place names with minor variations in spelling.

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
IC	U.S. Bureau of Mines Information Circular
OF	U.S. Geological Survey Open-File Report (numbers are informal and used only within the Alaskan Geology Branch of the U.S. Geological Survey)
MF	U.S. Geological Survey Miscellaneous Field Studies Map
P	U.S. Geological Survey Professional Paper
RI	U.S. Bureau of Mines Report of Investigations

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 cited 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.

Alaska-Premier

Copper, Gold, Lead, Silver, Tungsten,
Zinc

Hyder district
MF-418, loc. 23

Bradfield Canal (19.15, 0.7)
56°02'N, 130°03'W

Summary: Felsite sheets (either quartz porphyry sills or facies of greenstone) in country rock that is mainly greenstone with intercalated slate and graywacke contain quartz veins in shattered zones. Veins contain pyrite, sphalerite, galena, pyrrhotite, chalcopyrite, tetrahedrite, arsenopyrite, considerable gold, and rare scheelite grains. Some selected samples contain as much as 35 oz. a ton gold; some of fractured felsite contains \$2-\$3 [about 0.097-0.145 oz.] a ton gold and about 1 oz. a ton silver. Some exploration in late 1920's.

Buddington, 1925 (B 773), p. 74 -- Quartz veins and veinlike replacement bodies in quartz porphyry (felsite) contain pyrite, galena, sphalerite, chalcopyrite, and pyrrhotite.

p. 78-79 -- Preliminary to Buddington, 1929 (B 807).

Buddington, 1929 (B 807), p. 85-86 -- Country rock greenstone with intercalated slate and graywacke; 3 sheets of felsite, which may be either quartz porphyry sills or facies of greenstone. Quartz veins in shattered zones in felsite sheets contain pyrite, sphalerite, galena, pyrrhotite and considerable gold. One pocket also contains chalcopyrite. As much as 35 oz. a ton gold in some selected samples. 2 felsite sheets explored by tunnels; some of fractured felsite contains an average of \$2-\$3 a ton in gold and about 1 oz. a ton silver. A mineralized shear zone in a felsite sheet about 3 ft. wide contains pyrite, galena, sphalerite, chalcopyrite, tetrahedrite, pyrrhotite, and arsenopyrite.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Rare scheelite grains.

(Banded Mtn.)

Gold(?), Lead(?), Silver(?)

Hyder district

Bradfield Canal (15.2, 0.7)

MF-418, loc. 5

56°02'N, 130°27'W

Summary: Country rock largely graywacke cut by altered gabbro dikes. Rich ore reported to have been discovered about 1929 and some work done during the next few years. No data on ore deposits; assumed to be potentially valuable for gold; silver and lead also possibilities. See also: Edelweiss, Glacier.

Smith, 1932 (B 824), p. 17 -- Report of finding rich ore in 1929 set off a small stampede.

Smith, 1933 (B 836), p. 15 -- Continued prospecting said to have been encouraging, 1930.

Smith, 1933 (B 844-A), p. 17 -- Drift being driven, 1931.

Smith, 1934 (B 857-A), p. 16 -- Development, 1932.

Smith, 1934 (B 864-A), p. 16 -- Development, 1933.

Berg and Cobb, 1967 (B 1246), p. 182 -- Graywacke cut by altered gabbro dikes in area.

Bartholf

Copper, Lead

Hyder district
MF-418, loc. 19

Bradfield Canal (18.85, 1.65)
56°05'N, 130°04'W

Summary: Quartz vein (average thickness 6 in.) contains disseminated chalcopyrite and local shoots of pyrite and galena. Geologic map (pl. 2) shows country rock to be Texas Creek Granodiorite. Most of property on Canadian side of boundary.

Buddington, 1929 (B 807), p. 92-93 -- Quartz vein as much as a foot (average 6 in.) wide contains disseminated chalcopyrite and local shoots of pyrite and galena; barite plates common. Vein strikes N 18° W and dips 55° W. Most of property on Canadian side of boundary.

Bertha

Copper, Lead, Zinc

Hyder district
MF-418, loc. 23

Bradfield Canal (19.15, 0.7)
56°02'N, 130°03'W

Summary: Disseminated pyrite, chalcopyrite, galena, and sphalerite in a lode at least 15 ft. wide in silicified schistose tuff. See also Daly-Alaska, of which Bertha may have become a part.

Chapin, 1916 (B 642), p. 97 -- Bertha and Western claims being developed in 1915 on a NE-trending lode at least 15 ft. wide as exposed in a surface cut; in silicified schistose tuff; disseminated pyrite, chalcopyrite, galena, and sphalerite.

Mertie, 1921 (B 714), p. 142 -- Quotation from above.

Bevacque

Gold, Lead, Silver

Hyder district
MF-418, loc. 13

Bradfield Canal (17.35, 1.0)
56°03'N, 130°13'W

Summary: Ore shoots in vein reported to be as much as 3-1/2 ft. thick said to yield good assays in gold, silver, and lead. See also North Star.

Buddington, 1926 (B 783), p. 53 -- Vein reported to be as much as 3-1/2 ft. thick and to have been traced for several hundred feet. Ore shoots yielding good assays in gold, silver, and lead reported.

Blasher

Copper, Gold, Lead, Molybdenum, Silver,
Zinc

Hyder district
MF-418, loc. 9

Bradfield Canal (16.9, 1.15)
56°03'N, 130°16'W

Summary: Quartz vein 21-61 cm thick in quartzite, hornfels, and quartz monzonite (cupola of Texas Creek Granodiorite) contains chalcop-
pyrite, galena, sphalerite, pyrrhotite, pyrite, and a little molyb-
denite. Explored by short drift, pits, and diamond drill holes.
Has been recent work. No recorded production. See also Morning.

Buddington, 1929 (B 807), p. 100 -- Shattered and fissured zone in quartzite near contact with Texas Creek Quartz diorite contains a quartz vein about 4 ft. thick and many mineralized quartz stringers, which carry galena, pyrite, sphalerite, and a little chalcoppyrite. Zone strikes N 20° W, dips 45° E, and has been traced 500 yds. Short adit driven in argillite to undercut lode encountered quartz veinlets containing disseminated molybdenite.

Smith, 1942 (B 926-C), p. 171 -- Reference to above.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Search with ultraviolet lamp did not disclose any scheelite.

Berg and others, 1977 (B 1403), p. 38-39 -- Quartz vein 21-61 cm thick ex-
posed along strike for 42 m; in quartzite and hornfels of Hazelton(?) Gp.
and Texas Creek Granodiorite; strikes N 50° W, dips 60°-70° NE; con-
tains chalcoppyrite, galena, sphalerite, pyrrhotite, pyrite, and molyb-
denite. Recent work comprises short drift and pits. First staked, 1923;
restaked as part of Lone Star, 1970.

p. 72 -- Data on history of claims.

p. 85-89 -- Detailed description of prospect; data summarized in
table on p. 58-59 -- Weighted average of assay data is 0.93% Cu, 1.15%
Pb, 1.25% Zn, 0.002% Mo, 4.4 oz. a ton Ag, and 0.016 oz. a ton Au
(over sample width of 37 cm). Igneous rock is quartz monzonite; prob-
ably small cupola of Texas Creek Granodiorite.

Bluebird

Copper, Lead, Molybdenum, Tungsten

Hyder district
MF-418, loc. 22

Bradfield Canal (18.9, 0.55)
56°01'N, 130°04'W

Summary: Quartz vein 4 in. thick in granodiorite contains sparsely disseminated pyrite, chalcopyrite, galena, and scheelite; molybdenite along walls. Estimated to contain 0.5% WO_3 .

Byers and Sainsbury, 1956 (B 1024-F), p. 139-140 -- Claim located in 1942 on a quartz vein in Texas Creek Granodiorite about 1,500 ft. from contact with rocks of Hazelton Gp. Vein is 4 in. wide and exposed for only a few feet. Mainly quartz with sparsely disseminated pyrite, chalcopyrite, galena, and scheelite in the central part and molybdenite along walls. Hand specimens contained an estimated 0.5% WO_3 .

Border

Copper, Lead, Zinc

Hyder district
MF-418, loc. 21

Bradfield Canal (19.15, 1.05)
56°03'N, 130°03'W

Summary: Gash veins in fissure zone in slate and graywacke between 3 granodiorite porphyry dikes contain quartz and shoots as much as 6 in. thick of galena, sphalerite, pyrite, and a little chalcopyrite. 70-ft. adit.

Buddington, 1929 (B 807), p. 90 -- Mineralized fissure zone between 2 granodiorite porphyry dikes is in slate and graywacke and contains gash veins of quartz with galena, pyrite, sphalerite, and a little chalcopyrite and considerable carbonate. Sulfides in shoots as much as 6 in. wide. Adit has been driven 70 ft.

Brigadier

Gold, Lead, Silver, Tungsten

Hyder district
MF-418, loc. 22

Bradfield Canal (18.9, 0.55)
56°01'N, 130°04'W

Summary: Quartz veins 10 in. to 3 ft. thick in granodiorite contain gold, silver, galena, pyrite, and rare grains of scheelite. Samples assayed 11.4%-14.1% lead, 0.24-0.6 oz. a ton gold, and 10.2-20.6 oz. a ton silver. Explored in late 1920's by open cuts and a 25-ft. shaft. Includes reference to Butte group of claims.

Buddington, 1929 (B 807), p. 81 -- Quartz veins on Butte group of 6 claims contain gold, silver, galena, and pyrite. Both of 2 veins have been traced for 400-500 ft. and are 10 in. to 3 ft. wide. Assays of 2 samples indicated 11.4%-14.1% lead, 0.24-0.6 oz. gold, and 10.2-20.6 oz. silver a ton. Explored by open cuts and a 25-ft. shaft. Geologic map (pl. 2) shows country rock as Texas Creek Granodiorite.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Rare grains of scheelite.

Cantu (Mining Co.)

Copper, Gold, Lead, Silver, Zinc;
Barite

Hyder district
MF-418, loc. 19

Bradfield Canal (18.85, 1.65)
56°05'N, 130°04'W

Summary: Country rock is granodiorite near contact with greenstone and sedimentary rocks. Quartz veins as much as 3 ft. thick and small veinlets contain galena, sphalerite, tetrahedrite (some very rich in silver), and generally sparse pyrite and chalcopyrite. In places barite makes up as much as 50% of gangue. 20-ton test shipment of carefully selected ore to smelter in 1925 contained 0.175-0.30 oz. a ton gold, 13.80-31.05 oz. a ton silver, 37.2%-44.1% lead, and 5.6%-12.2% zinc. No record of any other production.

Moffit, 1927 (B 792), p. 30 -- Test shipment of 20 tons of high-grade lead ore carrying gold and silver, 1925; newly discovered deposit.

Buddington, 1929 (B 807), p. 41 -- Barite is a common gangue mineral.

p. 43 -- Example of quartz-fissure veins of lead-silver-gold type.

p. 91-92 -- Country rock is Texas Creek Granodiorite cut by quartz porphyry dikes; near contact between granodiorite and greenstone and sedimentary rocks of Hazelton Gp. Quartz veins ranging from a few inches to 3 ft. in thickness and small veinlets contain galena, sphalerite, tetrahedrite, and generally sparse pyrite and chalcopyrite; considerable barite in gangue, in places equal in amount to quartz. Test shipment of carefully selected ore sent to smelter; smelter assays showed 0.175-0.30 oz. gold and 13.80-31.05 oz. silver a ton, 37.20%-44.1% lead, and 5.6%-12.2% zinc; gross values were \$88.10 and \$108.79 a ton. Assays of grab samples of sorted ore at property were generally comparable except that one sample high in tetrahedrite contained 61.2 oz. silver a ton. A grab sample from another vein 30-35 ft. wide and containing streaks and disseminations of pyrite gave an assay of 0.8 oz. gold and 1.2 oz. silver a ton.

Buddington and Chapin, 1929 (B 800), p. 324 -- Tetrahedrite present locally in considerable amounts.

Smith, 1932 (B 824), p. 17 -- Claims consolidated, 1929.

Smith, 1943 (B 864-A), p. 16 -- Steps taken toward refinancing; no work on ground, 1933.

Smith, 1938 (B 897-A), p. 19 -- Prospecting, 1936.

West and Benson, 1955 (B 1024-B), p. 30 -- Data from Buddington, 1929 (B 807), p. 43.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Examination with ultraviolet lamp failed to reveal scheelite.

Berg and Cobb, 1967 (B 1246), p. 147 -- Some ore has been shipped.

Cathedral

Copper, Gold, Lead, Silver, Zinc

Hyder district

Bradfield Canal (16.8, 1.55)
56°05'N, 130°17'W

Summary: Quartz veins in Hazelton(?) Gp. graywacke are as much as 1-2 m wide; contain mainly galena and sphalerite with smaller amounts of chalcopryrite, pyrite, and pyrrhotite and as much as 20.4 oz. a ton silver, and a trace of gold. Very little development and no record of production.

Berg and others, 1977 (B 1403), p. 38-39 -- Quartz vein 1-2 m thick in graywacke of Hazelton(?) Gp. strikes N to N 5° E and dips 50° E. Carries sphalerite, galena, and chalcopryrite. First staked in 1930. Explored by stripped area for 3 m. Other smaller veins nearby.

p. 90-91 -- Quartz veins in rocks of Hazelton(?) Gp. have bands of sulfides, mainly sphalerite and galena with smaller amounts of pyrite, pyrrhotite, and chalcopryrite. Sample across sulfide zone in larger vein (about 1.5 m wide) contained 4.4 oz. a ton Ag, 0.27% Cu, 0.9% Pb, and 35% Zn. One analysis showed 0.05 ppm gold. Sample of sulfide zone 6 cm wide from smaller vein contained 20.4 oz. a ton Ag, 19% Pb, 9% Zn, and 0.02% Cu.

Charles, Nelson & Pitcher

Copper, Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 20

Bradfield Canal (18.9, 0.95)
56°03'N, 130°04'W

Summary: Sphalerite, galena, pyrite, and chalcopyrite disseminated in sheared silicified porphyry. Assays reported to show small quantities of gold and silver.

Westgate, 1922 (B 722), p. 129 -- Disseminated sulfides in sheared porphyry and granodiorite of batholith on Charles claim.

p. 139-140 -- Bedrock is sheared granite porphyry; cut by small barren quartz veins. Sphalerite, galena, pyrite, and chalcopyrite disseminated in silicified porphyry; assays reported to show small quantities of gold and silver.

Buddington, 1925 (B 773), p. 87 -- Reference to above.

Chickamin

Copper, Lead, Zinc

Hyder district

Bradfield Canal (16.9, 1.5)

MF-418, loc. 8

56°04'N, 130°16'W

Summary: Very little work done on fissured zone in graywacke that contains quartz mineralized with galena, chalcopyrite, sphalerite, pyrite, and a little pyrrhotite and tetrahedrite.

Buddington, 1929 (B 807), p. 100 -- Fissured zone in graywacke strikes N 25° W and dips 50° NE; contains quartz stringers mineralized with galena, chalcopyrite, sphalerite, pyrite, and a little pyrrhotite and tetrahedrite. Very little work has been done; veins are exposed for only very short distance.

Berg and others, 1977 (B 1403), p. 38-39, 84 -- Data from above; prospect could not be found.

(Chickamin R. Canyon)

RE

Hyder district

Bradfield Canal (14.5, 0.65)
56°02'N, 130°31'W

Summary: Sphene and allanite are prominent accessory minerals in biotite quartz monzonite.

Smith and others, 1977 (MF-825), sample 3S009 -- Sphene and allanite are prominent accessory minerals in medium-grained leucocratic massive biotite quartz monzonite.

Copper King

Copper, Gold, Lead, Silver, Zinc

Petersburg district
MF-418, loc. 1

Bradfield Canal (0.1, 8.25) approx.
56°28'N, 132°00'W approx.

Summary: Claim(s) staked in 1906 and restaked in 1951 on sulfide-bearing vein(?) reported to carry copper, lead, and zinc minerals and some gold and silver. Some references to this prospect may actually be to (Berg Basin) Petersburg quad. Includes references to Berg.

Chapin, 1916 (B 642), p. 78 -- Development on Berg claims, 1915. [This reference may really be to (Berg Basin) Petersburg quad.]

Chapin, 1918 (B 662), p. 75 -- Further development work, including an adit 300 ft. long, reported, 1916. [Reference may actually be to (Berg Basin) Petersburg quad. Maps here and in Chapin, 1916, both show prospect symbol in Bradfield Canal quad., however.]

Berg and Cobb, 1967 (B 1246), p. 192 -- Staked in 1906 and restaked in 1951. Sulfide-bearing vein(?) said to contain copper, zinc, and lead minerals and to carry some gold and silver.

Crest

Copper, Gold, Lead

Hyder district
MF-418, loc. 22

Bradfield Canal (18.9, 0.55)
56°01'N, 130°04'W

Summary: Quartz veins and stringers in fissure zone in granodiorite carry galena, pyrite, a little chalcopryite, and free gold. Wall rock impregnated with pyrite in places; fracture surfaces coated with pyrite and galena. Highest gold assay was about 5 oz. a ton; most considerably lower. Exploration by surface excavations.

Buddington, 1929 (B 807), p. 81-82 -- Narrow but persistent fissure zone in Texas Creek granodiorite strikes N 50° W and dips 55°-70° NE; has been traced for about 350 ft. in open cuts and strippings. Solid vein or stringers of quartz aggregate as much as 3 ft. in thickness and contain local shoots heavily mineralized with galena, some associated pyrite, and a little chalcopryite; country rock impregnated with pyrite; pyrite and galena on fracture surfaces. Some small quartz stringers carry as much as \$105 [about 5 oz.] in free gold per ton; most are considerably leaner.

Cripple Creek

Copper, Lead, Zinc

Hyder district
MF-418, loc. 22

Bradfield Canal (18.9, 0.55)
56°01'N, 130°04'W

Summary: Large quartz vein in sheeted zone in granodiorite, breccia zone with quartz veinlets in pyrite-impregnated granodiorite, and several fissure zones in granodiorite contain pyrite, galena, sphalerite, chalcopyrite, and tetrahedrite. Deposit in sheeted zone explored by 45-ft. adit and a short crosscut. No data on probable content of silver and gold.

Buddington, 1925 (B 773), p. 74 -- Quartz fissure vein in granodiorite contains pyrite, galena, and chalcopyrite.

p. 82-83 -- Preliminary to Buddington, 1929 (B 807).

Buddington, 1929 (B 807), p. 83-84 -- One deposit is a sheeted zone about 10-15 ft. wide in granodiorite; large quartz vein along footwall; strikes N 73° W and dips steeply N; contains considerable galena and smaller amounts of pyrite, chalcopyrite, sphalerite, and tetrahedrite; explored by a 45-ft. adit and a short crosscut. A breccia zone contains quartz veinlets and pyrite-impregnated granodiorite with a little disseminated galena and sphalerite; strikes N 50° W and dips 45° S. Elsewhere on property are several fissure zones in granodiorite that carry quartz veinlets and a little disseminated galena and pyrite.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Examination with ultra-violet lamp failed to reveal scheelite.

Cub

Copper

Hyder district

Bradfield Canal (15.5, 0.4)
56°01'N, 130°25'W

Summary: Group of claims on sulfide-bearing quartz-calcite veins as much as 15 cm thick in banded hornfels and argillite. Contain pyrrhotite and chalcopyrite. Active claims in 1973.

Berg and others, 1977 (B 1403), p. 40-41 -- Sulfide-bearing quartz-calcite veins as much as 15 cm thick in banded hornfels (metagraywacke) and argillite strike N 15°-75° W and dip 50° NW to vertical; contain pyrrhotite and chalcopyrite. Staked 1969-70.

p. 70 -- Claims active in fall of 1973.

p. 72-73 -- One of 3 groups of claims in Banded Mtn. area that were active in 1973.

Daly-Alaska

Copper, Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 23

Bradfield Canal (19.15, 0.7)
56°02'N, 130°03'W

Summary: Replacement deposits in shear zones in silicified and pyritized greenstone and a porphyry dike related to Texas Creek batholith. Quartz-calcite and sulfide veins contain pyrite, pyrrhotite, sphalerite, galena, tetrahedrite, chalcopyrite, and arsenopyrite. Considerable silver and some gold; carefully selected samples contained as much as 500 oz. a ton silver, probably in blobs of tetrahedrite in sphalerite. A little native silver was found in one of the workings. Developed by several hundred feet of underground workings and many open cuts. Work was between about 1915 and 1925; a little ore may have been mined. Includes references to: Elevenmile, New Alaska (Mining Co.). See also: Bertha, Iron, Western.

Chapin, 1916 (B 642), p. 97 -- Open pits on Elevenmile claim expose an iron-stained lode in a brecciated zone filled with veins of quartz carrying chalcopyrite, sphalerite and argentiferous galena; some shoots very rich.

p. 99 -- Same as on p. 97.

Mertie, 1921 (B 714), p. 142 -- Quotation from above.

Westgate, 1922 (B 722), p. 128 -- Types of deposits are (1) disseminated replacement deposits of galena, sphalerite, and pyrite in greenstone; (2) disseminated and lenticular replacement deposits of pyrrhotite with minor chalcopyrite and pyrite and very little sphalerite in greenstone.

p. 131-133 -- One of the most promising prospects in district. Deposits are in silicified and pyritized greenstone into which much calcite has been introduced. Principal development is a tunnel 114 ft. long and open cuts exposing fracture zones carrying sphalerite, galena, and pyrite with values in gold and silver and accompanied by a little chalcopyrite; mineralized belt strikes about N 70° E. Deposit grades into country rock; no well-defined walls. In second type of deposit has been but little work; some ore said to have been taken out of a 10-ft. tunnel.

Brooks, 1923 (B 739), p. 21 -- Underground work, 1921.

Buddington, 1925 (B 773), p. 74 -- Replacement and disseminated deposits in greenstone contain pyrite, galena, sphalerite, chalcopyrite, and pyrrhotite.

p. 83-84 -- Several hundred feet of underground development and many open cuts. Mineralized shear zones contain calcite and quartz veinlets, galena, sphalerite, pyrrhotite, chalcopyrite, and pyrite. Vein material reported to average 30-40 oz. a ton silver and to carry considerable gold. Picked samples have run as high as 500 oz. a ton silver; some probably in tetrahedrite blobs in sphalerite.

Buddington, 1926 (B 783), p. 41, 53 -- Continued development, 1924; good ore shoots reported to have been found in crosscuts.

Moffit, 1927 (B 792), p. 30 -- Exploration continued, 1925. A little native silver found.

Daly-Alaska -- Continued

Buddington, 1929 (B 807), p. 43-44 -- Deposit of same type as at Big Missouri in B.C.

p. 86-88 -- Country rock greenstone cut by quartz and feldspar porphyry dikes from Texas Creek batholith; all cut by younger granodiorite porphyry, malchite, and lamprophyre dikes. Descriptions of types of mineralization quoted from Westgate, 1922 (B 722), p. 132. Upper workings consist of an open cut and two adits (total length about 385 ft.) on ore shoots primarily of pyrite accompanied by smaller amounts of sphalerite, galena, tetrahedrite, chalcopyrite, pyrrhotite, and arsenopyrite; in porphyry related to Texas Creek batholith. Farther downhill open cuts on a mineralized shoot in greenstone exposed a 3-ft.-wide zone of sulfide and quartz-calcite stringers containing galena, pyrrhotite, sphalerite, chalcopyrite, pyrite, arsenopyrite, and 30-40 oz. a ton silver and some gold. Considerable underground exploration at lower workings where similar ore shoots are in greenstone; assays of selected samples reported to have run as high as 500 oz. a ton in silver; native silver reported to have been found near a fault in one of the tunnels.

Buddington and Chapin, 1929 (B 800), p. 318 -- Formed by replacement along shear zone.

p. 327 -- Small amount of native silver present.

p. 357-358 -- Example of low-grade complex ore with local high content of gold or silver.

West and Benson, 1955 (B 1024-B), p. 31 -- Data from Buddington, 1929 (B 807), p. 43.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Search with ultraviolet lamp failed to find scheelite.

Double Anchor

Copper, Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 8

Bradfield Canal (17.1, 1.3)
56°04'N, 130°15'W

Summary: Quartz breccia zone in graywacke and argillite contains quartz, pyrite, galena, sphalerite, and chalcopyrite; sparse pyrrhotite; average of 3.5 oz. a ton silver and 0.022 oz. a ton gold. Exploration was by a few short adits and pits. No record of production.

Buddington, 1925 (B 773), p. 91 -- 4 claims recorded in 1923.

Buddington, 1929 (B 807), p. 98-99 -- In a shear zone in banded argillite and fine-grained graywacke; seams and stringers of quartz and sulfides, including brown sphalerite, galena, pyrite, and chalcopyrite; sparse pyrrhotite; strikes about E and is flat; largest mineralized shoot is about 2-1/2 ft. thick and 30 ft. long; most are less than an inch thick. Thick quartz veins nearby are only sparsely mineralized.

Berg and others, 1977 (B 1403), p. 38-39 -- Quartz-breccia zones; one is subhorizontal, 37-195 cm thick, and exposed for 220 m along strike; other strikes N 70° E and dips 60° W, and is exposed along strike for 50 m. Contain pyrite, galena, sphalerite, and chalcopyrite. Developed by short adits and pits. Originally staked in 1923 and restaked as Alaska State Mines Extension in 1958.

p. 76 -- Data on history of ownership.

p. 79-84 -- Oxidized quartz breccia zone in graywacke and argillite is fairly flat lying; contains quartz and pyrite with sporadically distributed galena, sphalerite, and chalcopyrite; zone exposed on a cliff and in short adits and pits for a distance of 90 m and over widths of 37-107 cm. Weighted average of analyses of samples across a 65-cm width is 4.3% Pb, 1.0% Zn, 3.5 oz. a ton Ag, and 0.022 oz. a ton Au. Assay values of samples from other occurrences on property are generally lower.

Edelweiss

Gold, Lead, Silver

Hyder district
MF-418, loc. 6

Bradfield Canal (16.15, 0.65)
56°02'N, 130°21'W

Summary: Quartz fissure vein in rocks of Hazelton(?) Gp. contains galena and pyrite; picked sample reported to contain 1.55 oz. a ton gold and 10.2 oz. a ton silver. Little exploration and no recorded production. See also Marmot.

Buddington, 1929 (B 807), p. 101 -- Claim near Through Glacier staked in 1926. Vein reported to be 1,500-2,000 ft. above glacier and consist of quartz with galena and pyrite. Picked sample assayed \$32 [about 1.55 oz.] a ton in gold and 10.2 oz. a ton in silver. Map (pl. 2) shows bedrock as Jurassic(?) tuffaceous graywacke, slate, argillite, and quartzite; some limestone.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Search with ultraviolet lamp failed to find scheelite.

Berg and Cobb, 1967 (B 1246), p. 182 -- Reportedly on quartz vein carrying galena, pyrite, gold, and silver.

Berg and others, 1977 (B 1403), p. 40-41 -- Quartz fissure vein in rocks of Hazelton(?) Gp. contains galena and pyrite; 1.6 oz. a ton gold and 10.2 oz. a ton silver in picked sample. Vein 0.3 m thick, strikes N 30° E and is vertical. Old Edelweiss prospect is now part of Marmot group.

p. 110-113 -- Most of data summarized above. Grab samples did not confirm gold content reported by Buddington [above]. Originally staked in 1925; more claims staked in 1928; restaked as part of Marmot in 1969. Explored by open cut.

Engineer

Copper, Gold, Lead, Silver, Tungsten

Hyder district
MF-418, loc. 13

Bradfield Canal (17.35, 1.0)
56°03'N, 130°13'W

Summary: Quartz vein 2-4 ft. thick in granodiorite (with inclusions of older rocks) near contact with argillite and graywacke. Contains local shoots mineralized with chalcopyrite, pyrite, and galena; assays of material from shoots showed 0.04-0.64 oz. a ton gold, 7.6-26 oz. a ton silver, and 11.3%-55.3% lead; rare grains of scheelite. Explored by 30-ft. adit and several open cuts.

Buddington, 1929 (B 807), p. 109-110 -- In Texas Creek Granodiorite near contact with argillite and graywacke; blocks of sedimentary rock in granodiorite. Vein strikes N 30°-40° W, dips 60°-75° NE, and is from 1 to 4-1/2 ft. wide (generally 2-4 ft.) and consists of quartz with local shoots moderately to heavily mineralized with sulfides (chalcopyrite, pyrite, and galena) and rare grains of scheelite. Explored by an adit 30 ft. long and several open cuts. Assays of 7 specimens from mineralized shoots showed 0.04-0.64 oz. gold a ton, 7.6-26 oz. silver a ton, and 11.3%-55.3% lead.

Byers and Sainsbury, 1956 (B 1024-F), p. 127 -- Reference to above.
p. 140 -- Rare grains of scheelite.

Evening Star

Lead

Hyder district
MF-418, loc. 16

Bradfield Canal (17.85, 1.5)
56°05'N, 130°10'W

Summary: Stringer of galena in granodiorite. Explored by a 10-ft. adit.
No data on possible silver content. Includes references to
Morning Star.

Buddington, 1925 (B 773), p. 90 -- Evening Star and Morning Star claims
staked in 1923. Small open cut shows zone of shattered granodiorite
with stringers of galena and a quartz stringer as much as 9 in. wide.
Buddington, 1929 (B 807), p. 94 -- 10-ft. adit driven along a narrow
stringer of steel galena that strikes N 15° W in granodiorite.
Parallel quartz vein about 100 ft. up mountain side.

Fish Creek

Copper, Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 26

Bradfield Canal (19.05, 0.3)
56°00'N, 130°03'W

Summary: Most of property in Ketchikan quad. Some or all of Olympia Extension claim later became Last Chance claim; data on Olympia Extension are summarized here; those specifically on Last Chance are summarized on Last Chance sheet. On Summit claim a body of pyrrhotite in pyritiferous greenstone carries a little pyrite, arsenopyrite, chalcopyrite, quartz, 0.36 oz. a ton gold, and 4 oz. a ton silver; shaft sunk 10 ft. in pyrrhotite did not reach base of body. On Olympia Extension quartz fissure vein as much as 10 ft. thick in granodiorite contains about 5% disseminated sulfides and stringers of solid sulfides in rich ore shoots; sulfides include galena, tetrahedrite rich in silver, chalcopyrite, and arsenopyrite. About 800 ft. of underground workings; shipments of selected ore ran about \$90 a ton; amount of total production not known. Assays of samples taken across vein contained as much as 1.42 oz. a ton gold, 94.8 oz. a ton silver, 14.5% lead, and 2% copper. See also: Fish Creek (Ketchikan quad.), Last Chance.

Chapin, 1916 (B 642), p. 98-99 -- Fissure vein near head of Skookum Cr. 320-ft. adit and several crosscuts and inclines opened a fissure vein carrying tetrahedrite, chalcopyrite, galena, sphalerite and pyrite in blebs and veinlets in quartz; richest (in silver) ore in veinlets of tetrahedrite and galena; some mined and sorted for shipment. Country rock is porphyry and schistose tuff. Vein from 18 in. to at least 3 ft. wide; cut off by fault 300 ft. from adit mouth. [This property is probably part of Fish Creek and may be in Ketchikan quad.]. Free gold reported nearby.

Mertie, 1921 (B 714), p. 142 -- Quotation from above.

Westgate, 1922 (B 722), p. 128 -- Two types of deposits: (1) Disseminated replacement deposits of pyrrhotite with minor chalcopyrite and pyrite and very little sphalerite in greenstone; (2) quartz fissure veins carrying pyrite, galena, sphalerite, and locally tetrahedrite and chalcopyrite in granitic rocks.

p. 131 -- Promising prospects; considerable underground work; a little ore has been shipped. [Probably all in Ketchikan quad.].

p. 134-138 -- Bedrock of eastern part of property is greenstone; that to west is granitic. Several hundred feet of workings on claims in Ketchikan quad. Assays of ore run as high as 1.60 oz. a ton gold and 706.67 oz. a ton silver. Only work on part of property certainly in Bradfield Canal quad. was on Summit claim, where a body of pyrrhotite in pyritiferous greenstone carries a little pyrite, arsenopyrite, chalcopyrite, and quartz; shaft sunk 10 ft. without reaching bottom of pyrrhotite body; samples contained 0.36 oz. a ton gold, 4 oz. a ton silver, and 2% copper.

Brooks, 1923 (B 739), p. 21 -- Silver-lead ore carrying gold and copper was shipped, 1921. 10-15 men worked from June to end of year.

Fish Creek -- Continued

- Buddington, 1925 (B 773), p. 77-78 -- Metallized quartz fissure vein in quartz-hornblende diorite in Olympia Fraction claim exposed by trenches for a strike length of about 300 ft.; strikes about N 60° W and dips 50° NE; tapers off at each end. In one trench is 4-6 ft. wide and contains about 5% sulfides in rich ore shoots; rest of vein is mainly quartz with some calcite. Sulfides include galena, tetrahedrite, chalcopyrite, sphalerite, and arsenopyrite; tetrahedrite rich in silver. 40 tons of selected ore from trench reported to run about \$90 a ton. About 800 ft. of underground workings; vein 2-5 ft. wide; contains fragments of wall rock; 55 tons of sorted ore ran about \$90 a ton.
- Buddington, 1926 (B 783), p. 41-42 -- Reported that new tunnel will be started. [May be in Ketchikan quad.].
- Buddington, 1929 (B 807), p. 43 -- Example of quartz fissure veins of lead-silver-gold type on property; sulfides occur as ore shoots.
- p. 68-71 -- Most of work has been on part of property in Ketchikan quad. On Olympia Extension claim [in Bradfield Canal quad.] mineralized quartz vein as much as 10 ft. (average about 3 ft.) wide strikes N 60° W, dips 40°-50° NE, and has been traced for 600 ft. in prospect pits and trenches; in Texas Creek Granodiorite; walls slickensided. Vein cut by lamprophyre dike. Vein as exposed in one trench contains about 5% or more disseminated sulfides and stringers of solid sulfides that constitute ore shoots. Sulfides include galena, tetrahedrite, chalcopyrite, pyrite, and sphalerite. Crosscut adit and underground workings on vein are more than 265 ft. long. A shipment of 64 tons of sorted ore sent to Tacoma smelter is reported to have averaged \$90 a ton. Assays of samples taken across vein ran trace to 1.42 oz. a ton gold, 3.0-94.8 oz. a ton silver, 2.5%-14.5% lead, and trace to 2.0% copper. Data on Summit claim quoted from Westgate, 1922 (B 722), p. 137-138.
- Buddington and Chapin, 1929 (B 800), p. 317 -- Example of fissure veins.
- p. 324 -- Tetrahedrite present locally in considerable amounts.
- p. 327 -- Ore rich in tetrahedrite reported to carry as much as 700 oz. a ton silver.
- p. 358 -- Example of quartz fissure veins.
- Bain, 1946 (IC 7379), p. 42 -- Moderate percentages of lead in this and other deposits in district.
- West and Benson, 1955 (B 1024-B), p. 30 -- Data from Buddington, 1929 (B 807), p. 43.
- Byers and Sainsbury, 1956 (B 1024-F), p. 138 -- Applicable only to part of property in Ketchikan quad.; scheelite present.
- Berg and Cobb, 1967 (B 1246), p. 147 -- Has been production.
- Lovering, 1972 (P 710), p. 90 -- Reference to Westgate, 1922 (B 722), p. 123, 133, 137-138.

Fitzgerald

Lead(?), Silver(?)

Hyder district

Bradfield Canal(?)

SE 1/4 SE 1/4 SE 1/4 quad.(?)

Summary: Discovery reported, 1921. No other data; may be in Ketchikan quad.

Brooks, 1923 (B 739), p. 21 -- Discovery reported, 1921.

Galena

Copper, Lead, Molybdenum, Silver,
Zinc

Hyder district

Bradfield Canal (16.35, 0.7)
56°02'N, 130°20'W

Summary: Quartz stringers in several fracture systems in hornfels contain pyrite, galena, molybdenite, sphalerite, and chalcopyrite; silver content as high as 8.7 oz. a ton. Now part of Marmot group. See also Marmot.

Berg and others, 1977 (B 1403), p. 40-41 -- Quartz stringers in several fracture systems in hornfels of Hazelton(?) Gp. strike N 15° E and dip 50°-60° E. Contain pyrite, galena, sphalerite, molybdenite, and chalcopyrite. Originally staked in 1969; now part of Marmot group.

p. 112-114 -- Fractures with several different orientations in an exposed area of hornfels about 180 m long contain quartz seams and veinlets containing small amounts of unevenly distributed sulfides, particularly at fracture intersections; sulfides include pyrite, galena, molybdenite, sphalerite, and chalcopyrite. Composite samples ran 8.7 oz. a ton silver, 0.05% molybdenum, 0.65% lead, and 0.20% zinc, and 0.03% copper.

Glacier

Copper, Gold, Lead, Molybdenum(?),
Silver

Hyder district
MF-418, loc. 5

Bradfield Canal (15.7, 0.9)
56°02'N, 130°27'W

Summary: Quartz veins as much as a foot wide occupy cross fissures in graywacke with some andesite tuff and breccia; cut by lamprophyre dike. Veins contain pyrite, small amounts of pyrrhotite and chalcopyrite, and rarely galena. Assays showed 0.04 oz. gold and 6 oz. silver a ton and 3% copper. Could not be found during recent investigations; said to have been explored by a short tunnel and some surface stripping. Quartz float found nearby contains pyrite, chalcopyrite, and molybdenite; may have come from Glacier or similar veins.

Buddington, 1929 (B 807), p. 120-121 -- Quartz veins up to a foot in width occupy cross fissures in graywacke (with some andesite tuff and breccia); veins cut by a lamprophyre dike. Veins contain pyrite and small amounts of pyrrhotite and chalcopyrite and rarely galena. Developed by an 8-ft. tunnel and some surface stripping. Assays show a little gold, 6 oz. a ton silver, and 3% copper.

Wedow and others, 1952 (OF 51), p. 57 -- Quartz veins from 2 in. to about a foot thick contain much pyrite and small amounts of pyrrhotite, chalcopyrite, and galena.

Berg and Cobb, 1967 (B 1246), p. 182 -- Thin quartz veins in graywacke contain abundant pyrite, small amounts of pyrrhotite and chalcopyrite, and sparse galena; assays showed \$0.80 in gold and 6 oz. of silver per ton and 3% copper; little work was done.

Berg and others, 1977 (B 1304), p. 40-41, 114-116 -- Could not be found; data from Buddington, 1929 (B 807). Pieces of float quartz with pyrite, chalcopyrite, and molybdenite may have come from these or similar veins.

Goat

Copper, Gold, Silver

Hyder district

Bradfield Canal (15.5, 0.4)
56°01'N, 130°25'W

Summary: Quartz-calcite veins in hornfelsed graywacke contain abundant pyrrhotite, traces of chalcopyrite, and very minor amounts of gold and silver.

Berg and others, 1977 (B 1403), p. 40-41 -- Sulfide-bearing quartz-calcite veins as much as 15 cm thick in banded hornfels (metagraywacke) and argillite strike N 15°-75° W and dip 50° NW to vertical; contain pyrrhotite and chalcopyrite. Staked 1969-70.

p. 70 -- Claims active in fall of 1973.

p. 72-73 -- One of 3 groups of claims in Banded Mtn. area that were active in 1973.

p. 114-115 -- 2 claims staked in 1969 on sulfide-bearing quartz-calcite veins in slightly pyrrhotitic, hornfelsic graywacke. Veins locally contain abundant pyrrhotite, traces of chalcopyrite, and very minor amounts of gold (no more than 0.8 ppm) and silver (no more than 3 ppm). Veins vary widely in width and orientation. Geochemical sample from area contained 15 ppm (0.4 oz. a ton) silver.

Gold Cliff Premier

Copper, Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 21

Bradfield Canal (19.15, 1.05)
56°03'N, 130°03'W

Summary: Shear zone in tuffaceous rock mineralized with pyrite, quartz, and calcite; carries as much as 1 oz. a ton gold and 3-4 oz. a ton silver. Small stringers elsewhere on property carry galena, sphalerite, chalcopryite, tetrahedrite, and pyrrhotite. Country rock is quartzite, tuff, and slate cut by porphyry dikes of 2 ages.

Buddington, 1929 (B 807), p. 90 -- Country rock is quartzite, tuff, and intercalated slate cut by porphyritic granodiorite dikes of 2 ages. Quartzite locally intensely fractured and pyritized; open cut exposes a shear zone in tuffaceous rock mineralized with pyrite in a band 2-1/2 ft. wide and carrying as much as 1 oz. a ton gold and 3-4 oz. a ton silver; calcite and quartz gangue. Two narrow stringers elsewhere on property carry galena, sphalerite, chalcopryite, tetrahedrite, and pyrrhotite.

Greenpoint

Copper, Lead, Molybdenum, Silver

Hyder district
MF-418, loc. 7

Bradfield Canal (16.5, 0.6)
56°01'N, 130°19'W

Summary: Quartz-calcite veinlets not more than 15 cm thick in a fracture zone in hornfels contain pyrite and small amounts of galena and molybdenite and traces of chalcopryite; as much as 30 ppm silver in samples of veinlets. Veinlets too small and too lean to mine individually. Explored by 2 small excavations. See also Heckla; covers some or all of the same ground.

Bain, 1946 (IC 7379), p. 42 -- Moderate percentages of lead in this and other deposits in district. [May refer to Swennings Greenpoint.]

Berg and others, 1977 (B 1403), p. 40-41 -- Sulfide-bearing quartz-calcite veinlets 1-15 cm thick in hornfels of Hazelton(?) Gp. contain pyrite, galena, molybdenite, and chalcopryite; explored by small pit and open cut.

p. 72 -- Has been active since 1970; now abandoned.

p. 93-96 -- Quartz-calcite veinlets occupy a north-trending fracture zone that dips steeply westward; contains up to 5% pyrite and small amounts of galena and molybdenite; traces of chalcopryite. Veins are too small and lean to be mined individually. Samples of veinlets contained as much as 30 ppm silver.

Heckla

Copper, Gold, Lead, Molybdenum,
Silver, Zinc

Hyder district
MF-418, loc. 7

Bradfield Canal (16.35, 0.4)
56°01'N, 130°20'W

Summary: Quartz fissure veins in hornfelsed graywacke of Hazelton(?) Gp. are from 18 to 116 cm thick and contain pyrite, galena, sphalerite, pyrrhotite, molybdenite, chalcopyrite, digenite, covellite, and malachite. One ton of ore was sledged out over glacier in 1925. Picked sample contained 0.08 oz. gold and 54.3 oz. silver a ton and 21.6% lead, 32.1% zinc, and 4.1% copper. Includes reference (Moffit, 1927) to Hummel, Blasher & Moss. See also Greenpoint.

Moffit, 1927 (B 792), p. 30 -- Test shipment of one ton of complex silver-lead-zinc-copper ore made in 1925 by Hummel, Blasher & Moss. [On basis of statement in Buddington, 1929 (B 807), p. 102, the above must apply to Heckla prospect.]

Buddington, 1929 (B 807), p. 101-102 -- 5 claims staked in 1925. Vein reported to be in graywacke and exposed for a distance of 75 ft. A ton of ore broken from outcrop was sledged out. Ore consists of galena, pyrrhotite, sphalerite, and chalcopyrite. Picked sample yielded \$1.60 in gold and 54.3 oz. silver a ton, 21.6% lead, 32.1% zinc, and 4.1% copper.

Berg and Cobb, 1967 (B 1246), p. 147 -- Some ore has been shipped.

Berg and others, 1977 (B 1403), p. 37 -- Has been 1-ton test shipment.

p. 40-41 -- Quartz fissure veins in graywacke of Hazelton(?) Gp. strike N 0°-30° E and dip 43°-80° E; contain galena, pyrite, sphalerite, chalcopyrite, and molybdenite; reported values of 0.08 oz. a ton gold and 54.3 oz. a ton silver, 21.6% lead, 32.1% zinc, and 4.1% copper (picked sample). One-ton test shipment of ore broken from surface of outcrop in 1925. Prospect is now part of Greenpoint group of claims (staked 1970).

p. 70 -- Was a one-ton test shipment.

p. 72 -- One ton of ore was sledged over glacier in 1925.

p. 96-100 -- Has been some recent exploration by ground geophysical methods and shallow drilling. Veins are 18-116 cm thick; Heckla vein exposed for strike length of about 30 m. Sulfide-bearing quartz veins in hornfelsed metasedimentary rocks of Hazelton(?) Gp. that are cut by dioritic, andesitic, and quartz monzonite dikes; Hyder Quartz Monzonite crops out about 200 m to east. Veins contain quartz, pyrite, galena, sphalerite, pyrrhotite, molybdenite, chalcopyrite, digenite, covellite, and malachite. Gold values low (up to 0.23 oz. a ton) and spotty. Silver from 0.09 to 20.4 oz. a ton; most samples no more than 0.9 oz. a ton.

Hobo

Copper, Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 23

Bradfield Canal (19.15, 0.7)
56°02'N, 130°03'W

Summary: Veins or veinlike replacement deposits of sulfides, and quartz veins in fissures in greenstone carry pyrite, pyrrhotite, sphalerite, chalcopyrite, galena, and arsenopyrite. Generally small and variable amounts of gold and silver; sulfides in one vein carry from about 0.2 to 0.58 oz. a ton gold. Explored by open cuts.

Buddington, 1929 (B 807), p. 43 -- Example of disseminated and lenticular replacement type of deposit.

p. 84-85 -- Open cuts in mineralized greenstone expose veins or veinlike replacement deposits of sulfides, mainly pyrite, pyrrhotite, and sphalerite with smaller amounts of chalcopyrite, galena, and arsenopyrite; some gold and silver present, but amounts generally small and variable. Another vein in greenstone contains pyrite, pyrrhotite, and a little arsenopyrite in quartz gangue; sulfides carry \$4-\$12 [about 0.2-0.58 oz.] a ton gold. Nearby quartz veins in a fissured zone in greenstone carry pyrite, galena, and sphalerite.

West and Benson, 1955 (B 1024-B), p. 31 -- Data from Buddington, 1929 (B 807), p. 43.

Homestake

Copper, Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 16

Bradfield Canal (17.85, 1.5)
56°05'N, 130°10'W

Summary: Quartz fissure vein in granodiorite is 4-5 ft. thick and contains considerable steel galena, some chalcopryite and pyrite, and traces of sphalerite. Galena is argentiferous. Test shipment in 1925 of 9-1/2 tons of sorted ore contained 50% lead, 0.7% zinc, 22.87 oz. a ton silver, and 0.29 oz. a ton gold. Little if any activity since about 1925.

Buddington, 1925 (B 773), p. 88-89 -- Quartz vein 4-5 ft. wide has been traced for about 250 ft.; northern part contains considerable steel galena, some chalcopryite and pyrite, and traces of sphalerite; galena is argentiferous; assays of samples taken across part or all of vein carry as much as 5.8 oz. silver and 0.26 oz. gold a ton. Has been very little work on prospect.

Buddington, 1926 (B 783), p. 53 -- Crosscut reported to have cut vein 35 ft. below outcrop, 1924.

Moffit, 1927 (B 792), p. 30 -- Test shipment of 10 tons of lead ore with some silver and gold made in 1925 to Selby smelter.

Buddington, 1929 (B 807), p. 43 -- Example of lead-silver-gold fissure-vein type of deposit.

p. 94-95 -- Most of data the same as in Buddington, 1925 (B 773), p. 88-89. Country rock is Texas Creek Granodiorite. Vein strikes about N 15° E and dips 45° E. Test shipment of 9-1/2 tons of sorted ore sent to Selby smelter in 1925 returned \$83.72 a ton after all charges; assay was 50% lead, 0.7% zinc, 22.87 oz. a ton silver, and 0.29 oz. a ton gold.

Buddington and Chapin, 1929 (B 800), p. 317 -- Example of fissure veins.

p. 320 -- So-called steel galena resembles augen gneiss with eyes of granulated pyrite in flow-banded galena; deposit subjected to intense stresses since formation.

p. 358 -- Example of quartz fissure veins.

West and Benson, 1955 (B 1024-B), p. 30 -- Data from Buddington, 1929 (B 807), p. 30.

Berg and Cobb, 1967 (B 1246), p. 147 -- Some ore has been shipped.

Hummel

Copper, Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 14

Bradfield Canal (17.4, 1.4)
56°04'N, 130°13'W

Summary: Sulfides in shear zone in argillite and slate include sphalerite, galena, pyrite, chalcopyrite, and a little tetrahedrite. No data on precious metal content of deposit as a whole; a sample of sphalerite contained a little gold and 22.78 oz. a ton silver.

Buddington, 1929 (B 807), p. 48 -- Nearly pure sample of sphalerite contained 0.02 oz. a ton gold and 22.78 oz. a ton silver.

p. 98 -- Shear zone in argillite and slate contains stringers of sulfides and quartz; zone is at least 2 ft. wide and has a maximum of 6 in. of solid sulfides along hanging wall. Sulfides include sphalerite, galena, pyrite, chalcopyrite, and a little tetrahedrite. Shear zone strikes N 50° E and dips 35° W. Very little exploratory work has been done.

Hummel Canyon

Silver(?)

Hyder district

Bradfield Canal (16.8, 1.0)
56°03'N, 130°17'W

Summary: Adit driven 3.4 m to cut a pyritic silicified zone in hornfels. Samples contained negligible amounts of copper, lead, zinc, molybdenum, and silver; no gold.

Berg and others, 1977 (B 1403), p. 40-41 -- Pyritic silicified zone in banded hornfels of Hazelton(?) Gp. contains pyrite. Explored by a 3.4-m adit.

p. 86-87, 92 -- Adit driven 3.4 m to crosscut a pyritic silicified zone 18-30 cm wide and slightly pyritic hornfels wall rock. Samples cut across silicified zone and in wall of adit contained negligible amounts of copper, lead, zinc, molybdenum, and silver; no gold.

Hyder Lead (Mines, Inc.)

Copper, Gold, Lead, Molybdenum,
Silver, Zinc; Barite

Hyder district
MF-418, loc. 10

Bradfield Canal (17.05, 0.95)
56°03'N, 130°15'W

Summary: Quartz fissure veins in quartz diorite of Texas Creek batholith and overlying graywacke and tuff contain some or all of the following sulfides: galena, pyrite, chalcopyrite, sphalerite, pyrrhotite, and tetrahedrite; molybdenite in one vein. Gangue minerals include quartz, barite, calcite, and chlorite as well as rock fragments. Assays of samples showed as much as 16.9 oz. a ton silver and 0.18 oz. a ton gold. Veins in quartz diorite are generally leaner in metallic minerals than those in roof rocks. Exploration by surface excavations; no record of production. Includes references to: Comstock, Fortuna, Hyder Lead Mining Co., Jackson & Hummel, Texas (Creek) Comstock.

Buddington, 1925 (B 773), p. 74 -- Quartz fissure veins in granodiorite contain pyrite, galena, and chalcopyrite.

p. 91-93 -- Quartz fissure veins in granodiorite and metamorphosed graywacke and tuff that form top of ridge contain galena, pyrite, and chalcopyrite; generally strike NW and dip steeply NE. Andesite porphyry and aplite dikes cut both granodiorite and metamorphic rocks. Veins as much as 11 ft. wide (most less than that). One 2-in. vein in granodiorite contains molybdenite. Assays of samples showed 3.6-16.9 oz. silver and trace to 0.18 oz. gold per ton and as much as 0.61% copper, 72.8% lead, and 2.6% zinc (some of samples picked rather than representative). Called Texas Creek Comstock in this report.

Buddington, 1929 (B 807), p. 43 -- Example of quartz-fissure-vein lead-silver-gold type of deposit.

p. 102-108 -- Veins are in quartz diorite of the Texas Creek batholith and in the graywacke and tuff of the roof of the batholith. Veins in quartz diorite are generally leaner in metallic minerals than those in overlying bedded rocks. Veins are generally quartz veins carrying varying amounts of some or all of the following sulfides: galena, pyrite, chalcopyrite, sphalerite, pyrrhotite, and tetrahedrite. Gangue minerals include quartz, barite, calcite, and chlorite as well as rock fragments. Exploration has been by many surface cuts and strippings. Many detailed descriptions of individual veins and exposures. Free gold was found in a piece of float of unknown origin.

Buddington and Chapin, 1929 (B 800), p. 317 -- Example of fissure veins. Smith, 1932 (B 824), p. 17 -- Work, 1929.

Smith, 1933 (B 844-A), p. 17 -- Prospecting, 1931.

Bain, 1946 (IC 7379), p. 42 -- Moderate percentages of lead in this and other properties in district.

West and Benson, 1955 (B 1024-B), p. 30 -- Data from Buddington, 1929 (B 807), p. 43.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Search with ultraviolet lamp failed to find scheelite.

Hyder Skookum

Copper

Hyder district
MF-418, loc. 27

Bradfield Canal (19.25, 0.4)
56°01'N, 130°02'W

Summary: Replacement deposit in greenstone near a porphyry dike contains pyrrhotite and a little chalcopyrite and arsenopyrite.

Buddington, 1929 (B 807), p. 72 -- Breccia veins in greenstone and a porphyry dike are generally barren of sulfides; a little pyrite. A sulfide replacement mass in somewhat schistose greenstone near contact with porphyry dike contains pyrrhotite and a little chalcopyrite and arsenopyrite; some sulfides disseminated in quartz in same zone. Very little work done on prospect.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Search with ultraviolet light failed to find any scheelite.

Ibex

Copper, Lead, Silver, Zinc

Hyder district
MF-419, loc. 16

Bradfield Canal (17.85, 1.5)
56°05'N, 130°10'W

Summary: Quartz fissure veins in granodiorite and older argillite and quartzite within 200 ft. of contact between Texas Creek batholith and older rocks. Deposits contain mainly interbanded galena and sphalerite; pyrite, chalcopyrite, and tetrahedrite also present. Picked samples high in silver. Crosscut driven 131 ft. to undercut an orebody at depth did not find it and work was abandoned in about 1925.

Buddington, 1925 (B 773), p. 88-89 -- Vein of sulfides and quartz in argillite and quartzite cut by dikes of granite porphyry and granodiorite; sulfides mainly interbanded sphalerite and galena; pyrite, chalcopyrite, and tetrahedrite also present; vein generally 15 in. to 2 ft. thick, but pinches and swells; strikes N 5° E and dips steeply E. Assays of picked specimens said to have shown high content of silver, copper, and lead.

Buddington, 1926 (B 783), p. 53-54 -- New vein located in 1924; 5 in. to 3 ft. wide and has been traced for several hundred feet; consists of a fissure zone in granodiorite with quartz stringers; strikes about N 10° W and dips E; locally broken by small-displacement faults. Ore shoots contain galena and pyrite. Crosscut driven 131 ft. to undercut ore body described in Buddington, 1925 (B 773), p. 88-89, did not find ore body and work was abandoned.

Buddington, 1929 (B 807), p. 96-97 -- About the same data as in above 2 references. All veins within 200 ft. of contact between Texas Creek batholith and older rocks.

Buddington and Chapin, 1929 (B 800), p. 317 -- Example of fissure veins.
p. 324 -- Tetrahedrite present locally in considerable amounts.

Iron

Copper, Lead, Silver, Zinc

Hyder district
MP-418, loc. 23

Bradfield Canal (19.15, 0.7)
56°02'N, 130°03'W

Summary: Shoots of sulfides (chalcopyrite, sphalerite, and galena) are rich in silver; in 1915 a ton had been mined and sacked. See also Daly-West, of which Iron may have become a part.

Chapin, 1916 (B 642), p. 97 -- Open pits exposed iron-stained lode that strikes NE and dips steeply NW. Shoots of sulfides (chalcopyrite, sphalerite, and galena) are rich in silver; a ton has been mined and sacked for shipment (1915).

Mertie, 1921 (B 714), p. 142 -- Quotation from above.

Iron Cap

Copper, Gold, Silver, Zinc

Hyder district
MF-418, loc. 15

Bradfield Canal (17.6, 1.45)
56°04'N, 130°12'W

Summary: Fissure-vein deposit in graywacke and slate about 100 ft. above contact with granodiorite. A zone about 11 ft. wide contains stringers and veins of sulfides; main vein is 2 ft. wide, is quartz calcite, and contains shoots of pyrrhotite and chalcopryrite and pockets of sphalerite; a little arsenopryrite. A sample contained 0.04 oz. a ton gold, 6.28 oz. a ton silver, and 2% copper. Has been little exploration.

Buddington, 1925 (B 773), p. 95 -- Reported to be on a mineralized band of argillite containing chalcopryrite and pyrite; sample assayed 0.04 oz. gold and 6.28 oz. silver a ton and 2% copper.

Buddington, 1929 (B 807), p. 44 -- Example of fissure vein deposit approximately parallel to structure in slate and tuffaceous graywacke of Hazelton Gp.

p. 98 -- Open cut exposes an 11-ft. zone of fine-grained graywacke and slate containing stringers and veins of sulfides and a 2-ft. quartz-calcite vein with shoots of pyrrhotite and chalcopryrite and pockets of sphalerite; a little arsenopryrite. About 100 ft. above contact with Texas Creek Granodiorite.

West and Benson, 1955 (B 1024-B), p. 31 -- Data from Buddington, 1929 (B 807), p. 44.

Joker

Barren

Hyder district

Bradfield Canal (15.0, 3.6)

56°12'N, 130°28'W

Summary: Claims staked in 1954 on quartz-calcite fissure veinlets in fine-grained schist as a molybdenum prospect. No molybdenum, copper, lead, or zinc minerals found.

Berg and others, 1977 (B 1403), p. 42 -- Quartz-calcite fissure veinlets in fine-grained schist of Hazelton(?) Gp. cut by aplitic quartz monzonite dikes carry pyrite and molybdenite(?). Staked in 1954 as a molybdenum prospect. Intense iron-oxide alteration within 15 cm of dikes; sulfides very sparse and mainly associated with veinlets.

p. 73 -- Group of claims staked for molybdenum in 1954 near international boundary within sight of Granduc mine [in B.C.]; no ore bodies or mineralization similar to Granduc found.

p. 123 -- 20 claims staked in 1954. Rusty zone in schist apparently from oxidation of rock-forming minerals; no molybdenum, copper, lead, or zinc minerals observed; no samples assayed.

Jumbo (Banded Mtn.)

Lead, Molybdenum

Hyder district

Bradfield Canal (16.2, 0.5)
56°01'N, 130°21'W

Summary: Old prospect (first staked in 1925) that now is part of Marmot group. Quartz fissure veins in graywacke contain pyrite, galena, and molybdenite. See also Marmot.

Buddington, 1929 (B 807), p. 101 -- 2 claims staked in 1925. [Galena probably present.]

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Examination with an ultraviolet lamp failed to disclose scheelite. [This reference may be to Jumbo (Texas Cr.).]

Berg and others, 1977 (B 1403), p. 40-41 -- Quartz fissure veins 15-60 cm thick in graywacke of Hazelton(?) Gp. strike N 10° E and dip steeply; contain pyrite, galena, and molybdenite. Has been recent work; now covered by Marmot group of claims.

p. 101 -- Ground now included in Marmot group. Old Jumbo prospect could not be found with certainty; had been first staked in 1925 and was restaked at least 3 times. Adit said to have been driven after Buddington's work (Buddington, 1929 (B 807), p. 101).

Jumbo (Texas Cr.)

Copper, Lead, Zinc

Hyder district
MF-418, loc. 13

Bradfield Canal (17.35, 1.0)
56°03'N, 130°13'W

Summary: Graywacke in roof pendant in granodiorite contains a breccia vein along a shear zone 1 to 3-1/2 ft. wide. Vein consists of quartz stringers 1 in. to 2 ft. wide that carry galena, pyrite, and chalcopyrite; some of country rock impregnated with pyrite and chalcopyrite; intersecting fissure zone carries quartz, galena, pyrite, chalcopyrite, and sphalerite.

Buddington, 1929 (B 807), p. 111 -- Country rock is graywacke roof pendant in Texas Creek batholith (granodiorite). Breccia vein along a shear zone that strikes N 30° E and dips 75° E is 1 to 3-1/2 ft. wide; quartz stringers are 1 in. to 2 ft. wide and carry sulfides, including galena, pyrite, and chalcopyrite. Some of graywacke impregnated with pyrite and a little chalcopyrite. An intersecting fissure zone carries quartz, galena, pyrite, and a little chalcopyrite and sphalerite.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- No scheelite found with ultraviolet lamp. [This reference may refer to Jumbo (Banded Mtn.).]

Juneau

Copper, Lead

Hyder district
MF-418, loc. 12

Bradfield Canal (17.5, 0.5)
56°01'N, 130°13'W

Summary: Quartz veins in granodiorite carry galena, pyrite, and chalcop-
pyrite. Little if any development.

Buddington, 1929 (B 807), p. 108-109 -- Quartz vein 3-6 ft. wide in Texas
Creek Granodiorite, reportedly traced for 1,300 ft., locally has
small shoots of chalcopyrite. Vein strikes N 40° W and dips 50° NE.
Another vein is said to carry galena and pyrite.

Keno

Copper, Gold, Silver, Lead, Zinc

Hyder district
MF-418, loc. 11

Bradfield Canal (17.25, 0.65)
56°02'N, 130°14'W

Summary: Quartz fissure vein in granodiorite contains galena, pyrite, chalcopyrite, sphalerite, tetrahedrite, and as much as 0.6 oz. a ton gold and 3 oz. a ton silver. Also disseminated pyrite and barite.

Buddington, 1925 (B 773), p. 94 -- Quartz fissure veins in granodiorite pinch and swell; generally 2-4 ft. wide. Contain galena and other sulfides. A specimen sample contained 0.6 oz. gold and 3 oz. silver a ton and 48% lead; typical samples much less rich. Veins strike generally NW and dip steeply NE. Wall rock contains considerable epidote, but otherwise appears unaltered. Very little work has been done on prospect.

Buddington, 1929 (B 807), p. 108 -- Adit driven 50 ft. along a quartz vein as much as 4-1/2 (average 3-4) ft. wide in Texas Creek Granodiorite. Vein strikes N 42°W and dips 70°-80° NE; has been traced for length of 400 ft. and difference in altitude of 300 ft. Ore shoots of solid sulfide as much as 7 in. wide consist of galena, pyrite, chalcopyrite, sphalerite, and tetrahedrite. Quartz also carries disseminated pyrite and locally some barite. Adit has not been driven far enough to intersect a sulfide shoot exposed at surface.

Lake

Copper, Lead

Hyder district
MF-418, loc. 9

Bradfield Canal (16.85, 1.1)
56°03'N, 130°17'W

Summary: Quartz fissure vein about 11 in. thick in granodiorite near contact with older sedimentary rocks contains abundant galena and some pyrite along footwall; trace of chalcopyrite identified under microscope.

Buddington, 1925 (B 773), p. 74 -- Quartz fissure veins in granodiorite contain pyrite, galena, and chalcopyrite. [A general statement.]

p. 91 -- Quartz fissure vein 11 in. wide in quartz diorite strikes N 35° W and dips 60° E. Contains galena and pyrite along footwall. Has been no work on prospect.

Buddington, 1929 (B 807), p. 101 -- Vein in Texas Creek Quartz Diorite just below contact with older sedimentary rocks is 11 in. wide, strikes N 35° W, and dips 60° E. Abundant galena and less pyrite along footwall. Exposed along a trail.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Examination with ultraviolet lamp failed to find scheelite.

Berg and others, 1977 (B 1403), p. 38-39 -- Quartz fissure vein about 30 cm thick in quartz diorite of Texas Creek Granodiorite just below contact with overlying Hazelton(?) Gp. Strikes N 35° W and dips 60° E. Contains galena, pyrite, and chalcopyrite.

p. 84 -- Quartz vein 101 cm wide exposed in open cut; in Texas Creek granodiorite just below contact with Hazelton(?) metamorphic rocks; strikes N 35° W and dips 65° NE; contains visible pyrite and galena and a trace of chalcopyrite.

Lakeside

Lead, Silver

Hyder district

Bradfield Canal (16.9, 1.1)
56°03'N, 130°16'W

Summary: Quartz veins in granodiorite contain pyrite and galena; sample that may be of a boulder contains 0.4 oz. a ton silver. Little exploration. See also Morning.

Berg and others, 1977 (B 1403), p. 38-39 -- Quartz veins 30 cm thick in Texas Creek Granodiorite strike N 25° W and dip 65° E; contain pyrite and galena. Explored by several pits. Staked in 1923; probably a relocation of Morning. Now covered by Lone Star group.

p. 72 -- Lone Star group covers parts of old Lake, Lakeside, and Blasher locations.

p. 84-87 -- Probably a relocation of Morning claims; vein described by Buddington (1929, B 807, p. 101) was not found. Massive quartz that may be boulder material in overburden over granodiorite contains 280 ppm Cu, 4,000 ppm Pb, 120 ppm Zn, and 15 ppm (0.4 oz. a ton) Ag.

Last Chance

Copper, Gold, Lead, Silver, Tungsten, Zinc

Hyder district
MF-418, loc. 26

Bradfield Canal (19.05, 0.3)
56°00'N, 130°03'W

Summary: About 850 ft. of underground workings and many open cuts. Quartz vein as much as 4 ft. thick traced for several hundred feet on surface and for 180 ft. underground. Carries galena, tetrahedrite, chalcopryite, and sphalerite; sparse scheelite. According to geologic map (Byers and Sainsbury, 1956 (B 1024-F), pl. 13) country rock is Texas Creek Granodiorite. Small test shipment of ore in 1935 carried gold and silver. This property was originally part of Fish Creek property; see Fish Creek for data on Last Chance when it was part of Fish Creek.

Smith, 1937 (B 880-A), p. 18-19 -- Small test shipment of ore in 1935; carried gold, considerable silver-bearing galena, and some sulfides of other metals [which ones not specified].

Byers and Sainsbury, 1956 (B 1024-F), p. 128 -- Sulfide veinlets cut barren quartz.

p. 139 -- Formerly known as Olympia Extension [part of Fish Creek]; developed by 700 ft. of tunnels on 2 levels, a 50-ft. raise, and 2 winzes each 50 ft. deep (both now filled with waste). Vein traced for several hundred feet on surface in open cuts and for 180 ft. underground; as much as 4 ft. thick; carries galena, tetrahedrite, chalcopryite, and sphalerite; scheelite in a length of 50 ft. in one drift; WO_3 content estimated at about 0.05%. A few isolated scheelite crystals in another drift; none found in surface cuts.

Berg and Cobb, 1967 (B 1246), p. 147 -- Some ore has been shipped.

(Leduc R.)

RE

Hyder district

Bradfield Canal (13.8, 1.85)
56°06'N, 130°35'W

Summary: Accessory allanite, sphene, and opaque minerals in a porphyritic biotite granodiorite that may be a reheated mylonite.

Smith and others, 1977 (MF-825), sample 3S012 -- Accessory allanite, sphene, and opaque minerals in leucocratic porphyritic biotite granodiorite(?); possibly a reheated mylonite.

Liberty

Lead, Tungsten

Hyder district
MF-418, loc. 17

Bradfield Canal (17.9, 1.05)
56°03'N, 130°10'W

Summary: Quartz vein as much as 2 ft. thick in granodiorite contains local shoots of galena and rare scheelite grains. Exposed in creek bed; no exploration work. See also Stoner-Clegg-O'Rourke, where there is a Liberty claim.

Buddington, 1929 (B.807), p. 93-94 -- Quartz vein, with local shoots of galena, in Texas Creek Granodiorite is as much as 2 ft. wide; strikes N 50° E and dips 70° E. Exposed in creek bed, has been no work.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Rare grains of scheelite.

Marietta

Copper, Gold, Lead, Silver

Hyder district
MF-418, loc. 8

Bradfield Canal (17.0, 1.6)
56°06'N, 130°16'W

Summary: Searching for source of float by tunneling under glacier resulted in production of 300-400 oz. of gold and electrum during late 1930's and early 1940's, according to local residents. Samples of nearby outcrops and of float contained small amounts of galena, pyrrhotite, and chalcopyrite. See also Silver King; may be the same ground.

Smith, 1933 (B 844-A), p. 17 -- Some development, 1931.

Berg and others, 1977 (B 1403), p. 37-39 -- Local residents report that 300-400 oz. of electrum was produced in 1937. Area has been restaked several times.

p. 70 -- 300-400 oz. of gold and electrum has been produced, according to local residents.

p. 72 -- 300-400 oz. of native gold and electrum produced in late 1930's and early 1940's, according to local residents.

p. 76-78 -- Mining from ice tunnels beneath glacier; driven to find lode sources of gold- and electrum-bearing float; 300-400 oz. reported to have been mined. Samples from nearby outcrops contained a little pyrrhotite and traces of chalcopyrite; some argentiferous galena float. Claims lapsed in 1950 and were restaked. Marietta is near old Silver King; may be the same property.

Marmot

Copper, Gold, Lead, Molybdenum,
Silver, Zinc

Hyder district

Bradfield Canal (16.0-16.2, 0.5-0.6)
56°01'N, 130°21'-130°22'W

Summary: Sulfide-bearing quartz veins as much as 45 cm thick and massive sulfide stringers as much as 15 cm thick; country rock is hornfels, phyllite, and schist of Hazelton(?) Gp. intruded by 2 generations of dikes. Samples contained (some in trace amounts only) pyrite, molybdenite, galena, sphalerite, and chalcopyrite; as much as 5.8 oz. a ton silver, and a trace of gold. Claims active in 1973; covered some or all of old Jumbo, Edelweiss, and Galena prospects. See also: Edelweiss, Galena, Jumbo (Banded Mtn.).

Berg and others, 1977 (B 1403), p. 40-41 -- Sulfide-bearing quartz veins as much as 15 cm thick. Country rock is banded, variegated hornfels, phyllite, and fine-grained schist of Hazelton(?) Gp., andesite dikes (Texas Creek(?) Granodiorite), and aplite dikes (Hyder(?) Quartz Monzonite). Contain chalcopyrite, galena, pyrite, and molybdenum. Currently active, has been some stripping. Staked in 1969; covers old Edelweiss and Jumbo (Banded Mtn.) prospects.

p. 60 -- Very fine-grained molybdenite in selvages a cm or so wide at margins of quartz veins that also carry pyrite and chalcopyrite; veins parallel to composition banding in Hazelton(?) phyllite and hornfels.

p. 70, 72-73 -- Claims active in 1973.

p. 100-114 -- 51 claims staked in 1969 cover all or parts of old Jumbo (Banded Mtn.), Edelweiss, and Galena prospects. Samples of veins and a breccia zone contained pyrite, molybdenite, galena, sphalerite, and chalcopyrite, some in trace amounts only. Some silver values as high as 200 ppm (5.8 oz. a ton); highest gold value reported is 0.1 ppm.

Monarch

Copper, Gold, Lead, Silver, Tungsten,
Zinc; Barite

Hyder district
MF-418, loc. 26

Bradfield Canal (19.05, 0.3)
56°00'N, 130°03'W

Summary: Quartz veins in granodiorite contain local shoots of galena, pyrite, tetrahedrite, sphalerite, and chalcopyrite; also sparse scheelite (one small vein contains an estimated 0.5% to 3.0% WO_3). Samples from one vein contained as much as 1-1/2 oz. a ton in gold. A specimen of tetrahedrite contained 266 oz. a ton silver. Considerable barite locally.

Buddington, 1929 (B 807), p. 74-75 -- Northwestward-striking quartz veins in Texas Creek Granodiorite contain local shoots of galena, pyrite, tetrahedrite, sphalerite, and chalcopyrite. Locally there are sparse grains of scheelite. Samples from one vein showed \$20-\$30 [about 1 to 1-1/2 oz.] a ton in gold. A specimen of tetrahedrite contained 266 oz. a ton in silver. Considerable barite locally. Has been practically no development.

Bain, 1946 (IC 7379), p. 68 -- Scheelite present.

Thorne and others, 1948 (RI 4174), p. 4 -- Buddington mentioned presence of scheelite [reference given is incorrect].

Byers and Sainsbury, 1956 (B 1024-F), p. 139 -- 30-ft. drift exposed a quartz veinlet 4 in. thick and extending along most of length of drift; estimated to contain from 0.5% to 3.0% WO_3 . Vein may be part of Olympia Extension vein that crops out 1,000 ft. to SE.

Morning

Lead

Hyder district
MF-418, loc. 9

Bradfield Canal (16.95, 1.2)
56°04'N, 130°16'W

Summary: Quartz vein in granodiorite is 2-4 ft. thick and contains much pyrite and sparse pockets of galena. See also Lakeside.

Buddington, 1929 (B 807), p. 101 -- Quartz vein 2-4 ft. thick in Texas Creek Granodiorite strikes N 40° W and dips 45° NE. Much pyrite and sparse pockets of galena. Vein stripped for 40 ft.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Examination with ultra-violet lamp failed to find scheelite.

Ninety-Six

Copper, Lead, Zinc

Hyder district
MF-418, loc. 20

Bradfield Canal (18.9, 0.95)
56°03'N, 130°04'W

Summary: Breccia vein in granodiorite dike in interbedded slate and quartzite is about 5 ft. thick and contains a total of somewhat more than a foot of quartz; carries galena with smaller amounts of sphalerite, tetrahedrite, pyrite, and chalcopyrite. Developed by a 63-ft. adit and open cuts. No record of production. Includes reference to Snyder.

Buddington, 1925 (B 773), p. 87 -- Snyder has prospect on a vein in a shattered zone in granodiorite porphyry that is about 3 ft. thick and strikes N 25° W and dips 40° E. Vein consists of reticulating quartz veinlets and stringers with a total thickness [of quartz] of 12-14 in. and contains in places much galena, sphalerite, a little chalcopyrite, and sparse tetrahedrite. Several open cuts and strip-pings on small quartz veins that do not appear to be persistent as well as small open cut on main vein.

Buddington, 1929 (B 807), p. 93 -- Breccia vein in dike of Texas Creek Granodiorite in interbedded slate and quartzite is about 5 ft. thick, strikes about N 10° W, and dips 40° E; has been traced on surface for 200 ft. Galena is predominant sulfide, accompanied by sphalerite, tetrahedrite, pyrite, and chalcopyrite. 63-ft. adit driven to cut vein about 30 ft. below outcrop.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Examination with ultra-violet lamp failed to find scheelite.

(North Bradfield R.)

Copper, Iron

Petersburg district
MF-418, locs. 2-4

Bradfield Canal (5.65-5.9, 6.75-7.1)
56°23'-56°24'N, 131°23'-131°25'W

Summary: 11 bodies of magnetite with minor pyrrhotite and chalcopyrite in roof pendant of metamorphic rocks in quartz monzonite of Coast Range batholith. Individual bodies are 50-350 ft. long and 2-40 ft. thick, crudely stratiform and apparently discontinuous, and probably contain 50%-60% iron and 0.1%-0.5% copper. Very little surface alteration. Not enough data for an economic appraisal of prospect, which was discovered in 1955 and explored by surface stripping and 186 ft. of diamond-drill holes.

MacKevett and Blake, 1963 (B 1108-D) -- Magnetite deposits at NW end of a large roof pendant of gneiss, granulite, schist, marble, and skarn in quartz monzonite of Coast Range batholith; cut by quartz diorite, ap-
lite, and alaskite dike-like bodies; complexly folded, gross structure of pendant is an overturned syncline; pendant probably extends for many miles to SE. Skarn developed in marble units of roof pendant; in turn partially replaced by bodies essentially composed of magnetite with inter-
stitial pyrrhotite cut by veinlets of chalcopyrite. Ore contains sub-
ordinate amounts of hematite, hydrous iron sesquioxides, and malachite. Ore bodies are crudely stratiform and apparently discontinuous; range in strike length from 50 to 350 ft. and in thickness from 2 to 40 ft. 11 ore bodies exposed. Discovered in 1955; only exploration has been some stripping, an aeromagnetic survey, and 6 diamond-drill holes (total length 186 ft.). Most bodies probably contain 50%-65% iron and 0.1%-0.5% copper. Not enough data for an economic appraisal of prospect.

Berg and Cobb, 1967 (B 1246), p. 193 -- Summary of above.

North Star

Lead

Hyder district
MF-418, loc. 13

Bradfield Canal (17.35, 1.0)
56°03'N, 130°13'W

Summary: Quartz fissure vein in graywacke near contact with granodiorite contains local shoots of galena with a little pyrite. See also Monarch, where there is another North Star claim.

Buddington, 1929 (B 807), p. 110 -- Claim on a fissure vein in graywacke about 50 yards from contact with Texas Creek Granodiorite. Vein is 1 to 2-1/2 ft. wide, strikes N 40° W, and dips 70° SE. Exposed for a length of 50 ft. Consists of quartz with local shoots of galena and a little associated pyrite.

Nothiger

Lead

Hyder district
MF-418, loc. 17

Bradfield Canal (17.9, 1.05)
56°03'N, 130°10'W

Summary: Shear zone in granodiorite contains a quartz vein and many small stringers; only traces of galena and pyrite. Zone penetrated by crosscut.

Buddington, 1929 (B 807), p. 94 -- Extensively sheared zone in Texas Creek Granodiorite 20-40 ft. thick contains a quartz vein and many small stringers; main vein 2-1/2 to 6 ft. thick, strikes about N 40° E, and dips 38° E. Explored by a crosscut driven through main vein into footwall. Only a trace of galena and pyrite in the quartz.

Portland

Copper, Lead, Zinc

Hyder district
MF-418, loc. 23

Bradfield Canal (19.15, 0.7)
56°02'N, 130°03'W

Summary: Quartz vein in slate is 3 ft. wide and contains sparse disseminations and small blebs of pyrite, galena, sphalerite, and chalcoppyrite. Vein traced 500 yards by pits and surface exposures.

Buddington, 1929 (B 807), p. 84 -- Granodiorite porphyry dike cutting greenstone and slate. Quartz vein with many inclusions of both dike rock and slate exposed by open cut. A 2-ft. quartz vein in slate strikes N 60° W and dips 52° S; explored by a 15-ft. adit; has been traced for 500 yards by pits and surface exposures. Contains sparse disseminated fine grains of pyrite, galena, and blebs of sphalerite and a little chalcoppyrite.

Riverside (Mining & Milling Co.)

Copper, Gold, Lead, Silver, Tungsten,
Zinc

Hyder district
MF-418, loc. 25

Bradfield Canal (18.9, 0.3)
56°00'N, 130°04'W

Summary: Two main quartz veins in Texas Creek Granodiorite and one deposit (Lindeborg) in shear zone in schist inclusion in granodiorite (most investigators) or zone of mylonite gneiss and ultramylonite derived from granodiorite (J. G. Smith). Lindeborg deposit is partly a mineralized quartz vein and partly the result of replacement (according to most investigators) of calcareous laminae in schist inclusion. Lindeborg deposit contains considerable scheelite; the others carry only small amounts. Other than scheelite, the principal metallic minerals are galena, pyrite, tetrahedrite, pyrrhotite, chalcopyrite, sphalerite, and gold. Principal gangue mineral is quartz, accompanied by small amounts of calcite, ankerite, and barite. Mine operated (not continuously) from 1925 to 1951; consists of more than 6,000 ft. of underground workings. Explored by about 4,600 ft. of diamond-drill holes (mainly during World War II). Production was about 30,000 tons of ore that yielded about 3,000 oz. gold, 100,000 oz. silver, 100,000 lbs. copper, 250,000 lbs. lead, 20,000 lbs. zinc, and 3,500 units (70,000 lbs.) WO_3 . Includes references to: Lindeborg, Riverview.

Chapin, 1916 (B 642), p. 97 -- On Riverside and Riverview claims well-defined fissure veins in crystalline schist pinch and swell from about a foot to as much as 4 ft. in thickness; quartz carries abundant sulfides, including pyrite, chalcopyrite, and galena. Veins strike about N 60° W and dip about 60° NE. Adit 140 ft. long on Riverside claim and one 17 ft. long on Riverview.

Mertie, 1921 (B 714), p. 141-142 -- Quotation from above.

Westgate, 1922 (B 722), p. 139 -- 2 tunnels driven on a quartz vein that strikes N 60° W and dips 60° NE; vein 3 ft. thick in one tunnel; in sheared granite porphyry. In one tunnel small quartz stringers parallel main vein, particularly in footwall. Sulfides include pyrite, galena, and chalcopyrite.

Brooks, 1923 (B 739), p. 21 -- Underground work, 1921.

Buddington, 1925 (B 773), p. 74-75 -- Quartz fissure veins in granodiorite contain pyrite, galena, and chalcopyrite. "Cross" vein is transitional between veins with predominant galena and pyrite and veins with galena associated with tetrahedrite, chalcopyrite, and other sulfides.

p. 79-82 -- About 2,400 ft. of underground workings and many surface excavations (as of 1923). 3 fissure veins in somewhat schistose granodiorite being prospected. Veins pinch and swell from a fraction of an inch to as much as 5 ft.; consist mainly of quartz (some included wallrock) with sulfides (pyrite, galena, sphalerite, chalcopyrite, and pyrrhotite) and values in gold and silver; some of ore averages \$46 a ton [1923 prices] in total metals, with some running as high as \$100 a ton. Plan to put in a 50-ton mill.

Buddington, 1926 (B 783), p. 41, 53 -- Development, 1924. Installation of mill warranted.

Riverside (Mining & Milling Co.) -- Continued

Smith, 1926 (B 783), p. 22-23 -- Ore sufficiently rich to lead owners to feel justified to put in a mill, 1924.

Moffit, 1927 (B 792), p. 30 -- New mill operated for at least 2 months in 1925, producing a galena concentrate carrying silver and gold.

Buddington, 1929 (B 807), p. 43 -- Example of deposits of quartz-fissure-vein lead-silver-gold type.

p. 77-81 -- Mill operated part of 1925; produced more than 109 tons of galena concentrate reported to have assayed as high as \$240-\$300 a ton in lead, gold, and silver; all ore milled came from Cross vein. In 1925 there were over 5,000 ft. of underground workings. Country rock is Texas Creek Granodiorite with included bands of rocks of the Hazelton Gp. now metamorphosed and recrystallized to schist or injection gneiss. Younger granodiorite dikes cut country rock; not found in contact with veins. Malchite dikes cut both veins and country rock. 3 mineralized quartz veins; Ickis and Cross veins are in granodiorite and Lindeborg (or main) vein is in an included band of schist or injection gneiss. Ickis vein in fissure in shattered, slickensided gneissic granodioritic rock; consists of quartz with local concentrations of pyrite, galena, and rare sphalerite; assays as high as \$20 a ton in gold, silver, and lead reported. Cross vein averages 2 or more ft. thick; mainly quartz with shoots of sulfides (mainly galena and pyrite with chalcopyrite, sphalerite, tetrahedrite, and pyrrhotite) that carry considerable gold and silver; barite in gangue; some of ore mined ran as high as \$100 a ton in gold, silver, and lead. Lindeborg vein in shear zone in inclusion of schist; made up of an average of 3 ft. of quartz with local concentrations of pyrite, galena, a little chalcopyrite, and sparse sphalerite; some ore has been mined; vein traced in workings and on surface for 1,800 ft.

Buddington and Chapin, 1929 (B 800), p. 317 -- Example of fissure veins.

p. 324 -- Tetrahedrite present.

p. 330 -- Shoot of scheelite has been found in a vein.

p. 347 -- Concentrates from mine in 1926 reported to have contained 1.4 oz. a ton gold, 32 oz. a ton silver, and 60% lead.

Smith, 1929 (B 797), p. 37 -- Mining, 1926.

Smith, 1930 (B 810), p. 12 -- Several hundred tons of concentrates sent to smelter, 1927; gold also recovered in mill at mine.

p. 46 -- Some copper derived from concentrates, 1927.

p. 49 -- Largest silver producer of area; gold and lead also recovered from concentrates.

p. 51 -- Second greatest lead producer in Alaska (Alaska-Juneau [Juneau quad.] was first), 1927.

Smith, 1930 (B 813), p. 15 -- Mine idle, 1928.

Smith, 1932 (B 824), p. 17 -- Prospecting and development, 1929; may have been a test shipment.

Smith, 1934 (B 857-A), p. 16 -- Steps taken to reopen mine; did not happen in 1932.

Smith, 1934 (B 864-A), p. 16 -- Mine inactive, 1933.

Riverside (Mining & Milling Co.) -- Continued

- Smith, 1942 (B 933-B), p. 94 -- Mine reopened as a source of tungsten; mainly sampling and preparatory work, 1940. Considerable ore mined and stockpiled. Beneficiation plant planned to process about 50 tons a day of ore running 2% metallic tungsten.
- Bain, 1946 (IC 7379), p. 68-69 -- Tungsten production began in 1940. Production in 1944 was "46 tons of 21.23 percent concentrate plus secondaries treated at Salt Lake City."
- Thorne and others, 1948 (RI 4174), p. 4-5 -- Buddington reported scheelite [reference incorrect]. USBM had exploration and development program, 1942-43.
- p. 36-44 -- Mining, 1925 and 1928. In 1941 3,400 tons of ore was milled; produced 30 tons of scheelite concentrate running 44% WO_3 and 49 tons of galena concentrate running 68% lead, 31 oz. a ton silver, and 1.1 oz. a ton gold. In 1942 mill produced 36.6 tons of 10.15% WO_3 concentrate. Most of geologic data from Buddington, 1929 (B 807). Details of USBM exploration; 4,660.5 ft. of diamond-drill holes and 82 ft. of crosscuts and raises. Scheelite nearly all in Lindeborg vein; much of scheelite-bearing ore has been stoped out. [In this report the Ickis vein of Buddington is called the Riverview vein.].
- West and Benson, 1955 (B 1024-B), p. 30 -- Data from Buddington, 1929. (B 807), p. 43.
- p. 35 -- Sample of mill concentrate contained 0.001% eU.
- p. 42 -- Spectrographic analysis of sample of mill concentrate showed the major components to be lead, copper, silver, iron, and silicon.
- p. 44 -- No radioactive anomalies found. Mine has produced lead, silver, and gold.
- Byers and Sainsbury, 1956 (B 1024-F), p. 125-136 -- Scheelite known to be abundant in Hyder district only at Riverside and Mountain View [Ketchikan quad.] properties. Scheelite-bearing deposits are mineralized shoots in quartz veins in Texas Creek Granodiorite and in inclusions of Hazelton Group rocks in the granodiorite; veins are as much as 7 ft. thick and generally strike N 40°-60° W and dip 50°-80° NE (at an angle to gneissic banding of granodiorite, which generally strikes N 85° E and dips steeply N). Ore minerals include scheelite, galena, pyrite, tetrahedrite, pyrrhotite, chalcopyrite, sphalerite, and native gold; principal gangue mineral is quartz with minor calcite, ankerite, and barite. Scheelite deposited in Lindeborg shear zone seems to have preferentially replaced calcareous laminae in schist; Lindeborg vein is complex, with part a quartz fissure vein and part a replacement deposit. Production of mine, 1925-50, was 29,142 tons of ore milled that yielded minima of 2,452.5 oz. gold, 88,810 oz. silver, 75,700 lbs. copper, 2,258,200 lbs. lead, 17,900 lbs. zinc, and 3,500 units (70,000 lbs) WO_3 . Lindeborg shear zone strikes N 45°-55° W, dips steeply N, and has been traced for 2,000 ft. along strike and through a vertical interval of more than 700 ft. Other veins in mine contain only rare grains of scheelite. USBM drilled 4,660 ft. of diamond-drill holes and analyzed 36 core and 47 sludge samples. Percentages of WO_3 ranged from 0.03 to 2.60. Chances of finding more scheelite ore shoots are considered to be good, but most probably would be smaller and lower grade than those that have been mined.

Riverside (Mining & Milling Co.) -- Continued

Kaufman, 1958 (IC 7844), p. 13 -- Small scheelite ore bodies have been found.

Noel, 1966, p. 53-55 -- Operated 1925-27 as a lead-silver-gold mine; from 1941 to 1946 as a tungsten mine. About 10,000 tons of tungsten ore produced, 1941-45.

p. 63-64 -- References to Byers and Sainsbury, 1956 (B 1024-F).

Berg and Cobb, 1967 (B 1246), p. 147 -- In granodiorite and a large sheared schist inclusion; quartz veins carrying scheelite, lead-, zinc-, copper-, and silver-bearing sulfides, and native gold. Most production from Lindeborg shear zone in the inclusion. More than 6,000 ft. of workings; explored (mainly by USBM during World War II) by about 4,600 ft. of diamond-drill holes. Production was about 3,000 oz. gold, 100,000 oz. silver, 100,000 lbs. copper, 250,000 lbs. lead, 20,000 lbs. zinc, and 3,500 units (70,000 lbs) WO₃.

Berg and others, 1977 (B 1403), p. 37 -- About 26,000 metric tons of ore containing tungsten, gold, silver, copper, lead, and zinc produced between 1925 and 1951, the last year of recorded production.

p. 45 -- Tungsten ore was mined.

p. 72 -- Data from Berg and Cobb, 1967 (B 1246).

Smith, 1977 (B 1425), p. 17-18 -- On the basis of detailed petrography, Smith believes that the Lindeborg shear zone is a zone of mylonite gneiss and ultramylonite derived from Texas Creek Granodiorite in a wider zone of cataclastic rocks rather than a schist lens along which later movement had taken place.

Silver Bar

Copper, Lead

Hyder district
MF-418, loc. 18

Bradfield Canal (18.2, 1.3)
56°04'N, 130°08'W

Summary: Quartz fissure vein as much as 3 ft. thick in granodiorite contains pockets and bands sparsely to moderately mineralized with chalcopyrite and a little galena and pyrite; barite present. Includes reference to McVey.

Buddington, 1925 (B 773), p. 88 -- Reported to be a quartz fissure vein in granodiorite with pyrite, galena, and chalcopyrite.

Buddington, 1929 (B 807), p. 93 -- Quartz vein as much as 3 ft. wide in fissure zone in Texas Creek Granodiorite; strikes N 30° W, dips 45° E; exposed for length of 250-300 ft.; consists of mostly barren quartz with local pockets and bands sparsely to moderately mineralized with sulfides (mainly chalcopyrite with a little galena and pyrite) and barite.

Silver Bell

Copper, Lead, Zinc

Hyder district
MF-418, loc. 15

Bradfield Canal (17.6, 1.45)
56°04'N, 130°12'W

Summary: Quartz fissure vein in brecciated zone in argillite and graywacke is about 2 ft. thick and carries sparse disseminated pyrite, chalcopyrite, galena, and sphalerite; also a solid shoot of galena with a little tetrahedrite in part of vein. No data on possible silver content.

Buddington, 1929 (B 807), p. 44 -- Example of mineralized fissure zone in tuffaceous slate and graywacke of Hazelton Gp.

p. 97 -- Vein in brecciated zone in argillite and graywacke; strikes N 80° W and dips N; at a slight angle to bedding; about 2 ft. thick and consists of quartz with inclusions of country rock and sparse disseminated sulfides (pyrite, and chalcopyrite with a little galena and sphalerite); part of vein is a solid shoot as much as 13 in. thick made up mainly of galena with a little tetrahedrite. No work done when visited; exposed for a distance of 50 ft.

West and Benson, 1955 (B 1024-B), p. 31 -- Data from above, p. 44.

Silver Coin

Copper, Lead

Hyder district
MF-418, loc. 16

Bradfield Canal (17.85, 1.5)
56°05'N, 130°10'W

Summary: Northern part of vein about 50 ft. long following a shear zone in granodiorite is as much as 5 ft. wide and contains galena with a little pyrite and chalcopyrite.

Buddington, 1925 (B 773), p. 90 -- Quartz vein in granodiorite is about 50 ft. long; strikes N 5° and dips 45° E. 25 ft. of vein is heavily metallized with galena; a little pyrite and chalcopyrite. Rest of vein is barren quartz. Ore shoot is from a few inches to 5 ft. wide.

Buddington, 1929 (B 807), p. 95 -- Quartz vein in granodiorite is about 50 ft. long and strikes N 5° W and dips 45° E; ore shoot in northern part of vein is from a few inches to 5 ft. wide and contains galena with a little pyrite and chalcopyrite. In granodiorite along a shear zone; malachite along fracture surfaces in footwall.

Silver King

Copper, Gold, Lead, Silver, Zinc;
Barite

Hyder district
MF-418, loc. 8

Bradfield Canal (16.95, 1.4)
56°04'N, 130°16'W

Summary: Quartz fissure vein 6-30 in. wide has 2-8 in. of solid sulfides, including sphalerite, galena, pyrite, chalcopyrite, tetrahedrite, and a little arsenopyrite; barite also present. In graywacke and argillite cut by quartz diorite dike. Sample of galena reported to have assayed 1.28 oz. a ton gold, 5.96 oz. a ton silver, 55.2% lead, and 2.2% copper. Could not be found in 1970's investigation. See also Marietta; may be the same.

Buddington, 1929 (B 807), p. 99-100 -- 2 stripped exposures, probably on the same quartz fissure vein (strike N 35° W, dip 35° NE). Vein is 6-30 in. wide and has 2-8 in. of solid sulfides, including sphalerite, galena, pyrite, chalcopyrite, tetrahedrite, and a little arsenopyrite; some barite also. Country rock is graywacke and argillite cut by a quartz diorite dike. Sample of galena ore reported to have assayed 1.28 oz. gold and 5.96 oz. silver a ton, 55.2% lead, and 2.2% copper.

Berg and others, 1977 (B 1403), p. 38-39, 99-100 -- Data from above; could not be found. Reported to be near Marietta, but lower.

Silver Star

Gold, Lead, Zinc

Hyder district
MF-418, loc. 15

Bradfield Canal (17.6, 1.45)
56°04'N, 130°12'W

Summary: Quartz veins and veinlets in argillite and granodiorite contain local concentrations of galena, sphalerite, and pyrite with smaller amounts of pyrrhotite and arsenopyrite. Picked sample said to have yielded an ounce of gold per ton.

Buddington, 1925 (B 773), p. 89-90 -- 2-ft.-wide shear zone in granodiorite strikes about N 10° E and dips 55° E; contains pyrite and galena.

Picked sample said to have yielded an ounce of gold per ton.

Buddington, 1929 (B 807), p. 97 -- Claims staked along contact between Texas Creek Granodiorite and argillite; quartz veins in fissure zones both above and below contact. 2 veins in granodiorite in the same fissure zone consist of quartz as much as a foot wide carrying mainly galena and pyrite; explored by 30-ft. adit; strike about N and dip 55° E. Vein zone in argillite consists of quartz stringers about parallel to bedding (strike about N 70° W) locally mineralized with galena, sphalerite, pyrite, and smaller amounts of pyrrhotite, arsenopyrite, and freibergite.

Stampede

Copper, Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 8

Bradfield Canal (16.95, 1.3)
56°04'N, 130°16'W

Summary: Fissure veins in a shattered zone, mineralized quartz stringers in shear zones, sulfide stringers, and fractures in an aplite dike carry sparse galena, sphalerite, pyrite, and chalcopyrite; very small amounts of silver; a trace of gold in one sample. Graywacke and slate country rock. Very little development. Includes reference to Dugas.

Buddington, 1929 (B 807), p. 99 -- At Dugas prospect country rock is graywacke with an intercalated zone of black slate; strike is 70°-80° E and the dip to the north. Mineral deposits are (1) fissure veins in shattered zone cutting across bedding, (2) mineralized quartz stringers in shear zones parallel to bedding, and (3) stringers of sulfide (usually brown sphalerite) parallel to bedding. No ore shoot of any size. Sulfides include sphalerite, galena, pyrite, and chalcopyrite. Fracture surfaces in an aplite dike are faced with some sulfides. Only development is 2 open cuts.

Berg and others, 1977 (B 1403), p. 38-39 -- Quartz fissure veins, sulfide stringers, and a mineralized aplite dike in graywacke and black slate of Hazelton(?) Gp. contain galena, sphalerite, and chalcopyrite. Explored by 2 open cuts. Originally staked as Dugas in 1925.

p. 76-77, 79-80 -- Some or all of ground was staked and restaked several times between 1923 and 1958. 3 pits aligned along a poorly defined shear zone that strikes N 45° E and dips steeply NW. Sulfides include small amounts of galena and sphalerite and traces of chalcopyrite. Quartz vein nearby carries a trace of malachite and chalcopyrite. Highest precious-metal assays from 5 samples were 0.05 ppm gold and 30 ppm silver. [Details of descriptions in various parts of this report do not agree.]

Stoner (Gold & Silver Mining Co.)

Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 24

Bradfield Canal (19.2, 0.85)
56°02'N, 130°02'W

Summary: Three types of deposits on property: (1) quartz-calcite veins and disseminated deposits in greenstone; (2) sparsely mineralized quartz fissure veins in or near contacts between slate and granitic dikes; and (3) seams, disseminations, and fracture facings in quartz porphyry dikes. Sulfides include pyrite, sphalerite, galena, tetrahedrite, and pyrrhotite; as much as about half an ounce of gold and 20.5 oz. silver a ton reported. Explored by open cuts and a 15-ft. shaft.

Westgate, 1922 (B 722), p. 131-132 -- Shallow cuts in several places on group of 12 claims. Bedrock greenstone, some pyrrhotitized. Sulfides include pyrite, sphalerite, galena, and pyrrhotite; a little gold, as much a 20.5 oz. a ton silver, and 28% lead reported.

Buddington, 1925 (B 773), p. 74 -- Replacement and disseminated deposit in greenstone; this type of deposit contains pyrite, galena, sphalerite, chalcopryite, and pyrrhotite.

p. 83 -- Open cut in either silicified greenstone or a felsite sheet. Disseminated pyrite, locally a little galena, and common veinlets of calcite. Best assay reported to be about half an ounce of gold per ton.

Buddington, 1929 (B 807), p. 43 -- Example of disseminated and lenticular replacement type of deposit.

p. 89-90 -- Country rock is Hazelton Gp., mainly greenstone. Cut by granitic dikes associated with Texas Creek and Hyder batholiths. Mineral deposits are (1) veins and disseminated deposits (quartz-calcite gangue) in greenstone; (2) sparsely mineralized quartz fissure veins in or near contacts between slate and dikes; and (3) seams, disseminated deposits, and fracture facings in quartz porphyry. Most work has been on a deposit of first type; shaft 15 ft. deep and open cuts. Sulfide minerals are pyrite, sphalerite, galena, tetrahedrite, and pyrrhotite. Some specimens (not from deposit with most development) have assayed \$6 to \$8 a ton in gold and silver.

West and Benson, 1955 (B 1024-B), p. 31 -- Data from Buddington, 1929 (B 807), p. 74.

Stoner-Clegg-O'Rourke

Copper, Lead, Zinc

Hyder district
MF-418, loc. 24

Bradfield Canal (19.2, 0.85)
56°02'N, 130°02'W

Summary: Greenstone contains disseminated pyrite and pyrrhotite and calcite veinlets carrying sphalerite, pyrite, and galena and smaller amounts of pyrrhotite, chalcopyrite, and tetrahedrite. Explored by open cuts and a 75-ft. tunnel.

Buddington, 1929 (B 807), p. 88 -- Country rock greenstone with calcite veinlets carrying sphalerite, pyrite, galena and small amounts of pyrrhotite, chalcopyrite, and tetrahedrite. Explored by tunnel 75 ft. long and open cuts. Some of greenstone contains disseminated pyrite and pyrrhotite.

Sunset

Lead

Hyder district
MF-418, loc. 12

Bradfield Canal (17.5, 0.5)
56°01'N, 130°13'W

Summary: Quartz veins in granodiorite near a roof pendant of argillite and graywacke contain small amounts of galena and pyrite. Little exploration.

Buddington, 1929 (B 807), p. 109 -- 2 mineralized quartz veins in Texas Creek Granodiorite near an isolated roof pendant of argillite and graywacke strike about N 50° W and dip steeply NE. One vein is 1-3 ft. wide, has been traced for about 300 yds., and contains local ore shoots with galena and pyrite; at one place a shattered zone 20 ft. wide contains about 5 ft. of quartz stringers carrying moderate amounts of galena and pyrite. The other vein is about 3 ft. wide, has been traced for about 200 yds., and contains locally disseminated pyrite and a lens 12 ft. long and 4 in. thick of pyrite, galena, and barite. Exploration was by a little surface stripping.

Swede

Copper, Lead, Zinc

Hyder district
MF-418, loc. 23

Bradfield Canal (19.15, 0.7)
56°02'N, 130°03'W

Summary: Table shows pyrite, galena, sphalerite, chalcopyrite, and pyrrhotite. Description says property is reported to be similar to Daly-Alaska, where deposits carry chalcopyrite, sphalerite, and argentiferous galena. May be the same as Hobo or Portland.

Buddington, 1925 (B 773), p. 74 -- Replacement and disseminated deposit in greenstone contains pyrite, galena, sphalerite, chalcopyrite, and pyrrhotite.

p. 78 -- 6 claims said to be similar to Daly-Alaska.

Swennings Greenpoint

Lead, Molybdenum, Silver

Hyder district

Bradfield Canal (17.05, 0.5)
56°01'N, 130°16'W

Summary: Quartz veins in hornfels 15 m from contact between rocks of Hazelton(?) Gp. and Hyder Quartz Monzonite contain galena and molybdenite; as much as 100 ppm silver; no gold.

Berg and others, 1977 (B 1403), p. 40-41 -- Quartz veins in hornfels of Hazelton(?) Gp. near (15 m) contact with Hyder Quartz Monzonite contain galena and molybdenite; veins strike N 30° W and dip 65°-70° NE.
p. 92-93 -- Same data as above. Assays of 4 samples showed as much as 100 ppm silver; no gold.

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Texas Discovery

Copper, Gold, Lead, Silver

Hyder district
MF-418, loc. 15

Bradfield Canal (17.6, 1.45)
56°04'N, 130°12'W

Summary: Quartz fissure vein in granodiorite is 1-14 in. thick and contains pyrite, galena, pyrrhotite, and sparse chalcopyrite; picked sample reported to have contained 30% lead, about 1.06 oz. a ton gold, and \$6 a ton in silver. A nearby quartz stringer 4 in. thick contains galena and chalcopyrite.

Buddington, 1925 (B 773), p. 74 -- Quartz fissure vein in granodiorite contains pyrite, galena, and chalcopyrite.

p. 90-91 -- Quartz vein 1-14 in. wide pinches out to NW; strikes N 30° W and dips 45°-60° NE. Contains pyrite, galena, pyrrhotite, and sparse chalcopyrite. Assay of picked sample said to have shown 30% lead, \$22 a ton in gold [about 1.06 oz.], and \$6 a ton in silver. Staked in 1923.

Buddington, 1929 (B 807), p. 98 -- Most of data as above. Strike given as N 15°-30° W. Nearby quartz stringer 4 in. thick strikes N 50° W, dips 45° NE, and carries galena and chalcopyrite.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Examination with ultra-violet lamp filed to find scheelite.

Titan (& Salmon River Syndicate)

Copper, Gold, Lead, Silver, Zinc

Hyder district
MF-418, loc. 23

Bradfield Canal (19.15, 0.7)
56°02'N, 130°03'W

Summary: Country rock is greenstone and intercalated slate cut by porphyry dikes. Principal deposit is in a shear zone in an altered pyritiferous porphyry dike with much included country rock; quartz veins as much as 2 ft. thick contain disseminated sphalerite and lesser amounts of galena, pyrite, and chalcopryrite; picked samples from outcrop said to carry considerable gold and silver; samples from underground workings were leaner. Explored by about 500 ft. of adit and crosscuts. Another quartz vein (in greenstone?) carries a little galena, sphalerite, pyrite, and chalcopryrite; very little work done there. Shear zone in greenstone carries arsenopyrite and a little galena. Prospect staked in 1917; last reported work in 1928. No record of production.

Buddington, 1925 (B 773), p. 74 -- Quartz vein and veinlike replacement deposit in quartz porphyry (felsite). Deposits of this type contain pyrite, galena, sphalerite, chalcopryrite, and pyrrhotite.

p. 77 -- Information supplied by one of owners. Property staked in 1917. Developments include 400 ft. of tunnel. Cut a body of quartz 12 ft. wide carrying about \$4 [about 0.19 oz.] gold and 6 oz. silver per ton; sparse galena, pyrite, and sphalerite. Country rock is quartz porphyry similar to that at Premier [in B.C.]. Picked samples of rich stringers in porphyry said to assay as much as 4-1/2 oz. gold a ton.

Buddington, 1929 (B 807), p. 72-74 -- Country rock is greenstone and intercalated slate of Hazelton Gp. intruded by porphyry dikes associated with the Texas Creek and Hyder batholiths. Most of the work (about 550 ft. of adit and crosscuts) has been in a shear zone containing quartz veins as much as 2 ft. thick in a large NW-trending sheared and altered porphyry dike with many included layers of slaty rock and greenstone; zone traced for 250 yds. on surface; strikes N 50°-60° W, dips 45° SW. Porphyry impregnated with pyrite; quartz contains disseminated sphalerite and lesser amounts of galena, pyrite, and chalcopryrite. Picked samples from outcrops reportedly were high in gold and silver; lower assays from material in workings. Elsewhere on property a sheared quartz vein [in greenstone?] 7-10 ft. thick that apparently strikes NE and dips 30° SW is crossed by a granodiorite porphyry dike. Local shoots in walls of vein carry a little disseminated galena, sphalerite, pyrite, and chalcopryrite; very little work has been done here. Another shear zone in greenstone carries considerable arsenopyrite and a little galena.

Smith, 1930 (B 813), p. 15 -- Development, 1928.

West and Benson, 1955 (B 1024-B), p. 44 -- No radioactivity anomalies found in traverse of drifts.

Byers and Sainsbury, 1956 (B 1024-F), p. 140 -- Search with ultraviolet lamp failed to find any scheelite.

(Unuk R.)

Copper

Hyder district

Bradfield Canal (12.0, 6.0) approx.
56°20'N, 130°46'W approx.

Summary: 2-ft. vein contains pyrite, pyrrhotite, and chalcopyrite. No other information.

Wedow and others, 1952 (OF 51), p. 57 -- "Pyrite, pyrrhotite, and chalcopyrite occur in a 2-foot vein in the Unuk River about a mile below the international boundary."

Virginia

Copper, Gold, Lead, Zinc

Hyder district
MF-418, loc. 24

Bradfield Canal (19.2, 0.85)
56°02'N, 130°02'W

Summary: Mineralized shear zone in greenstone is several feet wide; ore shoot is nearly solid sulfides, including pyrrhotite, sphalerite, pyrite, and a little galena and tetrahedrite in quartz gangue; selected samples reported to have run as high as 4-1/2 oz. a ton gold. Developed by about 300 ft. of crosscut and drift. Elsewhere on property mineralized greenstone contains small amounts of galena, pyrite, sphalerite, chalcopyrite, and pyrrhotite. No record of any production.

Buddington, 1925 (B 773), p. 74 -- Replacement and disseminated deposits in greenstone contain pyrite, galena, sphalerite, chalcopyrite, and pyrrhotite.

p. 84 -- Reported that claims were staked in 1919. 600-700 ft. of tunnel and crosscuts. 12-16 ft. of a zone 50 ft. wide is mineralized with sulfides. Ore said to average \$4-\$6 a ton, mainly in gold. Selected samples have yielded as much as 4-1/2 oz. gold per ton.

Buddington, 1929 (B 807), p. 43 -- Example of disseminated and lenticular replacement type of deposit.

p. 88-89 -- Mineralized ore shoot in shear zone several ft. thick in greenstone strikes N 50° W, dips S; almost solid sulfide consisting of pyrrhotite, sphalerite, pyrite, and a little galena and tetrahedrite in quartz gangue. Developed by a little more than 300 ft. of crosscut and drifts. Selected samples of ore reported to have run as much as 4-1/2 oz. gold per ton. Elsewhere on property mineralized greenstone contains small amounts of galena, pyrite, sphalerite, chalcopyrite, and pyrrhotite.

West and Benson, 1955 (B 1024-B), p. 31 -- Data from Buddington, 1929 (B 807), p. 43.

Western

Copper, Lead, Zinc

Hyder district
MF-418, loc. 23

Bradfield Canal (19.15, 0.7)
56°02'N, 130°03'W

Summary: Disseminated pyrite, chalcopyrite, galena, and sphalerite in a lode at least 15 ft. wide in silicified schistose tuff. See also Daly-Alaska, of which Western may have become a part.

Chapin, 1916 (B 642), p. 97 -- Bertha and Western claims being developed in 1915 on a NE-trending lode at least 15 ft. wide as exposed in a surface cut; in silicified schistose tuff; disseminated pyrite, chalcopyrite, galena, and sphalerite.

Mertie, 1921 (B 714), p. 142 -- Quotation from above.

Unnamed occurrence

Copper, Gold, Lead

Hyder district

Bradfield Canal (16.75, 1.2)
56°03'N, 130°17'W

Summary: Quartz-albite vein and quartz stringers in metamorphic rocks contain pyrite and very small amounts of galena and chalcopyrite; 0.05 ppm gold in a chip sample. May be on same ground as old Sunset or Blasher prospects.

Berg and others, 1977 (B 1403), p. 133-134 (M-10) -- Quartz-albite vein and intersecting zone of quartz stringers in small area underlain by metamorphic rocks of Hazelton(?) Gp. Vein strikes N 50° W, dips 55° SW, and is about 60 cm wide. Vein and fracture system contain as much as about 2% pyrite and very small amounts of galena and chalcopyrite. Composite chip sample contained 70 ppm Cu, 80 ppm Pb, 30 ppm Zn, and 0.05 ppm Au. May be on Sunset or Blasher.

Unnamed occurrence

Copper, Gold, Silver

Hyder district

Bradfield Canal (15.75, 1.05)
56°03'N, 130°24'W

Summary: Quartz pods in iron-stained metagraywacke contain pyrrhotite, traces of chalcopyrite, and small amounts of gold and silver.

Berg and others, 1977 (B 1403), p. 133 (M-9) -- Quartz pods in iron-stained metagraywacke contain pyrrhotite and traces of chalcopyrite; as much as 1.5 ppm Ag and 0.05 ppm Au in samples. Pods strike N 30° E, dip 80° SE; foliation of country rock strikes N 60° E, dips 70° NW. In general area where claims were staked on Banded Mtn. in late 1920's.

Unnamed occurrence

RE

Hyder district

Bradfield Canal (14.75, 2.1)
56°07'N, 130°30'W

Summary: Accessory minerals in foliated hornblende granodiorite include sphene and allanite.

Smith and others, 1977 (MF-825), sample 3S010 -- Accessory minerals in medium-grained strongly foliated hornblende granodiorite include sphene and allanite.

Unnamed occurrence

RE

Hyder district

Bradfield Canal (12.5, 2.5)
56°08'N, 130°43'W

Summary: Accessory minerals in slightly porphyritic biotite quartz monzonite include sphene and allanite.

Smith and others, 1977 (MF-825), sample 3S019 -- Accessory sphene, allanite, and opaque minerals in slightly porphyritic biotite quartz monzonite with weak schlieric structure and vague compositional banding.

Unnamed occurrence

Silver

Hyder district

Bradfield Canal (13.65, 3.25)
56°11'N, 130°36'W

Summary: Quartz-epidote veinlets in hornblende gneiss contain as much as 2.0 ppm silver.

Berg and others, 1977 (B 1403), p. 140 (G-50) -- Quartz-epidote veinlets in hornblende gneiss contain 0.5-2.0 ppm silver. Spectroscopic analyses indicated the presence of small amounts of copper, lead, zinc, molybdenum, and tungsten.

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 as synonyms.

Alaska -- see Alaska-Premier, Hyder Lead, Monarch
 Alaska-Comstock -- see Hyder Lead
 Alaska State Mines -- see Double Anchor, Marietta, Stampede
 Alaska State Mines Extension -- see Double Anchor, Stampede
 American -- see Stoner

 Andrews & Schonberg -- see Glacier
 Berg -- see Copper King
 Bervaqua -- see Engineer, North Star
 Blasher Extension -- see Stampede
 Brigadier Mining Co. -- see Cripple Creek

 Butte -- see Brigadier, Fish Creek
 Carlson & Hewitt -- see Homestake, Ibex
 Climax -- see Fish Creek
 Comstock -- see Hyder Lead
 Conners -- see Silver Bell

 Copper Claim -- see Stampede
 (Chickamin Glacier) -- see Glacier
 Day Bros. -- see Ibex
 Doggat -- see Border
 Dugas -- see Stampede

 Eichner & Pieper -- see (North Bradfield R.)
 Electrum -- see Marietta
 Elevenmile -- see Daly-Alaska
 Extenuate -- see Monarch
 Fortuna -- see Hyder Lead

 Frey, Goldborgh & Davidson -- see Double Anchor
 Hewitt & Carlson -- see Homestake, Ibex
 Hoosier -- see Daly-Alaska
 Hummel, Blasher & M(r)oss -- see Edelweiss, Heckla, Jumbo (Banded Mtn.)
 Hummel, Mross & Blasher -- see Heckla

 Hyder Butte -- see Brigadier
 Hyder Lead Mining Co. -- see Hyder Lead
 Ickis & Moa -- see Portland
 Jackson -- see Liberty
 Jackson-Hummel -- see Hyder Lead

 Joe-Joe -- see Hyder Lead
 Johnson, Bayne & Hummel -- see Hyder Lead
 Jumbo Mining -- see Jumbo (Texas Cr.)
 Kennedy -- see Silver King
 Kennedy & Provinse -- see Jumbo (Texas Cr.)

Lindeborg -- see Riverside
 Lodge -- see Stoner
 Lone Star -- see Blasher, Lake, Lakeside
 McDonald & Cronholm -- see Cantu
 McVey -- see Iron Cap, Silver Bar

 McVey & Connors -- see Evening Star, Silver Star
 Meagher & Snyder -- see Silver Coin
 Metcalf & Findley -- see (Banded Mtn.)
 Moa -- see Bluebird
 Moa, Ickis & Hill -- see Crest

 Moa, Ickis & Hovland -- see Monarch
 Morning Star -- see Evening Star
 Mountain View -- see Fish Creek
 Murphy & Stevens -- see Sunset
 New Alaska (Mining Co.) -- see Daly-Alaska

 Olympia Extension -- see Fish Creek, Last Chance
 Olympia Fraction -- see Fish Creek, Last Chance
 Pecos -- see Marietta
 Pederson & Johnson -- see Hobo
 Peterson & Olson -- see Brigadier

 Ready Money -- see Alaska-Premier
 Red Rose -- see Hobo
 Riverview -- see Riverside
 Scott, J. H., Co. -- see Riverside
 Single Rose -- see Fish Creek

 Snow Shoe -- see Double Anchor
 Snyder (& Wilson) -- see Ninety-Six
 Solo (Mining Co.) -- see Marietta
 Strong (, Barber & Black) -- see Riverside
 Summit -- see Fish Creek

 Swenning -- see Cathedral, Swennings Greenpoint
 Texas (Creek) Comstock -- see Hyder Lead
 Thornton (& Lemmons) -- see Marietta
 Wano -- see Monarch

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