UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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

OPEN-FILE REPORT 76-662

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

Menlo Park, California
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SUMMARY OF REFERENCES TO MINERAL OCCURRENCES (OTHER THAN MINERAL FUELS AND CONSTRUCTION MATERIALS) IN THE FAIRBANKS QUADRANGLE, ALASKA

By

Edward H. Cobb

Open-file report 76-662

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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 Fairbanks quadrangle, Alaska. All references to reports of the Geological Survey, to most reports of the U.S. Bureau of Mines, and to most reports of the State of Alaska Division of Geological and Geophysical Surveys and its predecessor State and Territorial agencies released before January 1, 1976, are summarized. Certain, mainly statistical, reports such as the annual Minerals Yearbook of the U.S. Bureau of Mines and the biennial and annual reports of the State of Alaska Division of Geological and Geophysical Surveys and its predecessor State and Territorial agencies are not included.

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


ALASKA
ARCTIC OCEAN
BERING SEA
GULF OF ALASKA
PACIFIC OCEAN

Index map

Summaries of References

For each mineral occurrence there is a page that gives the name of the occurrence; the mineral commodities present (listed alphabetically for metallic commodities and then for nonmetallic commodities); the mining district (Ransome and Kerns, 1954) in which the occurrence is located; the name of the 1:250,000-scale topographic quadrangle (Fairbanks); coordinates (as described by Cobb and Kachadoorian, 1961, p. 3-4); the metallic mineral resources map number (MF-410) 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 are given if such names appear in the reports summarized. If a deposit does not have such a name, but is near a named geographic feature, the name of that feature is shown in parentheses in lieu of a proper name. One deposit that has no proper name and is not near a named geographic feature is titled "Unnamed occurrence" and appears at the end of the list. 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
BMB	U.S. Bureau of Mines Bulletin
C	U.S. Geological Survey Circular
GC	Alaska Division of Geological and Geophysical Surveys (and predecessor State agencies) Geochemical Report
GQ	U.S. Geological Survey Geologic Quadrangle Map
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
TDM	Alaska Territorial Department of Mines Pamphlet
USBM OF	U.S. Bureau of Mines Open-file Report

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. Geol. Survey Bull. 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. Bur. Mines Inf. Circ. 7679, 91 p.

(Alder Cr.) Gold (?)

Fairbanks district Fairbanks (14.3, 14.6) approx. 64°45'N, 148°05'W approx.

Summary: Possibly auriferous gravels were prospected in 1907. No definite report of mining. Location on creek not given.

Brooks, 1908 (B 345), p. 41-42 -- Gravels carefully prospected, 1907. [The statement on p. 41 is that gold was present, that on p. 42 is that Brooks does not know if values were found.]

Prindle, 1908 (B 337), p. 45-46 -- No gold has been mined; gravels said to be auriferous. Prospect drilling (results not known), winter of 1907.

Ellsworth and Parker, 1911 (B 480), p. 158 -- Very little actual mining in 1910.

Alexander & Bethis — Clay

Bonnifield district — Fairbanks (6.8, 9.15)
64°31'N, 149°06'W

Summary: A few thousand tons of clay in floodplain of Nenana R. are suitable for manufacture of common brick.

Eckhart, 1952 (OF 66) -- Clay deposit is part of flood plain of Nenana R. Four flat-lying, probably lenticular units of tan, gray, and dark clay. Lowest 3 units (dark and gray clay) are suitable for manufacture of common brick. Inferred reserves (calculated from auger holes) are 13,000 short tons, of which 4,900 tons are in units suitable for brick. Deposit not fully outlined.

(Allen Cr.)

Gold (?)

Fairbanks district

Fairbanks (13.0, 15.0) approx.
64°50'N, 148°15'W approx.

Summary: Prospects reported, but not confirmed.

Ellsworth, 1912 (B 520), p. 241 -- "Good prospects were found on Allen Creek, a small tributary of Goldstream" in 1911. [This is the only mention of this creek. No creek within about 4 mi. of Allen Cr. has reported placer deposits; no reported lode deposits in drainage basin.]

American

Gold

Fairbanks district
MF-410, loc. 35

Fairbanks (19.9, 17.5)
64°59'N, 147°19'W

Summary: Brecciated schist partly cemented by quartz and an irregular quartz vein. Very few sulfides. Gold can be panned from most random samples of quartz. Several tons of ore (gold tenor $24 per ton) have been mined; inclined shaft 60 ft. long. Includes reference to Perrault.

Smith, 1913 (B 525), p. 166 -- Vein 18 in. to 4 ft. wide, averaging 2 ft. Several tons of ore mined; gold tenor was $24 per ton.

Smith, 1913 (B 542), p. 151 -- Same as B 525.

Chapin, 1914 (B 592), p. 329-330 -- Quartz vein said to strike N 50° E and dip 60° NW; varies from 6 in. to 3-1/2 ft. in thickness; inclined shaft 60 ft. long. Two generations of quartz; very few sulfides. Footwall is a zone of schist 3 ft. wide with small quartz stringers. Gold can be panned from most random samples of quartz.

Hill, 1933 (B 849-B), p. 154 -- Workings inaccessible in 1931. Material on dumps is breccia of schist fragments partly cemented by quartz. Reference to B 525, p. 166.

Chapman and Foster, 1969 (P 625-D), p. D15 -- References to B 525, p. 166, and B 592, p. 329-330. [Lists scheelite, but none is mentioned in cited reports.]

American Eagle — Gold

Fairbanks district — Fairbanks (19.9, 17.5)
MF-410, loc. 35 — 64°59'N, 147°19'W

Summary: Vein 18 in. wide carries about 1.2 oz. gold per ton. 20 tons ore mined (but not shipped) in 1911. Shaft 38 ft. deep. See also American.

Smith, 1913 (B 525), p. 166 -- Vein averages 18 in. wide, $25 per ton in gold. Shaft 38 ft. deep. 20 tons ore mined but not shipped in 1911. Dike (character not known) said to cut vein and to carry $15 per ton in gold.
Smith, 1913 (B 542), p. 195 -- Same as B 525.
Hill, 1933 (B 849-B), p. 154 -- Reference to B 525.
Chapman and Foster, 1969 (P 625-D), p. D15 -- Reference to B 525.

Anderson

Gold (?), Tungsten

Fairbanks district
MF-410, loc. 27

Fairbanks (18.3, 17.0)
64°57'N, 147°32'W

Summary: Quartz vein cuts across foliation of mica schist. Scheelite along outer edge of vein, but not within the quartz or in the schist.

Mertie, 1918 (B 662), p. 424 -- Quartz stringer strikes N 50° E, dips 55° NW; foliation of mica schist country rock strikes N 60° E, dips 20° W. Scheelite reported along outer edges of vein, but not within vein or in schist.

Thorne and others, 1948 (RI 4174), p. 26 -- Quotation from B 662.

White and others, 1952 (C 196), p. 9 -- Sheared quartz vein in granitic rock; gold and several of the common sulfides.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 662.

(Antimony Ridge)

Antimony, Gold

Fairbanks district
MF-410, loc. 22

Fairbanks (16.65, 17.65)
65°00'N, 147°46'W

Summary: Shear zone associated with fault in schistose quartzite and mica schist. Stibnite in lenses and nodules; sheared vein quartz. Samples across vein contained 3.40 to 69.00 (average 16.1) ppm gold. Shaft (depth not given) on prospect.

Chapman and Foster, 1969 (P 625-D), p. D14 -- Stibnite in breccia associated with NE-trending reverse fault in schistose quartzite and mica schist. Shaft [depth not stated].

Pilkington and others, 1969 (OF 383), p. 4-6 -- Vein trends N 47° E, dips 60° SE. Major and many subsidiary shears. Stibnite occurs as lenses or nodules surrounded by sheared material. Analyses of channel samples across vein range from 3.40 to 69.00 and average 16.1 ppm gold.

Barker & McQueen

Gold

Fairbanks district
MF-410, loc. 4

Fairbanks (14.4, 15.5)
64°52'N, 148°04'W

Summary: Four tons of ore mined from a steeply dipping quartz vein yielded "fair returns." About 200 ft. of workings.

Smith, 1913 (B 525), p. 209 -- Quartz vein trends NW and dips steeply NE. Quartz on dump; gold content small; practically no sulfides.

Smith, 1913 (B 542), p. 195 -- Same as B 525.

Chapin, 1914 (B 592), p. 352-353 -- Two shafts were sunk 40 and 45 ft. and an incline driven along a narrow stringer for 100 ft. Drift cut a ledge said to be 4 ft. wide. 4 tons of ore mined and milled; yielded fair returns.

Chapman and Foster, 1969 (P 625-D), p. D19 -- References to B 525, B 592.

Big Blue — Gold (?)

Fairbanks district — Fairbanks (14.75, 15.6)
64°53'N, 148°01'W

Summary: Crushed schist, quartz, and gouge in fault zone. No data on metallic content, if any.

Hill, 1933 (B 849-B), p. 148 -- Vein exposed in shallow shafts and pits; strikes N 27° E. Apparently occupies faulted zone with much crushed schist, quartz, and gouge.

Chapman and Foster, 1969 (P 625-D), p. D18 -- Reference to B 849-B.

(Big Eldorado Cr.) Gold

Fairbanks district Fairbanks (16.45-16.9, 17.15-17.5)
MF-410, loc. 51 64°58'-64°59'N, 147°44'-147°47'W

Summary: Stream flows in asymmetrical valley. Thick mass of terrace deposits on gentle slope. In upper part of valley gold is in gravel 50 ft. deep. Has been minor production of gold. Includes reference (Prindle and Katz, 1913 (B 525), p. 106) to Eldorado Cr.

Brooks, 1908 (B 345), p. 42 -- Small production, 1907.

Prindle, 1908 (B 337), p. 39, 41 -- Gold has been found. Paystreak said to be narrow; has been some mining (as of 1907).

Prindle and Katz, 1908 (B 379), p. 191 -- On 2 claims depths to bedrock are 54 and 98 ft. (thicknesses of muck are 20 and 38 ft. respectively).

Prindle and Katz, 1913 (B 525), p. 106 -- [Given as Eldorado Cr. in reference; context makes it certain that data are for Big Eldorado Cr.] Thick mass of terrace deposits on gentle slope. Gold in upper part of valley in gravel 50 ft. deep and 30 ft. wide. Valley asymmetrical; stream close to steep SE wall.

p. 111 -- Production through 1910 was worth $50,000.

p. 113 -- Average value of gold per oz. is $19.38.

Brooks, 1916 (B 642), p. 59 -- Mining, 1915.

Smith, 1917 (BMB 153), p. 51 -- Mining, 1916.

Billy Sunday — Antimony, Gold, Lead, Zinc

Fairbanks district — Fairbanks (15.0, 15.4)
MF-410, loc. 18 — 64°52'N, 148°00'W

Summary: Mineralized zone 3-11 ft. wide with gold-quartz vein 2-3 ft. thick. Ore contains free gold, arsenopyrite, stibnite, cervantite, sphalerite, and galena. Developed by inclined shaft and 4 levels of drifts. Gold worth $50,000 (about 2,400 fine oz.) recovered from 1,900 tons of ore mined from 1918 to 1923. Includes references to: Bill Sunday Fraction, Leah fraction, Lean Fraction, Smith & McGlone, Smith & McGonnigle, Smith Bros.

Mertie, 1918 (B 662), p. 412-413 -- Work on Leah fraction consists of 95-ft. shaft. Vein of gold quartz 2-3 ft. thick in and parallel to mineralized zone 3-11 ft. wide. Vein strikes N 45° E, dips 55° SE. Quartz is broken and shattered; contains stibnite and a little sphalerite. Shattered rock next to quartz vein filled with quartz stringers; carries gold and may be minable.

Chapin, 1919 (B 692), p. 323 -- Development work continued, 1917. On Billy Sunday Fraction lode strikes N 25° E and dips 70° SE to nearly vertical, is 3 ft. wide at surface and widens downward; gouge and mineralized schist at 50 ft.; contains stibnite, cervantite, and free gold.

Martin, 1920 (B 712), p. 40 -- Operated May-October, 1918; 2 mill runs made.

Brooks and Martin, 1921 (B 714), p. 81 -- Minor production, 1919.

Brooks, 1922 (B 722), p. 45 -- Minor production, 1920.

Brooks, 1923 (B 739), p. 30 -- Mining, 1921.

Brooks and Capps, 1924 (B 755), p. 35 -- Development, 1922; pump to be installed.

Brooks, 1925 (B 773), p. 15 -- Mining, 1923.

Hill, 1933 (B 849-B), p. 139-142 -- About $50,000 produced from 1,900 tons of ore from stopes above 120-ft. level and winze on 200-ft. level. Mine not operated since 1923. Inclined shaft and drifts on 4 levels. Veins are irregular, as much as 5 ft. wide, and consist of quartz and crushed schist. Some schist near veins also mineralized; gold, stibnite, and arsenopyrite.

Killeen and Mertie, 1951 (OF 42), p. 17-18 -- Reference to B 662, p. 413; B 692, p. 323.

Chapman and Foster, 1969 (P 625-D), p. D17 -- References to B 662, B 849-B. Galena also reported.

Blossom

Tungsten

Fairbanks district
MF-410, loc. 27

Fairbanks (18.3, 17.0)
64°57'N, 147°32'W

Summary: Bedrock is quartz-mica and amphibole schists intruded by a porphyritic granite dike. Scheelite in quartz-scheelite stringers and in thin zones in schist in contact with the stringers. No tactite developed. Old workings (2 shafts, trenches, and pits) caved. Selected samples from dumps contained 1.44% and 2.02% WO_3. Includes reference to Black Bear.

Mertie, 1918 (B 662), p. 422 -- Along western periphery of large mass of porphyritic granite.

p. 424 -- Shaft said to have exposed a rich stringer of scheelite. Granite porphyry dike in bottom of shaft. Another shaft 20 ft. deep opened a scheelite lode 3-4 ft. thick.

Chapin, 1919 (B 692), p. 327 -- Quartz stringer lodes in schist in places carry large crystals of scheelite; exposed by trenching.

Thorne and others, 1948 (RI 4174), p. 24, 26 -- Quotations from B 662 and statement that claims were restaked in 1942.

Byers, 1957 (B 1024-I), p. 201 -- Had been located by 1916. Prospecting for 2 or 3 years; workings all caved by 1942.

p. 203-204 -- Workings (all caved) consisted of 2 shafts and 23 trenches and pits. Bedrock is quartz-mica and amphibole schists intruded by a porphyritic granite dike. Scheelite is in quartz-scheelite stringers and in thin zones in schist in contact with quartz stringers. No tactites developed. Selected samples from dumps contained 1.44% and 2.02% WO_3.

Berg and Cobb, 1967 (B 1246), p. 220 -- On ridge between Steele and First Chance Creeks where the scheelite deposits are in tactite, silicated limestone, granite and pegmatitic dikes, and small quartz veins in schist.

Chapman and Foster, 1969 (P 625-D), p. D16 -- References to B 692, p. 327, and B 1024-I, p. 203-204.

Mulligan, 1974 (IC 8626), p. 13 -- Pegmatite-type quartz-scheelite stringers penetrate quartz-biotite schist and porphyritic granite.

Blue Bonanza

Antimony, Gold, Lead, Silver

Fairbanks district
MF-410, loc. 8

Fairbanks (14.5, 15.8)
64°53'N, 148°04'W

Summary: Quartz vein 18 in. thick at surface narrows with depth; very rich (in gold) pockets near surface. Sulfides in vein include galena, pyrite, stibnite, and argentiferous tetrahedrite. Inclined shaft and stopes. 10 tons of ore reported to have been mined. Includes references to: Grant, near Nugget Cr.; Midnight Sun.

Smith, 1913 (B 525), p. 197 -- Inclined (35°) shaft on line between Blue Bonanza and Midnight Sun claims. 18-inch quartz vein that narrows with depth. Two periods of vein formation; older quartz crushed and has cavities opened since crushing. Younger quartz has glassy crystals and is banded parallel to walls; contains galena, pyrite, and some stibnite along walls and between crystals. Gold visible near and remote from sulfides. Considerable silver (in tetrahedrite).

Smith, 1913 (B 542), p. 183 -- Same as B 525.

Chapin, 1914 (B 592), p. 353 -- Shaft 130 ft. deep. Surface zone 12-15 ft. deep contained pockets of very rich ore; below this zone rock has low gold content.

Hill, 1933 (B 849-B), p. 122 -- Vein 5-6 in. wide. Quartz contains small amounts of arsenopyrite and stibnite. Vein strikes N 10° W, dips 65° E. Shaft more than 60 ft. deep, stopes. 10 tons ore said to have been mined. Grab sample from dump contained $9.22 per ton in gold.

Killeen and Mertie, 1951 (OF 42), p. 19 -- References to B 525 and B 849-B.

Chapman and Foster, 1969 (P 625-D), p. D18 -- References to B 525 and B 592.

(Bonnifield Cr.) Gold

Bonnifield district
MF-410, loc. 83

Fairbanks (15.75, 1.35) approx.
64°04'N, 147°56'W approx.

Summary: Small-scale mining reported in 1929 and 1935. There was undoubtedly prospecting or mining in other years as well.

Smith, 1932 (B 824), p. 40 -- Mining, 1929; no more than a few hundred dollars worth of gold produced.
Smith, 1937 (B 880-A), p. 46 -- Small-scale mining, 1935.
Cobb, 1973 (B 1374), p. 111 -- Has been one of the least productive creeks in the district.

Brown	Gold (?)
Fairbanks district	Fairbanks (18.7, 17.3) 64°58'N, 147°29'W

Summary: In 1913 Brown was prospecting several claims near a contact between porphyritic granite and schist.

Chapin, 1914 (B 592), p. 345 -- Several claims near contact between porphyritic granite and schist being developed, 1913.
Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 592.
Mulligan, 1974 (IC 8626), p. 13 -- Near contact between porphyritic granite and schist.

Bunker Hill

Gold

Fairbanks district
MF-410, loc. 23

Fairbanks (17.1, 17.7)
65°00'N, 147°42'W

Summary: Gold-quartz vein 2-12 in. thick in schist. Test shipment of 8 tons of material from near surface milled 13 oz. of gold. Shaft over 100 ft. deep, 2 short drifts. See also Goodwin.

Chapin, 1914 (B 592), p. 345 -- Test shipment of 8 tons of ore, 1913. Vein said to be 24 in. wide at surface.

Hill, 1933 (B 849-B), p. 154 -- Owner (Goodwin) stated that shaft was 102 ft. deep on a vein that strikes N 15° W, dips 70° E, averages 12 in. wide at surface and narrows to 2 in. at depth of 50 ft. Short drifts on 25-ft. and 60-ft. levels. Material on dump is mica schist from hanging wall and blocky quartz-mica schist from footwall. 8 tons of ore milled 13 oz. of gold. Grab sample of ore from dump assayed $24.06 per ton.

Chapman and Foster, 1969 (P 625-D), p. D15 -- [Called Bunker Hill mine.] References to B 592 and 849-B.

(California Cr., lode)

Antimony, Bismuth, Copper, Gold, Lead, Silver

Bonnifield district
MF-410, loc. 41

Fairbanks (9.8, 1.25)
64°04'N, 148°43'W

Summary: Small veins of complex ore; lead-antimony sulfide (probably jamesonite), bismuthinite, arsenopyrite, pyrite, and sulfides and sulfosalts that carry antimony, lead, copper, arsenic, and silver. Stibnite, chalcopyrite, and argentiferous galena also reported. Quartz gangue. Some development, 1934-35. Selected ore shipped for testing. Assays for silver as high as 600 oz. per ton. One sample contained 0.27 oz. gold per ton. Copper obtained from concentrates. Includes references to Prospect Mining Co.

Smith, 1936 (B 868-A), p. 24 -- Developed mainly for silver; subordinate amounts of gold and copper.

p. 63 -- Active prospecting in 1934. Ore carries some gold, considerable copper, a little lead; most valuable component is silver. Selected ore shipped for metallurgical testing.

p. 66-67 -- Copper obtained from concentrates.

Smith, 1937 (B 880-A), p. 28 -- Discontinued operations in midseason, 1935.

p. 65 -- Country rock mainly schist. Work discontinued, September, 1935.

p. 70 -- Copper obtained from concentrates.

Joesting, 1943 (TDM 2), p. 13-14 -- Several small antimony-bearing veins. Ore is complex; lead-antimony sulfide (probably jamesonite), sulfides and sulfantimonates of copper, arsenic, and silver, and small amounts of bismuthinite, arsenopyrite, and pyrite. Small fissure vein (Danzinger lode) unsuccessfully mined; sample assayed 0.27 oz. Au and 259 oz. Ag per ton; other samples as high as 600 oz. Ag per ton.

Wedow and others, 1952 (OF 51), p. 72 -- A few carloads of ore reported to have been produced.

White and others, 1952 (C 196), p. 9 -- Stibnite, pyrite, and chalcopyrite; silver-bearing galena; in quartz gangues.

Berg and Cobb, 1967 (B 1246), p. 202-203 -- Small veins contain arsenopyrite, pyrite, bismuthinite, and sulfosalts that carry antimony, lead, zinc (?), copper, arsenic, and silver.

(California Cr., placer) Gold, Mercury, Platinum

Bonnifield district Fairbanks (9.7-9.9, 0.85-1.5)
MF-410, locs. 66, 67 64°03'-64°05'N, 148°43'-148°44'W

Summary: Creek flows through 3 basins separated by canyons cut through schist ridges. Most mining was at head of canyon about 5 mi. above Rex Cr. in stream gravels on schist bedrock; reported in 1910 only, but may also have been carried on in other years. Gold may have come from quartz veins in schist near head of creek. Concentrates contained gold, cinnabar, and platinum-group metals.

Capps, 1911 (B 480), p. 221-222, 224 -- Preliminary to B 501.
Capps, 1912 (B 501), p. 44 -- Mining, 1910.
p. 46 -- Two canyons in schist ridges; rest of course in gravel sand, and lignite. Colors found in many parts of basin. Mining in 1910 was 5 mi. above Rex Cr.; gravels 6 ft. deep on schist bedrock.
Maddren, 1918 (B 662), p. 380-381 -- Three basins separated by ridges of schist through which creek has cut canyons hundreds of feet deep. Has been mining where creek enters canyon between middle and lower basins.
p. 383 -- In 1910 two men tried mining at head of canyon between middle and lower basins (5 mi. above mouth of Rex Cr.). Stream gravels about 6 ft. deep on schist, but too lean for hand mining. Quartz veins in schist at head of creek may have been source of gold.
Joesting, 1942 (TDM 1), p. 20 -- Platinum has been found in placers.
p. 27 -- Scarce cinnabar in placers.
Malone, 1962 (IC 8131), p. 56 -- Scarce placer cinnabar.
Malone, 1965 (IC 8252), p. 54 -- Placer cinnabar.
Cobb, 1973 (B 1374), p. 111 -- Concentrates contain gold, cinnabar, and platinum-group metals.

Camp Bird	Gold (?)
Fairbanks district	Fairbanks (14.85, 15.45) 64°52'N, 148°01'W

Summary: Vein; no data other than on attitude and operators.

Chapman and Foster, 1969 (P 625-D), p. D18 -- Vein strikes NNE and dips 85° W.

(Caribou Cr., trib. California Cr.) Antimony, Tungsten

Bonnifield district
MF-410, loc. 41

Fairbanks (9.8, 1.25)
64°04'N, 148°43'W

Summary: Stibnite-bearing quartz vein; wolframite in float.

Joesting, 1942 (TDM 1), p. 12 -- Stibnite vein has been staked several times.

p. 41 -- Wolframite (ferberite) has been found in float.

Berg and Cobb, 1967 (B 1246), p. 202-203 -- Stibnite-bearing quartz vein.

(Caribou Cr., trib. Dry Cr.) Gold

Bonnifield district
MF-410, loc. 84

Fairbanks (20.8, 1.5) approx.
64°04'N, 147°18'W approx.

Summary: Stream flows on high gravels and schist. Small-scale mining in 1909.

Capps, 1911 (B 480), p. 229 -- Preliminary to B 501.
Capps, 1912 (B 501), p. 52 -- Flows through valley that is in high gravels at head and in schist in lower part. Two men made wages mining stream gravels in 1909, but did not return in 1910.

Clipper

Antimony, Gold

Fairbanks district
MF-410, loc. 14

Fairbanks (14.85, 15.55)
64°52'N, 148°00'W

Summary: Tunnel 500 ft. long follows small faulted quartz vein in schist. Stibnite, antimony sulfosalt (jamesonite?), and free gold are present. May have been very small production of stibnite; reference (Killeen and Mertie, 1951) not consistent. Stibnite ore in sight not more than one ton.

Hill, 1933 (B 849-B), p. 152 -- Tunnel 237 ft. long in biotite schist with some quartzite. A narrow fissure (strike N 20° W, dip 85° W) near portal is 1-8 in. wide and carries a little sulfide and free gold (about $12 per ton). Other fissures do not appear to be mineralized.

Killeen and Mertie, 1951 (OF 42), p. 12 -- Ore sample contained 56.58% Sb.

p. 14 -- Minor amount of stibnite has been mined.

p. 16 -- Winding tunnel 500 ft. long follows small faulted vertical quartz vein. "Sulphantimonites are present as crystals disseminated in the vein quartz." Lens of stibnite partially exposed in tunnel is 2-12 in. thick, 3 ft. wide, and may be 10-15 ft. long. Sample contained 56.58% Sb.

p. 43 -- Ore in sight not more than 1 ton.

Chapman and Foster, 1969 (P 625-D), p. D18 -- References to B 849-B and OF 42. [Additional sources are cited, but no other information appears to have been taken from them.]

(Cody Cr.) Gold (?)

Bonnifield district Fairbanks (7.75, 1.0) approx.
64°03'N, 149°00'W approx.

Summary: Placer gold reported. See also Rambler.

Maddren, 1918 (B 662), p. 368 -- Placer gold reported. No mining in 1916. Source may be lodes such as one in basin that carries stibnite [Rambler].

Colbert

Tungsten

Fairbanks district
MF-410, loc. 32

Fairbanks (19.6, 17.6)
64°59'N, 147°22'W

Summary: Calcareous layers (and probably a little limestone) in quartz mica schist replaced by scheelite ore. Garnet tactite contains no scheelite. Lode traced (by trenching) for 2,000 ft. on surface; pinched out in some places; 50 ft. wide in one trench. Scheelite abundant in 3 ore shoots and in small (less than 1 ft.) pockets. Average tenor of ore shoots is 1.3% WO_3 over average width of 1.6 ft.

Joesting, 1943 (TDM 2), p. 22-23 -- Prospecting 1941-42. Scheelite-bearing float traced to bedrock source.

Thorne and others, 1948 (RI 4174), p. 4 -- USBM exploration project was completed in 1943.

p. 6 -- Prospect 1,200 ft. south of and parallel to Cleary Hill ore zone.

p. 8-11 -- Located, 1941. Trenches and pits traced mineralized structure more than 1,000 ft.; geophysical exploration indicated "a continuous vein structure for over 3,000 ft." Property comprises 14 unpatented claims. Bedrock schists (metasedimentary rocks), intruded by porphyritic granite. Scheelite mineralization generally parallels schistosity; small amounts of disseminated scheelite in granite. Ore lenses occupy parts of a thin (about 30 ft. thick) limestone bed in the schist; 2 periods of silicification. Scheelite lenses are 0.5 to 1.2 ft. thick and from a few to 100 ft. long; WO_3 content is 1.2% to 2.5%. Quartz veinlets and thin fractures that carry scheelite are in the ore zone, commonly parallel to main replacement zone.

p. 13-15 -- Details of USBM exploration project.

Byers, 1957 (B 1024-I), p. 189 -- Lode formed by replacement of calcareous layers in country rock (mainly quartz-mica schist); strike about N 70° E and dip about 35° N. About 0.4 mi. N of main mass of porphyritic granite and 0.8 mi. S of an outlying cupola.

p. 199-200 -- Lode traced by trenching for 2,000 ft. Thickness is variable; pinched out in some places and 50 ft. wide in one trench. Ore mainly replaced calcareous schist rather than limestone (as at Stepovich mine), although some remnant limestone is present; no scheelite in a garnet tactite on property. Scheelite abundant in 3 ore shoots and in widely spaced small (less than 1 ft.) pockets; scattered grains also. Average tenor of ore shoots is 1.3% WO_3 over an average width of 1.6 ft.

Berg and Cobb, 1967 (B 1246), p. 220 -- Lode 1,000 ft. south of, parallel to, and similar to Stepovich lode.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 1024-I, p. 199-200.

Columbia

Tungsten

Fairbanks district
MF-410, loc. 29

Fairbanks (18.5, 17.0)
64°57'N, 147°31'W

Summary: Lode is schist containing quartz-scheelite stringers; porphyritic granite hanging wall. Old workings consisted of 2 shafts, 2 adits, pit, trenches. No production reported.

Mertie, 1918 (B 662), p. 422-423 -- Along western periphery of large mass of porphyritic granite. Tunnel 130 ft. long; 3-ft. zone of scheelite-bearing rock with porphyritic granite hanging wall; strikes N 20° W, dips 30° E. Open cut exposes scheelite lode cut by 1-ft. quartz vein; much wad associated with quartz.

Chapin, 1919 (B 692), p. 326 -- Adit driven 80 ft. along scheelite-bearing quartz vein with granite hanging wall.

Thorne and others, 1948 (RI 4174), p. 24-25 -- Quotations from B 662.

Byers, 1957 (B 1024-I), p. 201 -- Had been located by summer of 1916.

p. 205-206 -- Workings in 1932 consisted of 2 adits, 2 shafts, a pit, and 4 trenches; all caved. In 1916 an adit was driven 80 ft. along a 3-ft. zone of schist containing quartz-scheelite stringers; strike N 20° W, dip 30° E; porphyritic granite hanging wall. Pieces of quartz-mica schist cut by scheelite-bearing quartz on dump in 1943.

Berg and Cobb, 1967 (B 1246), p. 220 — On ridge between Steele and First Chance Creeks where the scheelite deposits are in tactite, silicated limestone, granite and pegmatitic dikes, and small quartz veins in schist.

Chapman and Foster, 1969 (P 625-D), p. D16 -- References to B 692, p. 326, and B 1024-I, p. 205-206.

Mulligan, 1974 (IC 8626), p. 13 -- From P 625-D, p. D16.

(Columbia Cr.) — Gold (?)

Fairbanks district — Fairbanks (18.2, 16.25)
64°54'N, 147°33'W

Summary: Low-grade free-milling quartz reported.

Smith, 1913 (B 525), p. 210 -- Adit reported to have been driven 100 ft. on a quartz lead. Ore said to be low grade but free milling. Not visited by Smith.

Smith, 1913 (B 542), p. 196 -- Same as B 525.

Cottonblossom — Antimony, Gold

Fairbanks district — Fairbanks (14.45, 15.3)
MF-410, loc. 5 — 64°52'N, 148°04'W

Summary: Mineralized zone near a fault plane contains bunches of stibnite and gold and stibnite in quartz veins. Two shafts (70 ft. and 60 ft. deep) and about 100 ft. of other workings. No record of production. Includes reference to St. Jude.

Smith, 1913 (B 525), p. 208-209 -- Gouge above a fault plane and small fractures and quartz stringers, some of which contain gold. Stibnite occurs in bunches and sparingly in quartz stringers. Many cavities left by decomposition of sulfides. Explored by 2 shafts (70 ft. and 60 ft. deep).

Smith, 1913 (B 542), p. 194-195 -- Same as B 525.

Chapin, 1914 (B 592), p. 352 -- 100 ft. of tunnel and crosscuts in mineralized area cut small stringers, but no definite lode.

Brooks, 1916 (B 649), p. 40 -- Quotation from B 525.

Hill, 1933 (B 849-B), p. 123 -- Two old shafts indicate that vein strikes N 35° W. Dump consists of dark mica schist and very little quartz.

Killeen and Mertie, 1951 (OF 42), p. 20 -- Reference to B 525.

Chapman and Foster, 1969 (P 625-D), p. D19 -- References to B 525, B 592, B 849-B, OF 42.

(Cripple Cr.) Gold, Tin

Fairbanks district Fairbanks (14.9-15.5, 14.8-15.25)
MF-410, loc. 45 64°50'-64°51'N, 147°55'-148°00'W

Summary: Bedrock mainly mica schist. In early days (1908-13) most (if not all) production was from benches. Some of ground as much as 100 ft. deep. Preparations for large-scale dredging begun in 1936; dredge began operating in 1940. Rare cassiterite has been reported from placers.

Brooks, 1907 (B 314), p. 36 -- Gold values found, 1906.
Brooks, 1908 (B 345), p. 42 -- Carries gold. Only bench claims a mile below Ester Cr. have been productive (1907).
Prindle, 1908 (B 337), p. 29 -- Quotation from B 314.
p. 44-45 -- Bedrock principally mica schist. Bench deposits east of creek being mined in 1907.
Ellsworth, 1910 (B 442), p. 234 -- Some production, 1909.
Ellsworth, 1912 (B 520), p. 243 -- No mining in 1911.
Ellsworth and Davenport, 1913 (B 542), p. 208 -- Good prospects found, but no mining., 1912.
Prindle and Katz, 1913 (B 525), p. 110 -- Depth to bedrock on one claim is 76-100 ft.
p. 112-113 -- Production, 1908-10, worth $50,000. Gold worth $17.18 per oz.
Chapin, 1914 (B 592), p. 360 -- Mining, 1913.
Smith, 1938 (B 897-A), p. 46-48 -- Work preparatory to large-scale dredging, 1936.
Smith, 1939 (B 910-A), p. 46-47 -- Work preparatory to large-scale dredging, 1937.
Smith, 1939 (B 917-A), p. 44-45 -- Work preparatory to large-scale dredging, 1938.
Smith, 1941 (B 926-A), p. 40-41 -- Work preparatory to large-scale dredging, 1939.
Joesting, 1942 (TDM 1), p. 32 -- Rare placer cassiterite.
Smith, 1942 (B 933-A), p. 38-40, 67 -- New, large dredge began operating, 1940. Artificial freezing used to stabilize banks of thawed material.

Crown Point — Gold

Fairbanks district — Fairbanks (15.0, 15.2)
MF-410, loc. 19 — 64°51'N, 148°00'W

Summary: Visible gold in narrow quartz veins in joints in chloritic schist. Gouge along one vein wall and schist altered to clay. Wall rock said to contain a little gold. Explored by inclined shaft 20 ft. long.

Chapin, 1914 (B 592), p. 353 -- Inclined shaft driven 20 ft. along 2 narrow (2 in. and 1/2 in.) quartz veins in parallel joints in schist. Veins strike N 40° W and dip 65° SW and are separated by 4 ft. of chloritic schist. Gouge along hanging wall of larger vein; adjoining schist altered to clay. Specks of visible gold in quartz; wall rock said to contain a little gold.

Chapman and Foster, 1969 (P 625-D), p. D17 — Reference to B 592.

(Daniel(s) Cr.) Gold

Bonnifield district Fairbanks (11.15-11.25, 1.75-1.85)
MF-410, loc. 72 64°06'N, 148°32'-148°33'W

Summary: Stream heads in schist and has cut through Nenana Gravel and coal-bearing rocks (both Tertiary) into underlying schist, though gravel has slumped into creek in places. Gold is fine and rounded. Sporadic small-scale mining from 1914 to 1921 and in 1928-29.

Maddren, 1918 B 662), p. 388-391 -- Stream (about 4 mi. long) heads in schist. In middle and lower parts of stream course bedrock is slightly consolidated coal-bearing rocks overlain by Nenana Gravel; for 2 miles above mouth stream has cut down into underlying schist. Placer claims staked in 1905; mining began in 1914. On claims near mouth Nenana Gravel overlies schist and has slumped into creek canyon. Gold fine and rounded. Maddren thinks gold was derived from local sources in schist; no particular evidence for such a source.

Martin, 1920 (B 712), p. 44 -- Mining, 1918.

Brooks, 1922 (B 722), p. 51 -- Mining, 1920.

Brooks, 1923 (B 739), p. 35 -- Mining, 1921.

Smith, 1930 (B 813), p. 35 -- Mining, 1928; production no more than a few hundred dollars.

Smith, 1932 (B 824), p. 40 -- Mining (small-scale), 1929.

Dorothy & Dorice — Antimony, Gold (?)

Fairbanks district — Fairbanks (14.85, 15.55)
MF-410, loc. 14 — 64°53'N, 148°00'W

Summary: Vein striking N 40° E and explored by a shaft of unknown depth may carry gold. Stibnite float was not traced to source. Includes references to: Cosgrove & Krutsch, Krutsch and Cosgrove.

Chapin, 1914 (B 592), p. 354 -- Lode strikes N 40° E. Openings [shaft on index map] caved in 1913.

Joesting, 1942 (TDM 1), p. 11 -- Stibnite float, some pieces 2 ft. across. Stibnite is coarse and bladed. Several bulldozed trenches, but bedrock source not found. (Krutsch and Cosgrove.)

Killeen and Mertie, 1951 (OF 42), p. 19 -- Reference to TDM 1.
p. 42 -- Showing of stibnite of unproven significance.

Chapman and Foster, 1969 (P 625-D), p. D18 -- References to B 592 and TDM 1.

(Eagle Cr.) Antimony

Bonnifield district Fairbanks (10.4, 1.2)
MF-410, loc. 42 64°04'N, 148°39'W

Summary: High-grade bladed stibnite float on ridge. No development reported.

Joesting, 1942 (TDM 1), p. 12 -- Antimony prospect has been staked; no work reported.

Joesting, 1943 (TDM2), p. 13-14 -- On ridge between Eagle and Lynx Creeks. High-grade coarse, bladed stibnite float scattered for 100 ft. along ridge. Covered by claim of Strand & Diebold.

Berg and Cobb, 1967 (B 1246), p. 202-203 -- Small stibnite lode(s).

Elmes (Gold Mining Co.) Gold

Fairbanks district Fairbanks (15.15, 15.8)
MF-410, loc. 20 64°53'N, 147°58'W

Summary: Mica schist country rock. Assay of grab sample of material in ore bin in 1931 (when workings were inaccessible) showed value of $8.64 per ton. Dump was mainly mica schist and vein quartz. Exploratory work began 1926; production in 1928. Idle during most of 1929 and 1930-35. Production reported, 1937-39 and possibly in 1940. Includes references to Happy Creek, Nickaloff.

Smith, 1929 (B 797), p. 13 -- Began exploratory work, 1926; purchased an old mill and installed it.
Smith, 1930 (B 810), p. 15 -- Development work, 1927.
Smith, 1930 (B 813), p. 17 -- Produced, 1928.
Smith, 1932 (B 824), p. 20 -- Idle during most of 1929 season; owners squabbling.
Hill, 1933 (B 849-B), p. 150 -- Workings (shaft and tunnel) caved in June, 1931. Vein appears to strike N 25°-30° E. Rock on dump is mica schist with considerable vein quartz. Grab sample of material left in ore bin assayed $8.64 per ton.
Smith, 1933 (B 836), p. 19 -- Idle, 1930.
Smith, 1934 (B 864-A), p. 20 -- Idle, 1933.
Smith, 1938 (B 897-A), p. 22 -- Prospecting or development, 1936.
Smith, 1939 (B 910-A), p. 25 -- Productive mining and custom milling, 1937.
Smith, 1941 (B 926-A), p. 23 -- Production, 1939.
Smith, 1942 (B 933-A), p. 23 -- Development (possibly also production), 1940.
Chapman and Foster, 1969 (P 625-D), p. D17 -- Quartz veins in mica schist. Has been gold production.

(Emma Cr.) Gold (?)

Fairbanks district
MF-410, loc. 43

Fairbanks (14.1, 14.7) approx.
64°50'N, 148°06'W approx.

Summary: May have been a little mining in 1910.

Ellsworth and Parker, 1911 (B 480), p. 158 -- Very little actual mining in 1910.

Engineer

Gold

Fairbanks district
MF-410, loc. 24

Fairbanks (17.7, 16.6)
64°55'N, 147°38'W

Summary: Iron-stained quartz contains arsenopyrite. Assay of grab sample showed value of $2.86 per ton.

Hill, 1933 (B 849-B), p. 153 -- Two parallel veins strike N 70° E. Iron-stained quartz with arsenopyrite. Grab sample assayed $2.86 per ton.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 849-B.

(Engineer Cr.) Gold

Fairbanks district
MF-410, loc. 53

Fairbanks (17.45-17.9, 17.45-17.8)
64°50'-64°51'N, 147°35'-147°40'W

Summary: Depth to bedrock from about 50 ft. to more than 100 ft. Gold in basal 4-7 ft. of gravel, much of which was derived from granite. Placer mining reported in most years from 1907 to 1916. Later mining (mainly dredging) was probably with that on Goldstream.

Prindle, 1908 (B 337), p. 39, 41 -- Gold has been found and some produced.

Prindle and Katz, 1909 (B 379), p. 190-191 -- Preliminary to B 525.

Ellsworth, 1910 (B 442), p. 230, 232 -- Mining, 1909. Some very rich claims located.

Ellsworth and Parker, 1911 (B 480), p. 154-155 -- Mining, 1910.

Ellsworth, 1912 (B 520), p. 241 -- Large-scale mining, 1911.

Ellsworth and Davenport, 1913 (B 542), p. 206 -- Mining, 1912; great decrease from pace of 1911.

Prindle and Katz, 1913 (B 525), p. 105-106 -- Mining, 1908. Depth to bedrock 50-100 ft.; values in 4-7 ft. of gravel over widths of 30-100 ft. are 1-6 dollars per bedrock foot. Granite in valley; gravel near bedrock largely derived from granite.

p. 110-111 -- Depth to bedrock 49-103 ft. Production from Engineer Cr. and tributaries, 1907-10, worth $1,800,000.

p. 113 -- Gold worth $18.70 per oz.

Brooks, 1914 (B 592), p. 68 -- Mining, 1913.

Chapin, 1914 (B 592), p. 359 -- Mining, 1913.

Eakin, 1915 (B 622), p. 234 -- Mining, 1914.

Smith, 1917 (BMB 153), p. 51 -- Mining, 1916.

Smith, 1933 (B 844-A), p. 33 -- Fairbanks Exploration Co. acquired an extensive tract of placer ground, 1931. Experiment with underground sluicing was terminated because of heaving of floor of drift.

(Ester Cr.) Antimony, Gold, Tungsten

Fairbanks district Fairbanks (14.3-14.95, 14.85-15.1)
MF-410, loc. 44 64°50'-64°51'N, 147°59'-148°05'W

Summary: Placer deposits (both stream and bench) deeply buried; bedrock floor between Ester and Cripple Creeks nearly flat. Mined from 1905 to 1963; dredged from 1937 on. Stibnite and scheelite in concentrates. Includes references to (Esther Cr.); see also (Cripple Cr.).

Prindle, 1906 (B 284), p. 119-120 -- Gold deposits deeply (25-135 ft.) buried; probably not related to present stream course.

Brooks, 1907 (B 314), p. 30 -- Stibnite found in placers.

p. 36 -- Mining, 1906.

Brooks, 1908 (B 345), p. 41-42 -- A major producer in 1907. New discovery on bench east of creek.

Prindle, 1908 (B 337), p. 29 -- Quotation from B 314.

p. 44-45 -- Bedrock principally mica schist; some granite. Depth to bedrock 4 mi. above mouth is 15 ft.; at mouth is 120-135 ft. Some terrace gravels. 5-6 ft. of gravel and weathered bedrock are mined; 4-6 dollars per cu. yd.

Prindle and Katz, 1909 (B 379), p. 190, 192, 195, 197, 199-200 -- Preliminary to B 525 and general data on mining methods.

Ellsworth, 1910 (B 442), p. 233-234 -- Mining, 1909. Some of the richer claims were mined out.

Brooks, 1911 (P 70), p. 182 -- Mining, 1908.

Ellsworth and Parker, 1911 (B 480), p. 157-158 -- Mining, 1910. Prospecting may have discovered an old channel 1,500 ft. from present pay streak.

Ellsworth, 1912 (B 520), p. 243 -- Mining, 1911; output declined.

Ellsworth and Davenport, 1913 (B 542), p. 209 -- Mining, 1912. Output estimated at $300,000.

Prindle and Katz, 1913 (B 525), p. 103-105 -- Staked in 1903, production begun in 1905. Alluvial deposits deep, bedrock floor between Ester and Cripple Creeks nearly flat; terrain irregularities due to different thicknesses of fill. Productive gravels average 300 ft. wide, less than 100 ft. deep, 8 ft. thick; average $1.50 per bedrock foot. Bench between Ester and Ready Bullion Creeks is auriferous.

p. 110 -- Depth to bedrock 18-170 ft. (stream and bench deposits).

p. 112-113 -- Production, 1904-10, worth $7,800,000. Gold worth $16.56 per oz.

Brooks, 1914 (B 592), p. 68 -- Mining, 1913.

Chapin, 1914 (B 592), p. 359 -- Summer sluicing curtailed by shortage of water.

Brooks, 1915 (B 622), p. 54 -- Production from Ester Cr. and tributaries through 1914 was worth about $10,300,000.

Eakin, 1915 (B 622), p. 234-235 -- Mining, 1914.

(Ester Cr.) - Continued

Brooks, 1916 (B 642), p. 58-59 -- Through 1915 production from Ester Cr. and tributaries was worth about $10,680,000. Mining, 1915.
Smith, 1917 (BMB 142), p. 23 -- Mining, 1915.
Smith, 1917 (BMB 153), p. 51 -- Mining, 1916.
Brooks, 1918 (B 662); p. 51 -- Through 1916 production from Ester Cr. and tributaries was worth about $10,960,000.
p. 54 -- Mining, 1916.
Martin, 1919 (B 692), p. 35 -- Through 1917 production from Ester Cr. and tributaries was worth about $11,230,000.
Martin, 1920 (B 712), p. 39 -- Through 1918 production from Ester Cr. and tributaries was worth about $11,280,000.
Brooks and Martin, 1921 (B 714), p. 81 -- Through 1919 production from Ester Cr. and tributaries was worth about $11,330,000.
Brooks, 1922 (B 722), p. 45 -- Production 1903-20, from Ester Cr. and tributaries was worth about $11,359,000.
Brooks, 1923 (B 739), p. 29 -- Production, 1903-21, from Ester and adjacent creeks was worth about $11,394,000.
Brooks and Capps, 1924 (B 755), p. 35 -- Production, 1903-22, from Ester and adjacent creeks was worth about $11,443,000.
Capps, 1924 (B 755), p. 146 -- A major producing stream of the district.
Brooks, 1925 (B 773), p. 45 -- Production, 1903-23, from Ester and adjacent creeks was worth about $11,497,000.
Smith, 1926 (B 783), p. 13 -- Production, 1903-24, from Ester and adjacent creeks was worth about $11,600,000.
Moffit, 1927 (B 792), p. 17 -- Mining, 1925.
Smith, 1929 (B 797), p. 20 -- Mining, 1926.
Smith, 1930 (B 810), p. 25 -- Mining, 1927.
Smith, 1930 (B 813), p. 28 -- Mining, 1928.
Smith, 1932 (B 824), p. 33 -- Mining, 1929.
Smith, 1933 (B 836), p. 33 -- Mining, 1930.
Smith, 1933 (B 844-A), p. 32 -- Mining, 1931.
Smith, 1934 (B 857-A), p. 30 -- Mining, 1932.
Smith, 1934 (B 864-A), p. 35 -- Mining, 1933; exploration and preparatory work.
Smith, 1936 (B 868-A), p. 36 -- Mining and preparatory work, 1934.
Smith, 1937 (B 880-A), p. 39-40 -- Mining and preparatory work, 1935.
Smith, 1938 (B 897-A), p. 46-47 -- Mining and preparatory work, 1936.
Smith, 1939 (B 910-A), p. 46-47, 76 -- Dredging, 1937; also preparatory work.
Smith, 1939 (B 917-A), p. 43-45, 74 -- Dredging and preparatory work, 1938.
Smith, 1940 (B 926-A), p. 40-41, 70 -- Dredging and preparatory work, 1939.
Joesting, 1942 (TDM 1), p. 39 -- Scarce placer scheelite.
Smith, 1942 (B 933-A), p. 38, 67 -- Dredging, 1940.
Killeen and Mertie, 1951 (OF 42), p. 7 -- Stibnite in placer concentrates.
Wedow, Killeen, and others, 1954 (C 331), p. 6 -- Windrows of dredge tailings conspicuous in valley bottom.
Byers, 1957 (B 1024-I), p. 188 -- Scheelite in placer concentrates.
Burand, 1966 (GC 10), p. 2 -- Productive from 1904 to late 1963, when dredge was shut down.

(Ester Cr.) - Continued

Koschmann and Bergendahl, 1968 (P 610), p. 26 -- Huge reserves of auriferous gravels were dredged.

Cobb, 1973 (B 1374), p. 128-129 -- Produced gold worth [much] more than $4,000,000 (at 20.67 per oz.).

(Eva Cr., Bonnifield dist.) Gold, Tungsten

Bonnifield district Fairbanks (9.05-9.55, 0.9-1.0)
MF-410, loc. 65 64°03'N, 148°46'-148°50'W

Summary: Upper valley in Nenana Gravel; lower 1-1/2 mi. in underlying schist. Gravels in schist area are auriferous. Float near Liberty Bell mine contains gold, bismuth, and sulfides. Gold in placers probably derived from Liberty Bell and similar lodes. Placer concentrates contain gold, wolframite, and scheelite. Mining reported for 1916, 1920-21, 1933-38, 1940; no data on amount of production. See also Liberty Bell.

Maddren, 1918 (B 662), p. 381 -- Mining, 1916.

p. 384-386 -- Stream rises on gravel-capped ridge and flows 5 mi. to California Cr. Upper valley cut in high gravels [Nenana Gravel]; lower 1-1/2 mi. in underlying schist. Gravels in schist area contain gold. At lode area [Liberty Bell mine] schist float contains gold, native bismuth, arsenopyrite, and other sulfides. Placer gold probably derived from this and similar lodes in schist. About a quarter mile above mouth of Wilson Cr. stream gravels were being mined in 1916.

Brooks, 1922 (B 722), p. 51 -- Mining, 1920.
Brooks, 1923 (B 739), p. 35 -- Mining, 1921.
Smith, 1934 (B 864-A), p. 42 -- Mining, 1933.
Smith, 1936 (B 868-A), p. 44 -- Mining, 1934.
Smith, 1937 (B 880-A), p. 46 -- Small-scale mining, 1935.
Smith, 1938 (B 897-A), p. 56 -- Mining, 1936.
Smith, 1939 (B 910-A), p. 55 -- Mining, 1937.
Smith, 1939 (B 917-A), p. 54 -- Mining, 1938.
Joesting, 1942 (TDM 1), p. 39 -- Scarce wolframite and rare scheelite in placers.

p. 41 -- Wolframite (ferberite) in placer concentrates near Liberty Bell mine.

Smith, 1942 (B 933-A), p. 48 -- Mining (with a "one-bucket dredge"), 1940.
Joesting, 1943 (TDM 2), p. 20 -- Scarce placer scheelite.
Thorne and others, 1948 (RI 4174), p. 27 -- Quotation from TDM 2.
Cobb, 1973 (B 1374), p. 111 -- Scheelite in concentrates.

(Eva Cr., Fairbanks dist.) Gold

Fairbanks district
MF-410, loc. 44

Fairbanks (14.85-14.95, 15.1-15.2)
64°51'N, 148°00'W

Summary: Placer gold mining or prospecting, 1911-15. No data on total production; about 24,000 fine oz. recovered in 1912. Mining near mouth may have been reported for Ester Cr. Many lode prospects on ridge E of Eva Cr.

Ellsworth, 1912 (B 520), p. 243 -- Rich gravel reported to have been found, 1911.

Ellsworth and Davenport, 1913 (B 542), p. 209 -- Production in 1912 worth about half a million dollars.

Chapin, 1914 (B 592), p. 359 -- Mining, 1913.

Eakin, 1915 (B 622), p. 235 -- Prospecting, 1914. Divining rod used to locate one shaft.

Brooks, 1916 (B 642), p. 59 -- Mining, 1915.

Eva Quartz Co.

Gold

Fairbanks district
MF-410, loc. 19

Fairbanks (15.0, 15.3) approx.
64°52'N, 148°00'W approx.

Summary: Mining in 1928 reported. Eva Quartz Co. could have been mining on part of either Ryan or Stay properties.

Smith, 1930 (B 813), p. 17 -- Mining, 1928. [Part of Ryan or Stay properties.]

Fair Chance

Gold

Fairbanks district
MF-410, loc. 17

Fairbanks (14.95, 15.55)
64°52'N, 148°00'W

Summary: Mineralized zone of crushed schist, quartzite, and quartz mixed with blue gouge; considerable free gold. Developed by shafts, drifts, and a stope. Total production (mainly rich quartz ore) worth about $2,000. Mineralized zone appears to extend onto neighboring Blue Bird claim. Includes reference to Blue Bird claim of Miller & O'Connor.

Chapin, 1914 (B 592), p. 353-354 — Mineralized zone is a mass of crushed schist and quartzite, considerable quartz crushed and mixed with blue gouge, all containing considerable free gold. Zone dips steeply to SE. Opened by shaft, 2 levels (40 ft. and 18 ft.), and a small stope that may be in another ore body. Main mineralized zone cut off by fault (strike N 30° E, dip 70° SE) on 40-ft. level.

Eakin, 1915 (B 622), p. 237 -- Mining, 1914.

Hill, 1933 (B 849-B), p. 139 -- 3 shafts about 50 ft. apart. 40 tons ore mined in 1930 and milled with disappointing results; crushed mixture of gouge, schist and quartz, a sample of which assayed $5.95 per ton. Mineralized zone strikes N 20° E, dips 60° W; several veins of quartz ore in crushed schist; $1,800 in gold recovered from quartz. On nearby Blue Bird claim tunnel was driven in 1931 to intersect what is probably the same zone as is on Fair Chance group.

Chapman and Foster, 1969 (P 625-D), p. D17 -- References to B 592 and 849-B.

Farmer

Gold

Fairbanks district
MF-410, loc. 9

Fairbanks (14.55, 15.55)
64°53'N, 148°03'W

Summary: Quartz vein, crushed schist, and fault breccia contains visible gold and sulfides (mainly pyrite). Gold has been produced, but venture was abandoned because results were discouraging. 60-foot-long inclined shaft and other workings.

Smith, 1913 (B 525), p. 198 -- North-trending apparently lenticular vein in schist dips 40° E; cut by many small faults; sulfides (mainly pyrite) and visible gold. Inclined shaft 15 ft. deep.

Smith, 1913 (B 542), p. 184 -- Same as B 525.

Chapin, 1914 (B 592), p. 352 -- Inclined shaft sunk 60 ft. on vein, but work was abandoned because results were not encouraging.

Hill, 1933 (B 849-B), p. 122-123 -- Vein strikes N 25° E, dips 52° W; in schist; 4 in. of quartz, 14 in. crushed schist, 2 ft. iron-stained fault breccia of fragments of schist and quartz. Sample from a pillar assayed $7.06 per ton. Good ore reportedly mined and milled in the past. Most workings caved in 1931.

Chapman and Foster, 1969 (P 625-D), p. D19 -- References to B 849-B and more data on names of past operators.

First Chance — Gold

Fairbanks district — Fairbanks (14.85, 15.55)
MF-410, loc. 14 — 64°52'N, 148°00'W

Summary: Vein averaged one foot thick in mined area. Shaft 120 ft. deep. 520 tons of ore above 100-ft. level was stoped out; gave returns of $26,000 in gold, probably all between 1924 and 1928.

Smith, 1926 (B 783), p. 8-9 -- Ore milled, 1924.
Moffit, 1927 (B 792), p. 12 -- Shaft 40 ft. deep and a short drift expose 2-3 ft. thick. 43 tons ore taken for mill test, 1925.
Smith, 1930 (B 813), p. 17 -- Mining, 1928.
Hill, 1933 (B 849-B), p. 147-148 -- Vein at surface strikes N 10° E, dips 44° W, is 6 in. to 4 ft. wide (average in stoped area 12 in.). Wall rock schist. Shaft 120 ft. deep; all ore above 100-ft. level northward to a fault 70 ft. from shaft was stoped out. 520 tons of ore yielded gold worth $26,000. Ore south of shaft lower grade (less than $20 per ton below 100-ft. level).
Chapman and Foster, 1969 (P 625-D), p. D18 -- Reference to B 849-B.

(First Chance Cr., trib. Goldstream Cr.) Gold, Tin, Tungsten

Fairbanks district
MF-410, loc. 53

Fairbanks (17.8-18.1, 17.05-17.2)
64°57'-64°58'N, 147°34'-147°35'W

Summary: Gold reported as early as 1908 and as recently as 1940. Some of ground mined was as much as 42 ft. deep. Abundant placer scheelite derived from lodes at head of creek; clogged some sluice-box riffles. Cassiterite rare in concentrates.

Prindle and Katz, 1909 (B 379), p. 194 -- Mining, 1908.
Ellsworth, 1912 (B 520), p. 241 -- Mining, 1911.
Ellsworth and Davenport, 1913 (B 542), p. 206 -- Mining, 1912. Some of ground about 35 ft. deep.
Prindle and Katz, 1913 (B 525), p. 113 -- Gold worth $18.25 per oz.
Chapin, 1914 (B 592), p. 358 -- Mining, 1913. 42 ft. to bedrock; pay-streak 4 ft. wide.
Eakin, 1915 (B 622), p. 234 -- Mining, 1914.
Smith, 1917 (BMB 142), p. 23 -- Mining, 1915.
Smith, 1939 (B 917-A), p. 43 -- Mining, 1938.
Smith, 1941 (B 926-A), p. 40 -- Mining, 1939.
Joesting, 1942 (TDM 1), p. 32 -- Rare placer cassiterite.
p. 39-41 -- Placer scheelite abundant. Scheelite occurs near head of creek in contact-metamorphosed limestone and in gold-bearing quartz veins near porphyritic granite intrusive body. On lower part of creek scheelite constitutes main part of placer concentrates; clogs sluice-box riffles.
Smith, 1942 (B 933-A), p. 39 -- Mining, 1940.
Byers, 1957 (B 1024-I), p. 188 -- Scheelite in placer concentrates.
p. 210-211 -- Scheelite came from nearby lodes.

Flagler — Gold (?)

Fairbanks district — Fairbanks (14.5, 15.7) approx. 64°53'N, 148°03'W approx.

Summary: Quartz vein; no definite statement that gold is present. Only assessment work.

Smith, 1913 (B 525), p. 197-198 -- Open cut and inclined shaft 12 ft. deep on large body of mineralized quartz of probably low tenor. Vein trends North and dips 45° E. Nearby, lens-shaped masses of quartz have been broken up and scattered about. [These prospects are not named in the text, but are shown as Flagler on fig. 20, p. 204.]

Smith, 1913 (B 542), p. 183-184 -- Same as B 525.

Chapin, 1914 (B 592), p. 352 -- Only assessment work has been done as of 1913.

Chapman and Foster, 1969 (P 625-D), p. D19 -- References to B 525, B 592.

Flower — Gold (?)

Fairbanks district — Fairbanks (14.85, 15.4)
MF-410, loc. 15 — 64°53'N, 148°00'W

Summary: Vertical vein was explored sometime before 1931 by shallow shafts and a short tunnel. No other data. May be the same occurrence as Little Flower; attitudes of veins as reported at the two occurrences differ.

Hill, 1933 (B 849-B), p. 152 -- Vertical vein strikes N 10° E. Several shallow shafts and a short tunnel (caved in 1931).

(Flume Cr.)

Gold

Fairbanks district
MF-410, loc. 54

Fairbanks (18.2-18.3, 17.8-17.85)
65°00'N, 147°32'W

Summary: Has been placer mining. Probably was normally reported with that on Pedro Cr.

Brooks, 1916 (B 642), p. 59 -- Mining, 1915.
Chapman and Foster, 1969 (P 625-D), pl. 2 -- Area shown as having been placer mined.

(Fourth of July Cr.)

Antimony, Gold, Lead, Silver

Bonnifield district
MF-410, loc. 73

Fairbanks (11.1-11.2, 0.8-1.15)
64°02'-64°03'N, 148°33'W

Summary: Bedrock schist; dike crosses creek.1 mi. above mouth. All placer gold below dike. This creek was probably an important contributor of gold to Totatlanika Cr. Sample of jamesonite (?) float (bedrock source not found) contained 0.08 oz. gold and 94.8 oz. silver per ton, 15.3% antimony, 25.6% lead.

Maddren, 1916 (B 662), p. 388 -- One of major producing creeks in Totatlanika basin.

p. 393-394 -- Valley eroded in schist; lower half mile incised 100-150 ft. Dike [kind of rock not stated] crosses creek about 1/4 mi. above mouth. All gold in creek downstream from dike; no gold noted in dike or schist near it. Gold rough, some with a attached quartz; largest nugget worth about $25.00. Most of mining in 1910-11; production worth about $10,000. Creek may have been an important source of gold in Totatlanika Cr.

Overbeck, 1916 (B 662), p. 351 -- "A mineralized zone that apparently is gold bearing is reported from Fourth of July Creek about half a mile above its mouth."

Joesting, 1943 (TDM 2), p. 13-14 -- Fine-grained jamesonite (?) float. In bedrock a 6-in. zone of gouge and quartz is barren. Picked float sample contained 0.08 oz. Au and 94.8 oz. Ag per ton, 15.3% Sb, and 25.6% Pb. Occurrence has been staked.

(Fox) Limestone

Fairbanks district Fairbanks (16.6, 17.0)
64°57'N, 147°46'W

Summary: Lens of impure magnesian limestone in schist. Lens 15 ft. thick; can be traced more than 300 ft. on surface; dips 35°.

Waring, 1947 (C 18), p. 6, 8-9 -- Lens of white, fine-grained limestone exposed for 200 ft.; maximum thickness 15 ft. Too much magnesia (19.88%) for use as burnened lime.

Rutledge and others, 1953 (RI 4932), p. 120-121 -- Small lens of limestone in Birch Creek Schist. Strikes E, dips 35° W, is 15 ft. thick and can be traced more than 300 ft. along base of hill on which it crops out. Analysis shows 29.9% CaO, 19.6% MgO, 26.2% SiO_2, 0.4% Al_2O_3, 0.3% Fe_2O_3.

(Fox Cr.) Gold, Tungsten

Fairbanks district
MF-410, loc. 52

Fairbanks (17.6, 17.4-17.8)
64°59'-65°00'N, 147°37'-147°38'W

Summary: Placer gold mined sporadically from as early as 1908 to as recently as 1926; gravels 6-19 ft. deep; hand methods only. Much scheelite (estimated 90% of concentrates) near head of creek. Granite at head of creek. Lode near mouth has been prospected for gold.

Prindle, 1908 (B 337), p. 39, 41 -- Gold has been found and mined.
Prindle and Katz, 1909 (B 379), p. 191 -- Depth to bedrock 10-19 ft.
p. 193 -- Mining, 1908.
Ellsworth, 1910 (B 442), p. 232 -- Mining, 1909.
Prindle and Katz, 1913 (B 525), p. 105-106 -- Mining, 1908. Granite near head of creek.
p. 111 -- Production, 1905-10, worth $31,000.
p. 113 -- Gold worth $17.50 per oz.
Smith, 1913 (B 525), p. 198 -- Gold lode has been prospected near mouth.
Smith, 1913 (B 542), p. 184 -- Same as B 525, p. 198.
Smith, 1929 (B 797), p. 20 -- Mining, 1926.
Joesting, 1943 (TDM 2), p. 20 -- Abundant placer scheelite.
p. 24 -- Scheelite said to have been found in placer cut near head of creek; placer concentrates from nearby mainly scheelite.
p. 28 -- Placer scheelite particularly abundant on upper Fox Cr.
Thorne and others, 1948 (RI 4174), p. 28-29 -- Quotations from TDM 2.
Byers, 1957 (B 1024-I), p. 188 -- Scheelite in placer concentrates.
p. 210 -- Placer concentrates near head of creek contained an estimated 90% scheelite.
Mulligan, 1974 (IC 8626), p. 13 -- Deposit 6-8 ft. deep; worked sporadically by hand methods. Considerable scheelite recovered with gold near head of creek.

Franklin

Fairbanks district
MF-410, loc. 32

Tungsten

Fairbanks (19.6, 17.6) approx.
64°59'N, 147°23'W approx.

Summary: Scheelite in quartz and silicates that replaced limy horizons in schist. See also Ptarmigan.

Chapin, 1919 (B 692), p. 327 -- Several mineralized zones that strike N 40° W and dip NW; one appears to be 15-20 ft. across. Lode material is quartz and silicate rock that presumably selectively replaced limestone. Scheelite occurs in quartz and silicates.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 692. Here limestone is considered to be limy horizons in schist.

Gale

Gold (?)

Fairbanks district

Fairbanks (14.5, 15.1)
64°51'N, 148°04'W

Summary: Iron-stained quartz and brown-weathering schist reported to be auriferous. Prospect pit 20 ft. deep.

Smith, 1913 (B 525), p. 206 -- Prospect pit sunk 20 ft. on iron-stained quartz and brown-weathering schist. Quartz appears to be in small stringers in schist, but large pieces were seen on dump. Reported to carry some gold. [Not named in text; shown as Gale on fig. 20, p. 204.]

Smith, 1913 (B 542), p. 192 -- Same as B 525.

Chapman and Foster, 1969 (P 625-D), p. D19 -- Reference to B 525.

(Gilmore Cr.) Bismuth, Gold, Tungsten

Fairbanks district Fairbanks (18.25-19.05, 17.5-17.6)
MF-410, loc. 55 64°59'N, 147°26'-147°32'W

Summary: Granitic rocks and area with lode scheelite occurrences in contact-metamorphosed limestone and gold-bearing quartz veins near head. Gravels (stream and bench) as much as 60 ft. deep. Mined from 1905 to as recently as 1940. Dredge tailings now in lower valley. Concentrates contained bismuth, some intergrown with gold, and scheelite.

Prindle, 1906 (B 284), p. 115 -- Bismuth "in close association with the gold in a nugget..."
p. 118 -- Deposits from a few feet near head to 60 ft. thick at mouth. Gold, some with intergrown native bismuth, on or in bedrock.
Prindle, 1908 (B 337), p. 39-40 -- Joins Pedro Cr. to form Goldstream. Gravel is mainly schist, quartz, and granite. Bench on north; auriferous gravels; in some placers is separated from valley floor by rock rim. Nuggets worth up to $20. Some bismuth with the gold.
Prindle and Katz, 1909 (B 379), p. 192 -- Depth to bedrock 4-18 ft.
p. 194 -- Mining, 1908.
Ellsworth, 1910 (B 442), p. 232 -- Mining, 1909.
Ellsworth and Parker, 1911 (B 480), p. 154-155 -- Mining, 1910.
Ellsworth, 1912 (B 520), p. 241 -- Mining, 1911.
Ellsworth and Davenport, 1913 (B 542), p. 206 -- Mining, 1912.
Prindle and Katz, 1913 (B 525), p. 105-106 -- Mining, 1908. Deposits shallow. Native bismuth intergrown with gold.
p. 109 -- Depth to bedrock 8-18 ft.
p. 111 -- Production, 1905-10, worth $121,200.
p. 113 -- Gold worth $18.85 per oz.
Chapin, 1914 (B 592), p. 359 -- Mining, 1913.
Eakin, 1915 (B 622), p. 234 -- Mining, 1914.
Brooks, 1916 (B 642), p. 59 -- Mining, 1915.
Smith, 1917 (BMB 142), p. 23 -- Mining, 1915.
Smith, 1917 (BMB 153), p. 51 -- Mining, 1916; production worth about $40,000.
Brooks, 1918 (B 662), p. 54 -- Mining, 1916.
Hill, 1933 (B 849-B), p. 71 -- Bismuth in placer concentrate; nearly surrounded a small gold nugget.
Smith, 1938 (B 897-A), p. 46 -- Mining, 1936.
Smith, 1939 (B 910-A), p. 46 -- Mining, 1937.
Smith, 1939 (B 917-A), p. 43-46 -- Mining, 1938.
Smith, 1941 (B 926-A), p. 40, 42 -- Mining, 1939.
Joesting, 1942 (TDM 1), p. 39-40 -- Placer scheelite common. Creek drains area with lode scheelite in contact-metamorphosed limestone and gold-bearing quartz veins near porphyritic granite intrusive body.
Smith, 1942 (B 933-A), p. 39 -- Mining, 1940.

(Gilmore Cr.) - Continued

Wedow, Killeen, and others, 1954 (C 331), p. 6 -- Windrows of dredge tailings conspicuous in valley bottom.
Wedow, White, and others, 1954 (C 335), p. 1 -- Reference to B 849-B, p. 71.
Byers, 1957 (B 1024-I), p. 188 -- Scheelite in concentrates.
p. 210-211 -- Scheelite locally derived.

(Gold King Cr.) Gold, Tungsten

Bonnifield district Fairbanks (15.2-15.35, 0.8-2.2)
MF-410, locs. 80-82 64°02'-64°06'N, 148°00'-148°02'W

Summary: Stream rises on high ridge of schist, but most of course is cut in Tertiary high gravels (Nenana Gravel) and coal-bearing rocks. Bedrock in areas mined mainly clay. Gold probably reconcentrated from Nenana Gravel. Scheelite in concentrates. Attempts at large-scale mining of Nenana Gravel were not successful. Mining reported intermittently from 1903 to as recently as 1940. Includes references to (Gold Run (Cr.)).

Prindle, 1907 (B 314), p. 212 -- Clay bedrock where mining is in progress (1906); boulders act as riffles. Gold either in 4-5 ft. of gravel or on clay bedrock; probably derived from high gravels.
Brooks, 1910 (B 442), p. 44 -- Mining, 1909; hydraulic plant being installed.
Brooks, 1911 (P 70), p. 174 -- Same as B 314.
Capps, 1911 (B 480), p. 221-222, 226-228 -- Preliminary to B 501.
Capps, 1912 (B 501), p. 44 -- Mining in 1910.
p. 49-51 -- Rises on high ridge of schist; flows for 10 mi. through high gravels in valley incised 1,200-1,500 ft. below gravel surface. Stream gravels mined since 1903. Ground 2-8 ft. deep; many large boulders. Gold either in gravels or on soft clayey bedrock. High gravels are auriferous. In 1910 there were extensive preparations for large-scale hydraulicking of high gravels (to begin in 1911); inadequate advance prospecting.
Maddren, 1918 (B 662), p. 400-401 -- Large-scale operation described in B 501 were abandoned after a short trial run. Reworked stream gravels on clay bedrock were being mined in 1916. Creek has eroded about to the base of the Nenana Gravel.
Capps, 1924 (B 755), p. 138 -- Attempt at large-scale hydraulic mining of Nenana Gravel was not financially successful.
Smith, 1930 (B 813), p. 35 -- Small-scale mining on Gold Run Cr., 1928.
Smith, 1932 (B 824), p. 40 -- Small-scale mining on Gold Run Cr., 1929.
Moffit, 1933 (B 836), p. 345 -- Mining, 1930.
Smith, 1933 (B 836), p. 41 -- Mining, 1930.
Smith, 1933 (B 844-A), p. 41 -- Mining on Gold Run, 1931.
Smith, 1934 (B 857-A), p. 38 -- Mining, 1932.
Smith, 1934 (B 864-A), p. 42 -- Mining, 1933.
Smith, 1936 (B 868-A), p. 44 -- Mining, 1934.
Smith, 1937 (B 880-A), p. 46 -- Hydraulic mining, 1935.
Joesting, 1942 (TDM 1), p. 39 -- Rare placer scheelite.
Smith, 1942 (B 933-A), p. 48-40 -- Mining, 1940.
Koschmann and Bergendahl, 1968 (P 610), p. 24 -- First mining in district, 1903.
Cobb, 1973 (B 1374), p. 111 -- Scheelite in concentrates.

(Goldstream (Cr.)) Gold, Tin, Tungsten

Fairbanks district Fairbanks (17.1-18.2, 16.8-17.5)
MF-410, loc. 53 64°56'-64°59'N, 147°32'-147°42'W

Summary: Stream formed by confluence of Gilmore and Pedro Creeks. Most of gravel in valley deep (30 or more feet); both stream and bench placers. Mined by non-dredge methods, 1903-27; dredges from 1928 to as recently as 1940. Cassiterite (source not known) and scheelite (from nearby lodes) in concentrates.

Prindle, 1905 (B 251), p. 75 -- Claims worked in 1903-04.
p. 77 -- Ground 30 or more feet deep. Not much active development in 1904.
Prindle, 1906 (B 284), p. 118-119 -- Deposits deep. Very little development as of 1905.
Brooks, 1907 (B 314), p. 36-37 -- Mining, 1906. Some new, rich discoveries.
Brooks, 1908 (B 345), p. 41 -- New discovery on lower part of creek, 1907.
Prindle, 1908 (B 337), p. 29 -- Quotation from B 314.
p. 38-39 -- Alluvium up to 200 ft. thick. As of 1907 mining was on upper 17 claims. Limit of profitable mining was $1.50-$2.00 per yard.
Prindle and Katz, 1909 (B 379), p. 190, 195 -- Mining, 1908.
p. 191 -- Depth to bedrock 22-70 ft.
Ellsworth, 1910 (B 442), p. 232 -- Mining, 1909.
Brooks, 1911 (P 70), p. 182 -- Mining, 1908.
Ellsworth and Parker, 1911 (B 480), p. 154-155 -- Mining, 1910. Bench claims had richer pay streak than creek bed.
Ellsworth, 1912 (B 520), p. 240-241 -- Largest producer in district, 1910-11.
Ellsworth and Davenport, 1913 (B 542), p. 205-206 -- A major producer, 1912.
Prindle and Katz, 1913 (B 525), p. 105 -- Mining, 1908. From confluence of Pedro and Gilmore Creeks to claim 17 below. Course of productive ground diverges from that of creek. Productive ground averages 6 ft. thick, 225 ft. wide, $1 per bedrock foot.
p. 109-111 -- Depth to bedrock (including bench claims) is 14-110 ft. Production, 1903-10, worth $4,249,500.
p. 113 -- Gold worth $18.33 per oz.
Brooks, 1914 (B 592), p. 68 -- Mining, 1913.
Chapin, 1914 (B 592), p. 358 -- One of major producers in district, 1913.
Brooks, 1915 (B 622), p. 54-55 -- Production from Goldstream and its tributaries through 1914 was worth about $12,400,000. Mining, 1914.
Brooks, 1916 (B 642), p. 58-59 -- Through 1915 production from Goldstream and tributaries was worth about $13,050,000. Mining, 1915.
Smith, 1917 (BMB 142), p. 23 -- Mining, 1915.
Smith, 1917 (BMB 153), p. 51 -- Mining, 1916.
Brooks, 1918 (B 662), p. 51 -- Through 1916 production from Goldstream and its tributaries was worth about $13,500,000.
p. 54 -- Mining, 1916.

(Goldstream (Cr.)) - Continued

Martin, 1919 (B 692), p. 35 -- Through 1917 production from Goldstream and its tributaries was worth about $13,800,000.
Martin, 1920 (B 712), p. 39 -- Through 1918 production from Goldstream and its tributaries was worth about $14,080,000.
Brooks and Martin, 1921 (B 714), p. 80-81 -- Mining, 1919, on Goldstream and tributaries produced gold worth about $275,000; total, 1903-19, about $14,355,000.
Brooks, 1922 (B 722), p. 44-45 -- Mining, 1920, on Goldstream and tributaries; total production, 1903-20, was worth about $14,625,000.
Brooks, 1923 (B 739), p. 29 -- Mining, 1921, in Goldstream basin; total production, 1903-21, was worth about $14,836,000.
Brooks and Capps, 1924 (B 755), p. 35 -- Mining, 1922, in Goldstream basin; total production, 1903-22, was worth about $15,085,000.
Capps, 1924 (B 755), p. 146 -- Has been one of the major producing streams in the district.
Brooks, 1925 (B 773), p. 45 -- Production, 1903-23, from Goldstream basin was worth about $15,286,000.
Smith, 1926 (B 783), p. 13 -- Production, 1903-24, from Goldstream basin was worth about $15,512,000.
Moffit, 1927 (B 792), p. 14, 17 -- Stripping, test drilling, and ditch building, 1925.
Smith, 1929 (B 797), p. 19 -- Water being brought from Chatanika R. near Faith Cr. [Circle quad.], 1926.
Smith, 1930 (B 810), p. 25 -- Thawing preparatory to dredging, 1927.
Smith, 1930 (B 813), p. 28, 47 -- Dredge began operating, 1928.
Smith, 1932 (B 824), p. 32-33, 52 -- Dredge operated, 1929.
Smith, 1933 (B 836), p. 32-33, 54 -- Dredge operated, 1930.
Smith, 1933 (B 844-A), p. 32-33, 54 -- Dredge operated, 1931.
Smith, 1934 (B 857-A), p. 30-31, 51 -- Dredge operated, 1932.
Smith, 1934 (B 864-A), p. 34-35, 56 -- Mining, including dredging, 1933.
Smith, 1936 (B 868-A), p. 35-36, 58 -- Mining, including dredging, 1934.
Smith, 1937 (B 880-A), p. 39-40, 61 -- Mining, including dredging, 1935.
Smith, 1938 (B 897-A), p. 46-47, 71 -- Mining, including dredging, 1936.
Smith, 1939 (B 910-A), p. 46-47, 76 -- Dredging, 1937.
Smith, 1939 (B 917-A), p. 43-46, 74 -- Mining, including dredging, 1938.
Smith, 1941 (B 926-A), p. 40-42, 70 -- Mining, including dredging, 1939.
Joesting, 1942 (TDM 1), p. 32 -- Scarce placer cassiterite.
p. 39 -- Scarce placer scheelite.
Smith, 1942 (B 933-A), p. 38-39, 67 -- Mining, including dredging, 1940.
Wedow, Killeen, and others, 1954 (C 331), p. 6 -- Windrows of dredge tailings conspicuous in valley bottom.
Byers, 1957 (B 1024-I), p. 188 -- Scheelite in concentrates.
p. 210-211 -- Scheelite from lodes nearby
Cobb, 1973 (B 1374), p. 128-129 -- One of major producing creeks of district; gold worth [several times] more than $4,000,000 (gold at $20.67 per oz.).
Mulligan, 1974 (IC 8626), p. 14 -- Buried, frozen placer adjacent to dredge tailings; ground patented; no recent mining.

Goodwin

Gold

Fairbanks district
MF-410, loc. 23

Fairbanks (17.1, 17.7)
65°00'N, 147°42'W

Summary: Zone of brecciated iron-stained schist (vein quartz in material on dumps) contains a little gold. See also Bunker Hill.

Hill, 1933 (B 849-B), p. 153-154 -- Tunnel (caved in 1931) crosscut a 50-ft. wide zone of brecciated iron-stained schist that strikes N 70° E and is vertical. Material on dumps contains vein quartz. Grab sample assayed only 23 cents per ton.

Chapman and Foster, 1969 (P 625-D), p. D15 -- [Called Bunker Hill prospect.] Reference to B 849-B.

Grant, near Happy Cr.

Gold

Fairbanks district
MF-410, loc. 21

Fairbanks (15.25, 15.7)
64°53'N, 147°58'W

Summary: Vein 5-6 ft. thick (2-4 ft. quartz) discovered at bottom of placer prospect shaft. As of 1931 there were 250 ft. of drifts on 2 levels and 500-600 tons of ore that returned $15-$20 per ton had been mined. Mining in 1937 reported. Includes references to Irishman.

Smith, 1932 (B 824), p. 20 -- Lode mineralization found at bottom of old shaft sunk for placer prospecting, 1929.

Hill, 1933 (B 849-B), p. 150-151 -- Old placer prospect shaft hit quartz vein in bedrock. Shaft was continued to total depth of 240 ft. 280 ft. of drifts on 200-ft. and 240-ft. levels. Vein said to strike N 40° E, dip 65° E, and be 5-6 ft. wide, including 2-4 ft. quartz. 500-600 tons of ore from this vein was milled and yielded $15 to $20 per ton. Mine not accessible because of bad air at time of Hill's visit (June 1931).

Smith, 1933 (B 836), p. 19 -- Quartz with disseminated sulfides mined and sacked at mine, 1930.

Smith, 1939 (B 910-A), p. 25 -- Gold produced, 1937.

Killeen and Mertie, 1951 (OF 42), p. 19 -- Reference to B 836, p. 19.

Chapman and Foster, 1969 (P 625-D), p. D17 -- Data from above references. Also: quartz vein characterized by crushed and recemented silica; gouge probably on gently dipping thrusts [probably from Univ. of Alaska BS thesis]. [The authors' no's. 136 and 137 are the same mine.]

Green Mountain

Gold

Fairbanks district
MF-410, loc. 30

Fairbanks (18.6, 17.2)
64°58'N, 147°30'W

Summary: Brecciated schist contains small quartz veins and gouge seam. Free gold can be panned from crushed rock. Nearby quartz vein is 15 ft. wide.

Chapin, 1914 (B 592), p. 345-346 -- Small open cut on quartz vein at least 15 ft. across. Tunnel started to crosscut vein intersected brecciated mass of schist with small quartz veins and gouge seams between blocks. Free gold can be panned from crushed rock.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 692.

Mulligan, 1974 (IC 8626), p. 13 -- "A 15-foot-wide quartz vein near a brecciated mass of schist contains sparse gold in quartz."

(Grubstake Cr.) Gold, Mercury, Tungsten

Bonnifield district Fairbanks (13.75-14.5, 0.4-0.8)
MF-410, locs. 77-79 64°00'-64°02'N, 148°09'-148°13'W

Summary: Most of course in coal-bearing rocks or Nenana Gravel. Gold in basal 2 ft. of stream gravels; probably reconcentrated from Nenana Gravel. Small amounts of cinnabar and scheelite in concentrates. Intermittent mining, 1905 to as recently as 1940.

Prindle, 1907 (B 314), p. 210-211 -- Bedrock is sticky clay, sand, and coal. Gravel up to 6 ft. thick and made up of schist, quartzite, vein quartz, and other resistant rock types. Gold, in small, worn, flat pieces, in basal 2 ft. of gravel or on clay bedrock. Mining, 1905-06.
Brooks, 1910 (B 442), p. 44 -- Mining, 1909.
Brooks, 1911 (P 70), p. 173-174 -- Same as B 314.
Capps, 1911 (B 480), p. 221-222, 225 -- Preliminary to B 501.
Capps, 1912 (B 501), p. 44 -- Mining, 1910.
p. 48 -- Mining since 1905. Follows contact between schist and high gravel. Mined near mouth where stream has cut into coal-bearing rocks.
Maddren, 1918 (B 662), p. 399-400 -- Mining, 1916; has been major producer in Tatlanika basin since discovery in 1905. Rises on ridge of Nenana Gravel; lower course in coal-bearing rocks. Gold in 2 ft. of stream gravel on bedrock of coal-bearing formation. Gold probably reconcentrated from Nenana Gravel.
Brooks, 1923 (B 739), p. 35 -- Mining, 1921.
Smith, 1930 (B 813), p. 35 -- Mining (5-man camp), 1928.
Smith, 1932 (B 824), p. 40 -- Mining (5-man camp), 1929.
Moffit, 1933 (B 836), p. 345 -- Mining, 1930.
Smith, 1933 (B 836), p. 41 -- Mining, 1930.
Smith, 1937 (B 880-A), p. 46 -- Small-scale mining, 1935.
Smith, 1941 (B 926-A), p. 51 -- Mining, 1939.
Joesting, 1942 (TDM 1), p. 27 -- Scarce placer cinnabar.
p. 39 -- Rare placer scheelite.
Smith, 1942 (B 933-A), p. 48-49 -- Mining, 1940.
Malone, 1962 (IC 8131), p. 56 -- Scarce placer cinnabar.
Malone, 1965 (IC 8252), p. 55 -- Placer cinnabar.
Cobb, 1973 (B 1374), p. 111 -- Scheelite and cinnabar in placer concentrates.

(Happy Cr.) Gold

Fairbanks district
MF-410, loc. 48

Fairbanks (15.1, 15.8) approx.
64°53'N, 147°59'W approx.

Summary: Gold placer mining, 1913-16, 1938-40. Some ground as deep as 140 ft. See also Dorothy & Dorice.

Brooks, 1914 (B 592), p. 68 -- Mining, 1913. New discovery made.
Chapin, 1914 (B 592), p. 360 -- New productive ground found, 1913.
Eakin, 1915 (B 622), p. 235 -- Mining, 1914.
Brooks, 1916 (B 642), p. 59 -- Mining, 1915.
Smith, 1917 (BMB 142), p. 23 -- Mining, 1915; new ground found at depth of 140 ft.
Smith, 1917 (BMB 153), p. 51 -- Mining, 1916.
Smith, 1939 (B 917-A), p. 43 -- Mining, 1938.
Smith, 1941 (B 926-A), p. 40 -- Mining, 1939.
Smith, 1942 (B 933-A), p. 39 -- Mining, 1940.

(Hearst Cr.) Gold

Bonnifield district
MF-410, loc. 75

Fairbanks (13.85, 1.7) approx.
64°05'N, 148°12'W approx.

Summary: Rises in high gravel (Nenana Gravel); in lower part of course has cut down into underlying coal-bearing rocks, on which are stream gravels in which gold has been reconcentrated from Nenana Gravel. A few thousand dollars worth of gold recovered in 1905.

Prindle, 1907 (B 314), p. 211 -- Flows in coal-bearing formation. A few thousand dollars recovered in 1905 from point 2 mi. above mouth. Prospecting in 1906.

Brooks, 1911 (P 70), p. 173-174 -- Same as B 314.

Capps, 1911 (B 480), p. 226 -- Preliminary to B 501.

Capps, 1912 (B 501), p. 49 -- In coal-bearing series. No mining in 1910.

Maddren, 1918 (B 662), p. 399-400 -- Has not been very productive. Similar to Grubstake and Roosevelt Creeks. Rises in Nenana Gravel and has cut down into underlying coal-bearing formation. Gold in stream gravels on bedrock of coal-bearing formation; probably reconcentrated from Nenana Gravel.

Hegan & Lefebre — Gold (?)

Fairbanks district — Fairbanks (14.95, 15.1) approx. 64°51'N, 148°00'W approx.

Summary: Tunnel driven on vein. No data on gold tenor.

Smith, 1913 (B 525), p. 207 -- Tunnel driven on north-trending vein. No statement of tenor. Cross-cutting fracture zone with broken country rock and quartz exposed in tunnel.

Smith, 1913 (B 542), p. 193 -- Same as B 525.

Hess & Thomas — Gold (?)

Fairbanks district — Fairbanks (14.75, 15.25)
64°52'N, 148°02'W

Summary: Chloritic schist cut by small quartz veins. No data on gold content (if any). See also Prometheus.

Smith, 1913 (B 525), p. 208 -- Decomposed chloritic schist cut by small quartz veins. No data on possible metallic content.
Smith, 1913 (B 542), p. 194 -- Same as B 525.

(Hill Cr.) Gold

Fairbanks district
MF-410, loc. 56

Fairbanks (19.05, 17.35-17.55)
64°58'-64°59'N, 147°26'W

Summary: Eluvial placer developed on and in weathered granite of a stock; gold derived from a mineralized zone near the contact between granite and schist.

Prindle, 1908 (B 337), p. 40 -- Rises in granite dome; most of course in granite. Open cut on narrow pay streak near contact between granite and schist.

Brooks, 1911 (B 480), p. 69 -- Placers appear to have been derived from mineralized zone around a granite stock.

Brooks, 1925 (B 773), p. 19 -- Eluvial placer developed on and in weathered granite. Placer not rich like those in Iditarod district.

(Homestake Cr.) Gold

Bonnifield district Fairbanks (11.15-11.25, 0.1-0.3)
MF-410, loc. 74 64°00'N, 148°31'-148°32'W

Summary: Stream cuts through a ridge of schist intruded by andesite or dacite bodies. The richest placers are near a contact zone with many quartz veins in carbonaceous slate of the schist unit. Head of valley is in Tertiary coal-bearing rocks. Gold probably derived from Tertiary gravels (Capps) or perhaps from mineralized schist (Maddren). Gold in base of gravel and in top foot of schist bedrock. Most of mining probably was in part of creek in Healy quad. Production, 1905-16 was worth about $80,000. See also (Homestake Cr.) Healy quad.

Prindle, 1907 (B 314), p. 208-209 -- Upper part of valley open and flat and underlain by coal-bearing formation; lower part canyon in andesite. Mining at upper end of canyon and half a mile upstream. Gold coarse.

Brooks, 1911 (P 70), p. 172-173 -- Same as B 314.

Capps, 1911 (B 480), p. 221-224 -- Preliminary to B 501.

Capps, 1912 (B 501), p. 44-46 -- Mining, 1910. Upper part of basin is underlain by sand, clay, gravel, and lignite; stream then flows through canyon in andesite. Workable placers in and immediately upstream of canyon. Gravels 6 ft. deep on decayed schist bedrock. Gold rusty and rather coarse. Gold probably derived from high gravels. Production, 1906-09, about $50,000.

Maddren, 1918 (B 662), p. 388 -- One of principal gold-producing creeks in Totatlanika basin.

p. 395-397 -- Stream cuts through a ridge of schist intruded by andesitic or dacitic bodies. Richest placers below contact zone that contains many quartz veins in carbonaceous slate (part of schist unit); probable source of gold. Gold discovered near mouth of Fox Gulch [Healy quad.] in 1905; mining there and both upstream and downstream. Gravels 3-6 ft. thick; most of gold in lower part and in top foot of schist bedrock. Some ground ran $5-$7 per cu. yd. Production, 1905-16, about $80,000 in gold. All mining small scale because of shortage of water.

Smith, 1937 (B 880-A), p. 46 -- Small-scale mining, 1935.

Smith, 1938 (B 897-A), p. 56 -- Mining, 1936.

Smith, 1941 (B 926-A), p. 51 -- Mining, 1939.

(Iowa Cr.)	Gold
Fairbanks district	Fairbanks NE 1/4 NE 1/4 NE 1/4 quad.

Summary: One report of gold worth $19.00 per oz. (old price).

Prindle and Katz, 1913 (B 525), p. 113 -- Value of gold, $19.00 per oz.; only one report. No other data.

Janiksela — Tin (?)

Fairbanks district — Fairbanks (18.1, 17.5)
64°58'N, 147°35'W

Summary: Pegmatite (?) at contact between mica schist and graphite schist; explored by 2 shafts. Cassiterite reported to have been found.

Hill, 1933 (B 849-B), p. 154 -- Mixture of quartz, feldspar, and mica on dump suggests pegmatite rather than quartz vein. Two shafts (one flooded and one caved at time of Hill's visit in 1931). Lode strikes E and apparently follows contact between mica schist and black graphite schist. Cassiterite said to have been found; none noted in material on dump.

Chapman and Foster, 1969 (P 625-D), p. D15 -- Reference to B 849-B.

Jennie C.

Antimony

Fairbanks district
MF-410, loc. 4

Fairbanks (14.4, 15.5)
64°52'N, 148°05'W

Summary: Iron-stained quartz vein as much as 18-24 inches thick contains shoots and kidneys of stibnite. Some stibnite (3 tons or 100 tons, depending on source of data) mined during World War I from trenches, shafts, and a tunnel. Includes references to McQueen.

Brooks, 1916 (B 649), p. 40-41 -- Ore body appears to strike N 50°-70° W and dip to north. Iron-stained quartz with stibnite in shoots and kidneys. Only a thin film of oxidation products. In 1915 only a small pit had been dug to expose the deposit.

Chapin, 1919 (B 692), p. 323 -- Lode of nearly solid stibnite; a little quartz; occurs in lenses; varies in width from a thin seam of gouge to 18-24 inches; strikes N 45° W, dips 75° NE. Mined by surface trenching, hand picking, and sacking at mine, 1917. [No statement that ore was sold.]

Hill, 1933 (B 849-B), p. 157 -- All workings caved by 1931. Vein probably strikes N 30° E and dips steeply eastward [very different attitudes from those reported by Smith (B 649, p. 40-41) and Chapin (B 692, p. 323)]. More than 100 tons of stibnite said to have been shipped, 1916-18, from trenches, 2 shafts, and a tunnel.

Ebbley and Wright, 1948 (RI 4173), p. 38 -- Antimony ore has been produced.

Killeen and Mertie, 1951 (OF 42), p. 12 -- Sample from dump contained 28.12% Sb.

p. 14 -- Significant quantity of stibnite may have been mined.

p. 19-20 -- Small amount of stibnite mined during World War I; statements of amount differ (3 tons or 100 tons). Surface trenching, 2 shafts, and a tunnel exposed vein 18-24 in. wide that carries stibnite. Sample from dump contained 28.12% Sb.

Chapman and Foster, 1969 (P 625-D), p. D19 -- Stibnite shoots and kidneys in iron-stained quartz.

Killarney	Gold
Fairbanks district MF-410, loc. 14	Fairbanks (14.85, 15.55) 64°52'N, 148°00'W

Summary: Has been some production from gold-bearing quartz veins in micaceous schist.

Chapman and Foster, 1969 (P 625-D), p. D18 -- Fractured and recemented gold-bearing quartz veins in micaceous schist strike N 5° E and dip 75° W. Has been gold production.

Koegley

Gold

Fairbanks district
MF-410, loc. 7

Fairbanks (14.4, 15.15)
64°51'N, 148°04'W

Summary: Short tunnel in mineralized schist cut by small quartz stringers.. Whole mass said to warrant milling; highest gold content in quartz stringers.

Smith, 1913 (B 525), p. 206 -- Short tunnel driven in mineralized schist cut by small quartz stringers. All material traversed by tunnel said to carry enough gold to warrant milling; small quartz stringers richest.
Smith, 1913 (B 542), p. 192 -- Same as B 525.
Chapman and Foster, 1969 (P 625-D), p. D19 -- Reference to B 525.

Last Chance — Antimony, Gold

Fairbanks district — Fairbanks (14.95, 15.55)
MF-410, loc. 17 — 64°52'N, 148°00'W

Summary: Gold has been produced from a steeply dipping quartz vein that is 2 ft. thick and contains arsenopyrite, stibnite, and visible gold.

Chapman and Foster, 1969 (P 625-D), p. D18 -- Quartz vein 2 ft. thick contains visible gold, stibnite, and arsenopyrite. Strikes NE and dips steeply northward. Has been gold production.

(Last Chance Cr.) Gold

Fairbanks district Fairbanks (20.65, 17.8-17.9)
MF-410, loc. 61 64°59'-65°00'N, 147°13'W

Summary: Placer mining, 1911-14. Includes reference to (First Chance Cr., trib. Fish Cr.)

Ellsworth, 1912 (B 520), p. 243 -- Mining on one claim, 1911.
Ellsworth and Davenport, 1913 (B 542), p. 208 -- Mining, 1912.
Chapin, 1914 (B 592), p. 359 -- Mining, 1913.
Eakin, 1915 (B 622), p. 233 -- Mining, 1914.

Leidy	Gold (?)
Fairbanks district	Fairbanks (18.8, 17.65) 64°59'N, 147°28'W

Summary: Quartz vein; probably barren. Placer gold may have rested on surface over vein.

Hill, 1933 (B 849-B), p. 155 -- Vein of glassy quartz strikes N 70° W, dips 50° N. Shaft sunk 40 ft. on vein. Bedrock schist with a thin covering of placer gravel. Surface was ground sluiced; any gold from surface of vein was probably placer rather than lode.

Lepsoe — Gold (?)

Fairbanks district — Fairbanks (14.2, 16.05)
64°54'N, 148°06'W

Summary: Two claims on a quartz vein parallel to a granite porphyry dike. No data on metal content, if any.

Hill, 1933 (B 849-B), p. 152 -- Two claims on a white quartz vein about 20 ft. wide that strikes N 40° W parallel to a granite porphyry dike. Very little work on these claims.

Chapman and Foster, 1969 (P 625-D), p. D18 -- Reference to B 849-B.

Liberty Bell — Bismuth, Copper, Gold

Bonnifield district — Fairbanks (8.8, 1.0)
MF-410, loc. 40 — 64°03'N, 148°51'W

Summary: Some beds of a sedimentary series now metamorphosed to schist were selectively replaced by sulfide minerals (mainly auriferous arsenopyrite and minor amounts of chalcopyrite, lollingite, pyrite, and bismuthinite); some free gold also. Ore body nearly horizontal; badly crushed and sheared so caving inhibited mining; seems to be limited above by a flat fault. Sulfides in lenses and stringers from a fraction of an inch to 18 in. thick. Deposit discovered in 1915; by 1930 over 1,000 ft. of workings; proved and probable reserves estimated at 37,000 tons of $22 ore. Mining and milling, 1931-33; possibly in 1934; total production not given. Includes references to: Eva Creek Mining Co., Bonnifield dist.; Eva (Mining Co.), Bonnifield dist.; Eva Quartz Mining Co., Bonnifield dist.; lode mine on Eva Cr.

Overbeck, 1918 (B 662), p. 351 -- Discovery of float mineralized with arsenopyrite, bismuth, and bismuthinite led to active prospecting, 1915-16, and discovery of several mineralized zones.

p. 355-356 -- Near large fault. Best material found is float that consists of arsenopyrite and quartz with small amounts of bismuth and bismuthinite and a very little chalcopyrite and pyrite.

p. 360 -- Tunnel 35 ft. long and shaft 15 ft. deep opened in loose rock. Gold panned from decomposed rock at tunnel mouth and from a shear zone in schist. Shear zone strikes N 15° E, dips 75° S, and contains pyrite, arsenopyrite, chlorite, and scorodite (?).

Brooks, 1919 (B 666), p. 98 -- Bismuth has been found in a gold prospect.

Brooks, 1921 (B 714), p. 41 -- Reference to B 662.

Brooks and Capps, 1924 (B 755), p. 40 -- Development work, 1922. Assay returns indicate a large body of ore with a promising gold content.

Capps, 1924 (B 755), p. 139 -- Prospect has promise.

Brooks, 1925 (B 773), p. 31 -- Development continued, 1923. [Prospect identified as bismuth-bearing lode in Bonnifield district.]

Smith, 1926 (B 783), p. 26 -- Development work reported, 1924.

Moffit, 1933 (B 836), p. 340-345 -- Bedrock several kinds of schist apparently derived from sedimentary rocks, including calcareous members; faulted, sheared, and decomposed; timbering needed because of caving. Where mineralized principal sulfide is arsenopyrite, with pyrite, chalcopyrite, bismuthinite, and gold; quartz gangue. Sulfides appear as lenses and stringers in foliation of schist; from a fraction of an inch to 18 inches thick; do not cross bedding. Some beds seem to have been much more favorable for replacement by sulfides than others. Gold both in arsenopyrite and free; silver present in only small amounts. Deposit discovered, 1915. Developments by August 1930 included over 1,000 ft. of adits and several shafts and raises. Estimate of reserves by E. N. Patty was 37,000 tons of proved and probable ore with an average assay of $22 per ton. A few dikes

of granitic rock and of a rock that is now mainly hornblende in area. Schists in ore body nearly horizontal; sericitized, altered, and crushed in ore body. Wavy, flat fault appears to be above, but not actually in contact with, ore body. Schist between the beds replaced by sulfides is bleached and softened and contains some disseminated sulfides.

Smith, 1933 (B 844-A), p. 19 -- Mill installed; results better than anticipated, 1931.

p. 80-81 -- Ore valuable mainly for gold; considerable bismuthinite present. More than a carload of concentrates shipped each month.

Smith, 1934 (B 857-A), p. 19 -- Mined by a method similar to longwall retreating coal mining; too much caving with normal drift mining; 1932.

p. 76 -- Bismuthinite in ore.

Smith, 1934 (B 864-A), p. 23 -- Mine does not operate in winter; other data repeated from earlier reports; 1933.

p. 80 -- Bismuthinite in ore.

Smith, 1936 (B 868-A), p. 24 -- Very little work in 1934; mining expensive because of caving.

Smith, 1937 (B 880-A), p. 28-29 -- Mine acquired by new interests and being rehabilitated, 1935.

Smith, 1938 (B 897-A), p. 35-36 -- All work discontinued, midsummer 1936; some of machinery sold and removed.

Wedow and others, 1952 (OF 51), p. 72 -- Reference to B 836, p. 340-345.

p. 81 -- Mineral assemblage suggestive of presence of uranium.

White and others, 1952 (C 196), p. 9 -- Quartz stringers in schist; arsenopyrite with minor amounts of pyrite, chalcopyrite, bismuthinite, and free gold in quartz gangue.

Berg and Cobb, 1967 (B 1246), p. 202 -- Ore body is a nearly horizontal lode 6-30 ft. thick made up of sulfides; disseminated or in small lenses or stringers parallel to foliation in schist. Gold mainly in arsenopyrite, but some is free. Other metallic minerals include small amounts of chalcopyrite, pyrite, lollingite, and bismuthinite.. Very little quartz. Reserve data from B 836, p. 343.

Hasler and others, 1973 (P 820), p. 98 -- Bismuth minerals reported.

Lincoln	Gold (?)
Fairbanks district	Fairbanks (14.85, 15.65) 64°53'N, 148°00'W

Summary: Assay of $160.00 per ton (in gold?) reported for grab samples.

Chapman and Foster, 1969 (P 625-D), p. D18 -- "Grab samples from ore dump assay $160.00 Au (?) per ton."

Little Flower

Gold

Fairbanks district
MF-410, loc. 15

Fairbanks (14.8, 15.4)
64°52'N, 148°01'W

Summary: Gold has been produced from a vein. May be the same occurrence as Flower; attitudes of veins as reported at the two occurrences differ.

Chapman and Foster, 1969 (P 625-D), p. D17 -- Gold has been produced from a vein that trends north and dips 70° E.

(Little Moose Cr.) Gold, Tungsten

Bonnifield district Fairbanks (8.15, 0.6)
MF-410, loc. 63 64°02'N, 148°56'-148°57'W

Summary: Basin underlain by schist; high gravels on divides and intertributary ridges. Placer mining in 2-4 ft. of gravel in mile of stream course above confluence with Moose Cr. Source of gold probably mineralized zones (such as one near divide between Little Moose and Eva Creeks) in schist. Concentrates contain scarce scheelite. Mining reported for 1916 and 1937; was undoubtedly carried on in other years.

Maddren, 1918 (B 662), p. 365-368 -- Headwater tributary of Moose Cr. Basin underlain mainly by schist; high gravel on divides and intertributary ridges. Placer deposits all in lower mile of course (above confluence with Moose Cr.). Mining, 1916. Gravel 2-4 ft. thick. Sulfide mineralization has been found near divide between Little Moose and Eva Creeks. Source of placer gold probably mineralized zones in schist rather than high gravels.
Smith, 1939 (B 910-A), p. 55 -- Mining, 1937.
Joesting, 1943 (TDM 2), p. 20 -- Scarce placer scheelite.
Thorne and others, 1948 (RI 4174), p. 27 -- Scarce placer scheelite.
Cobb, 1973 (B 1374), p. 111 -- Scheelite in concentrates.

(Little Nugget Cr.) Gold

Fairbanks district Fairbanks (14.9-15.05, 16.2-16.3)
MF-410, loc. 47 65°00'N, 147°59'-148°00'W

Summary: Has been placer mining.

Chapman and Foster, 1969 (P 625-D), pl. 1 -- Area shown as having been placer mined. No other data.

Lookout

Gold

Fairbanks district
MF-410, loc. 2

Fairbanks (14.0, 14.75)
64°50'N, 148°07'W

Summary: Some gold has been mined. A vein is cut by an auriferous dike.

Chapman and Foster, 1969 (P 625-D), p. D19 -- Gold has been produced. A NE-trending vein is cut by a 6-ft.-wide auriferous leucocratic dike.

Macomb

Gold (?)

Fairbanks district

Fairbanks (15.15, 15.65)
64°53'N, 147°58'W

Summary: Caved shafts sunk on a vein. "Ore" on dump is crushed schist, gouge, and quartz. No data on metal content, if any.

Hill, 1933 (B 849-B), p. 152 -- Several claims on a vein that strikes NE and dips 60° SE. Two shafts 30 ft. and 50 ft. deep; caved in 1931. Ore on dump is crushed schist, gouge, and quartz.
Chapman and Foster, 1969 (P 625-D), p. D17 -- Reference to B 849-B.

Maloney

Antimony

Fairbanks district
MF-410, loc. 3

Fairbanks (14.2, 15.25)
64°51'N, 148°05'W

Summary: Shaft; material on dump mainly quartzite schist; material in ore bin gouge and quartz with arsenopyrite and stibnite.

Hill, 1933 (B 849-B), p. 123 -- 90-ft. shaft said to intersect (at 50-ft. depth) a ledge said to be 12-14 ft. wide, to strike ENE, and dip SE. Dump is mainly quartzite schist; ore pile largely gouge with some quartz carrying arsenopyrite and stibnite.

Killeen and Mertie, 1951 (OF 42), p. 20 -- Reference to B 849-B.

Chapman and Foster, 1969 (P 625-D), p. D19 -- Reference to B 849-B.

(McAdam(s) Cr.) Gold

Bonnifield district Fairbanks (10.05, 0.75) approx.
MF-410, loc. 68 64°02'N, 148°42'W approx.

Summary: A little placer mining in 1930.

Moffit, 1933 (B 836), p. 345 -- Dead work and a little mining, 1930.
Smith, 1933 (B 836), p. 41 -- Small-scale mining, 1930.

McDonald (& Morton) — Antimony, Gold

Fairbanks district — Fairbanks (15.0, 15.2)
MF-410, loc. 19 — 64°51'N, 148°00'W

Summary: Several auriferous quartz veins with arsenopyrite and oxidation products; some also contain stibnite. Inclined shafts and other workings on 4 claims. Mining in 1931, 1937, and probably some other years. In 1931 240 tons of $19 ore from Blue Bird workings; no data on other production. Includes references to: Blue Bird Mining Co., Combination; see also Wandering Jew.

Chapin, 1919 (B 692), p. 323 -- In 1917 a few shallow pits exposed a quartz vein with arsenopyrite scattered through it and coatings of scorodite and cervantite.

Moffit, 1927 (B 792), p. 12 -- Shaft 30 ft. deep exposes horse of mineralized schist with quartz veins on both walls; visible gold.

Hill, 1933 (B 849-B), p. 133-135 -- Several groups of workings on 4 claims. The Blue Bird inclined shaft is 80 ft. deep on a vein that strikes N 35° W, dips 65° NE; 3 levels of drifts. Vein terminated by fault on 3 levels. 240 tons of $19 ore mined from stopes and milled, 1931. At Combination shaft a 100-ft. incline followed a vein striking N 20° W, dipping 45° E, and with an average width of 3 ft. Vein carries sulfide ore averaging $25 to $40 per ton; large boulders of stibnite-arsenopyrite ore on dump. On McDonald claim 4 subparallel nearly vertical veins strike N 40° E; quartz-arsenopyrite-stibnite ore.

p. 139 -- Blue Bird should not be confused with claim of same name belonging to Miller & O'Connor farther NW on same ridge.

Smith, 1939 (B 910-A), p. 25 -- Mining, 1937; ore taken to a custom mill.

Joesting, 1942 (TDM 1), p. 11 -- Stibnite present; near a limestone-aplite contact.

Killeen and Mertie, 1951 (OF 42), p. 16-17 -- References to B 692 and B 849-B.

Chapman and Foster, 1969 (P 625-D), p. D17 -- Data mainly from above references.

McGrath

Gold

Fairbanks district
MF-410, loc. 25

Fairbanks (17.8, 16.3)
64°55'N, 147°36'W

Summary: Low-grade gold-quartz vein in schist.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Low-grade gold-quartz vein.

Mulligan, 1974 (IC 8626), p. 14 -- Gold-quartz vein in schist; no record of production. In residential area.

(Melba Cr.) Gold

Fairbanks district Fairbanks (19.65, 17.9)
65°00'N, 147°21'W

Summary: Has been placer mining. See also Vogt.

Chapman and Foster, 1969 (P 625-D), pl. 1 -- Area shown as having been placer mined.

Merian	Gold (?)
Fairbanks district	Fairbanks (15.0, 15.4) 64°52'N, 147°59'W

Summary: Tunnel driven in schist. No data on metal content, if any.

Hill, 1933 (B 849-B), p. 152 -- Long tunnel (caved 75 ft. from portal) in schist.

Michley — Gold

Fairbanks district — Fairbanks (14.75, 15.75)
MF-410, loc. 13 — 64°53'N, 148°02'W

Summary: Quartz vein 2-12 in. wide in schist. Ore milled about $10 per ton. Developed by short drifts from a long tunnel.

Hill, 1933 (B 849-B), p. 149 -- Crosscut has been driven through flat-lying quartz-mica schist. Short drifts follow a quartz vein that strikes N 4° W, dips 60° E, and is 2-12 in. wide. Ore from a small stope milled about $10 per ton. A higher tunnel follows this vein for about 50 ft.

Chapman and Foster, 1969 (P 625-D), p. D19 -- Reference to B 849-B.

Mohawk (Mining Co.) — Antimony, Gold, Lead, Zinc

Fairbanks district — Fairbanks (14.95, 15.55)
MF-410, loc. 17 — 64°52'N, 147°59'W

Summary: Major work on Mohawk and Bondholder claims; some development on Yellow Jacket. Quartz veins with schist inclusions; some gouge. Ore contains free gold, arsenopyrite, stibnite, galena, and sphalerite. Mohawk claim workings most extensive; vein developed for length of 1,300 ft. and to vertical depth of 232 ft. by 1931; average thickness of vein was 3 ft.; ore averaged more than $20 per ton. Bondholder ore less rich and development smaller as of 1931. Total production through 1931 was nearly 10,000 fine oz.; mine operated intermittently to 1940; no data on production. A few tons of stibnite was mined; about 5 tons probably was sold. Includes references to: Bondholder, Henderson (& McGinn), St. Patrick Creek, Tyndall & Finn, Tyndall & Flynn, Yellow Jacket.

Smith, 1913 (B 525), p. 209 -- Has been prospecting

Smith, 1913 (B 542), p. 195 -- Same as B 525.

Chapin, 1914 (B 592), p. 355 -- Lode that strikes N 20° E and dips 40° NW has been traced on surface for 500 ft. and opened by incline for 20 ft. Ledge is 6 ft. wide and is composed of quartz with inclusions of fragments and lenses of schist. Gouge marks hanging wall; richest ore (free gold) in greenish quartz stringer along hanging wall. No sulfides noted. Footwall is made up of parallel joint planes marked by seams of gouge.

Eakin, 1915 (B 622), p. 237-238 -- Mining, 1914. Considerable development on Bondholder and Yellow Jacket claims as well as on Mohawk claim; 8 or 10 shafts and tunnels.

Brooks, 1916 (B 642), p. 61 -- Development continued in 1915. Adit on Bondholder claim now nearly 600 ft. long; cuts narrow mineralized shear zones, but has not reached main lode.

Smith, 1917 (BMB 142), p. 24 -- Considerable development work on Bondholder, Yellow Jacket, and Mohawk claims; several shafts and a long access adit.

Mertie, 1918 (B 662), p. 413-414 -- Summary of data in B 592, p. 355. Long adit being driven to crosscut lode on Bondholder claim had not reached it by August, 1916. On Mohawk claim 2 shafts expose 8-ft. vein of quartz containing stibnite and a little sphalerite; may be continuation of lode on Leah fraction [Billy Sunday].

Martin, 1920 (B 712), p. 40 -- Mine operated and some ore milled, 1918.

Brooks and Martin, 1921 (B 714), p. 81 -- Minor mining, 1919.

Brooks and Capps, 1924 (B 755), p. 35 -- Tunnel driven 150 ft.; some ore mined.

Brooks, 1925 (B 773), p. 15 -- Mining, 1923.

Smith, 1926 (B 783), p. 8 -- "Considerable quantity of excellent ore" mined, 1924. Stibnite, galena, sphalerite in ore, but only the free gold is recovered.

Mohawk (Mining Co.) - Continued

Moffit, 1927 (B 792), p. 11-12 -- Largest output of any lode mine in district, 1925. Granular quartz vein 1-5 ft. thick contains free gold, stibnite, arsenopyrite, galena, and sphalerite. Narrow parts of vein are richest; quartz near stibnite pockets (not auriferous) is high grade.

Smith, 1929 (B 797), p. 13 -- Mining, 1926.

Smith, 1930 (B 810), p. 15 -- Mining, 1927. Water shortage hampered operation of mills in [Ester Dome] area.

Smith, 1930 (B 813), p. 17 -- Mining, 1928.

Smith, 1932 (B 824), p. 19 -- Mining, 1929; also custom milling.

Hill, 1933 (B 849-B), p. 142-147 -- 8 claims; production more than $200,000, mainly since 1925 [as of 1931]; mostly from Mohawk vein, a little from Bondholder vein. Mohawk vein, in general, strikes N 30° E and dips 40°-70° (average 60°) ESE. Main workings comprise more than 2,900 ft. of drifts, 1,800 ft. of raises and winzes; vein developed for total length of 1,300 ft. and to vertical depth of 232 ft. Vein varies from 9 in. to 6 ft. (average 3 ft.) in width. Ore yielded $15 to $35 (average more than $20) per ton. Some of ore contains bunches of stibnite. Several veins other than Mohawk encountered underground. Bondholder vein strikes N 24° E, dips 45° NW, is 4-1/2-7 ft. wide; cuts mica-quartz schist; contains gold, arsenopyrite, stibnite. Mining 1930-31; several hundred tons of ore milled; about $10 per ton in gold. Other veins exposed on property.

Smith, 1933 (B 836), p. 18-19 -- Mining, 1930.

Smith, 1933 (B 844-A), p. 18 -- Mining, 1931.

Smith, 1934 (B 864-A), p. 20 -- No mining, 1932.

Smith, 1937 (B 880-A), p. 21 -- Development, 1935.

Smith, 1938 (B 897-A), p. 22 -- Development, 1936.

Smith, 1939 (B 910-A), p. 25 -- Mining, 1937.

Smith, 1941 (B 926-A), p. 23 -- Mining, 1939.

Smith, 1942 (B 933-A), p. 23 -- Activity [possibly mining], 1940.

Joesting, 1943 (TDM 2), p. 11 -- Wide vein or lens of stibnite encountered in a raise. At least 20 tons taken out of raise; 5 tons stacked on dump and the rest left underground. The 5 tons was taken to Fairbanks in 1942. [No information on any sale.]

Killeen and Mertie, 1951 (OF 42), p. 12 -- Sample of stibnite ore contained 54.02% Sb.

p. 14 -- Minor amount of stibnite ore has been produced.

p. 18 -- References to B 662 and B 849-B. Also statement that mine was active as late as 1940, but idle in 1942. Sample of sacked ore on property in 1942 contained 54.02% Sb.

p. 26 -- Ore on property would have to be resacked if sold.

Chapman and Foster, 1969 (P 625-D), p. D17 -- Data mainly from above references and a Univ. of Alaska B.S. thesis. Some of faults in working may be thrusts.

(Monte Cristo Pup) — Gold

Fairbanks district — Fairbanks (19.65, 17.9)
MF-410, loc. 58 — 65°00'N, 147°21'W

Summary: Placer mining in 1914.
Eakin, 1915 (B 622), p. 233 -- Mining, 1914.

(Moose Cr., trib. Ester Cr.) Antimony, Gold

Fairbanks district Fairbanks (14.4, 15.25) approx. 64°51'N, 148°04'W

Summary: Stibnite makes up cobbles as much as 6 in. in diameter in old placer workings. No further data on placer activity on this creek in this or any other reference to mining in the Fairbanks district, but it is safe to assume that the placer miners were looking for and found some gold.

Killeen and Mertie, 1951 (OF 42), p. 12 -- Stibnite cobble contained 62.11% Sb.

p. 20 -- Cobbles of stibnite as much as 6 in. in diameter in old placer workings.

p. 42 -- Alluvial stibnite in gravels.

(Moose Cr., trib. Nenana R.) — Gold, Mercury, Platinum, Tin, Tungsten

Bonnifield district — Fairbanks (7.65-7.9, 0.7-0.85)
MF-410, locs. 39, 62 — 64°02'-64°03'N, 148°58'-149°00'W

Summary: Drains area of schist with remnants of Tertiary gravel on ridges. Oxidized schist near head contains arsenopyrite, pyrite, and (determined by assay) gold. Both creek and bench placers have been mined. Concentrates contain gold, scheelite, cassiterite, cinnabar, and platinum-group metals. Mining reported for most years from 1909 to as recently as 1940. Includes references to (Big Moose Cr.); see also (Moose Cr.) Healy quad.; some of the cited references might be to mining on that creek.

Capps, 1911 (B 480), p. 221-222 -- Preliminary to B 501.
Brooks, 1912 (B 520), p. 38 -- Probably was mining in 1911.
Capps, 1912 (B 501), p. 44 -- First production in 1909. Heads on schist ridge with remnants of gravel capping. 100 oz. gold recovered from a gravel bench with schist bedrock. Mining in 1910.
Maddren, 1916 (B 662), p. 364-368 -- Basin eroded in schist overlain by gravel; thick remnants on divides and intertributary ridges. Placers above and below mouth of Little Moose Cr. Both creek and bench placers. 100 oz. gold mined from bench in 1909. Mining of creek placers, 1916. Total output from basin (including Little Moose Cr.), 1909-16, was worth about $30,000. Stream placers in gravel 2-4 ft. thick; no continuous pay streaks. Some gold in high gravels, but Maddren considers principal source of placer gold to be mineralized zones in schist.
Overbeck, 1918 (B 662), p. 351 -- Lode claims have been located.
p. 355 -- Quartz porphyry intrusives near head; placer gold in parts of stream courses that cut them.
p. 360 -- Specimen of oxidized schist from claim at head of creek contained arsenopyrite and pyrite; assay determined gold to be present.
Martin, 1920 (B 712), p. 44 -- Mining, 1918.
Brooks, 1922 (B 722), p. 51 -- Mining, 1920.
Brooks, 1923 (B 739), p. 35 -- Mining, 1921.
Capps, 1924 (B 755), p. 138-139 -- Mining, 1922.
Smith, 1930 (B 813), p. 35 -- Small-scale mining, 1928.
Smith, 1932 (B 824), p. 40 -- Small-scale mining, 1929.
Smith, 1933 (B 836), p. 41 -- Small-scale mining, 1930.
Smith, 1933 (B 844-A), p. 41 -- Small-scale mining, 1931.
Smith, 1934 (B 857-A), p. 38 -- Mining, 1932.
Smith, 1934 (B 864-A), p. 42 -- Mining, 1933.
Smith, 1936 (B 868-A), p. 44 -- Mining, 1934.
Smith, 1937 (B 880-A), p. 46 -- Mining, 1935.
Smith, 1938 (B 897-A), p. 56 -- Mining, 1936.
Smith, 1939 (B 910-A), p. 55 -- Dragline plant installed, 1937; output for district increased markedly [$12,000 to $44,000; table on p. 45].
Smith, 1939 (B 917-A), p. 54 -- Mining, 1938. Also prospect drilling on benches.

(Moose Cr., trib. Nenana R.) - Continued

Smith, 1941 (B 926-A), p. 50-51 -- Mining, 1939. Tried out a new gadget called a "one-bucket dredge."
Joesting, 1942 (TDM 1), p. 20 -- Platinum has been found in placers.
p. 27 -- Common placer cinnabar.
p. 34 -- Scarce placer cassiterite.
p. 39 -- Common placer scheelite.
Smith, 1942 (B 933-A), p. 48 -- Mining ("one-bucket dredge"), 1940; major producer in district.
Malone, 1962 (IC 8131), p. 56 -- Placer cinnabar common.
Malone, 1965 (IC 8252), p. 55 -- Placer cinnabar.
Cobb, 1973 (B 1374), p. 111 -- Concentrates contain scheelite, cassiterite, cinnabar, and platinum-group metals.
Hasler and others, 1973 (P 820), p. 98 -- Bismuth minerals reported. [This reference probably is to Liberty Bell; data in cited reference are incorrect].

Mother

Gold

Fairbanks district
MF-410, loc. 1

Fairbanks (14.0, 15.8)
64°53'N, 148°07'W

Summary: Brecciated iron-stained quartz and silicified schist carries free gold.. Some of quartz averages $20 a ton.

Hill, 1933 (B 849-B), p. 120-122 -- Nearly vertical ledge strikes east; about 20 ft. thick; consists of iron-stained quartz, silicified schist, quartz breccia, and blue clay [gouge?]. Some of quartz averages $20 a ton in gold; some high-grade ore seen.
Chapman and Foster, 1969 (P 625-D), p. D18 -- Reference to B 849-B.

(Nenana) Limestone

Fairbanks district Fairbanks (6.9, 10.05)
64°34'N, 149°05'W

Summary: Lens of limestone in schist exposed in railroad cut.

Waring, 1947 (C 18), p. 6, 8 -- Lens of blue-gray limestone in Birch Creek schist exposed in railroad cut; 400 ft. long; 1-4 ft. thick; grades laterally into siliceous schist. Analysis indicates 2.1% insol., 1.1% iron and aluminum oxides, 0.7% MgO.

(Nugget Cr., trib. Goldstream Cr.) Gold

Fairbanks district
MF-410, loc. 57

Fairbanks (13.95-14.05, 16.0-16.05)
64°54'N, 148°07'W

Summary: Placer gold mining, 1938-40.

Smith, 1939 (B 917-A), p. 43 -- Mining, 1938.
Smith, 1941 (B 926-A), p. 40 -- Mining, 1939.
Smith, 1942 (B 933-A), p. 39 -- Mining, 1940.

(Nugget Cr., trib. Smallwood Cr.) Gold

Fairbanks district
MF-410, loc. 46

Fairbanks (19.1-19.7, 16.65-17.2)
64°57'N, 147°23'-147°26'W

Summary: Has been placer mining.

Chapman and Foster, 1969 (P 625-D), pl. 1 — Area shown as having been placer mined.

(O'Connor Cr.) Gold

Fairbanks district
MF-410, loc. 50

Fairbanks (15.95, 17.3)
64°58'N, 147°51'-147°52'W

Summary: Stream flows in an asymmetrical valley similar to that of Big Eldorado Cr. Ground 100-130 ft. deep. About 55 oz. of gold worth $18.00 per oz. mined in 1907.

Prindle, 1908 (B 337), p. 39, 41 -- Gold has been found; work had not progressed beyond prospecting stage in 1907. Ground 100-130 ft. deep.

Prindle and Katz, 1913 (B 525), p. 106 -- Valley asymmetrical; very similar to that of Big Eldorado Cr.

p. 111 -- Gold worth $1,000 mined in 1907.

p. 113 -- Gold worth $18.00 per oz.

Parker

Gold

Fairbanks district
MF-410, loc. 8

Fairbanks (14.5, 15.8)
64°53'N, 148°04'W

Summary: Auriferous quartz vein 1-6 inches thick.

Chapman and Foster, 1969 (P 625-D), p. D19 -- Irregular quartz vein 1-6 in. thick contains gold. Strikes N 15° E, dips 55° W.

(Pearl Cr.)

Bismuth, Gold, Tungsten

Fairbanks district
MF-410, loc. 59

Fairbanks (19.9, 17.7-17.8)
64°59'N, 147°19'W

Summary: Placer gold mined 1911-14, 1938-40. Concentrates contain native bismuth, wolframite, and much scheelite. Creek heads in area with occurrences of lode scheelite. Includes references to (Yellow Pup Cr.); see also White Association.

Ellsworth, 1912 (B 520), p. 243 -- A pay streak said to have been located, 1911.
Ellsworth and Davenport, 1913 (B 542), p. 208 -- Mining, 1912.
Chapin, 1914 (B 592), p. 359 -- Mining, 1913.
Eakin, 1915 (B 622), p. 233 -- Mining, 1914.
Mertie, 1918 (B 662), p. 421 -- Scheelite in concentrates.
Hill, 1933 (B 849-B), p. 71 -- Native bismuth in concentrates.
Smith, 1939 (B 917-A), p. 43-44 -- Mining, 1938.
Smith, 1941 (B 926-A), p. 40 -- Mining, 1939.
Joesting, 1942 (TDM 1), p. 39-40 -- Abundant placer scheelite and wolframite. Creek heads in area where scheelite occurs in contact-metamorphosed limestone and gold-bearing quartz veins near porphyritic granite intrusive body.
Smith, 1942 (B 933-A), p. 39 -- Mining, 1940.
Joesting, 1943 (TDM 2), p. 27 -- Scheelite in float and reported (but not confirmed) in lode prospects. Scheelite and wolframite in placers.
Wedow, White, and others, 1954 (C 335), p. 1 -- Reference to B 849-B, p. 71.
Byers, 1957 (B 1024-I), p. 188 -- Scheelite in concentrates.
p. 210-211 -- Scheelite from nearby lodes.

(Pedro Cr.) Gold, Tin

Fairbanks district
MF-410, loc. 54

Fairbanks (18.2-18.35, 17.5-17.85)
64°59'-65°00'N, 147°31'-147°32'W

Summary: Site of first gold discovery in district. Headwater branch of Goldstream Cr. Placers mainly deep and frozen. Mined, 1902 to as recently as 1940; dredge from 1930 on. Cassiterite is a rare constituent of concentrates. Production usually reported as part of Goldstream basin. See also (Pedro Cr.) Livengood quad.

Prindle, 1905 (B 251), p. 67 -- Gold discovered by Felix Pedro in 1902.
p. 75-77 -- Depth to bedrock 8-30 ft., of which more than 20 ft. may be muck overlying 1-20 ft. of gravel. Base of gravel is clayey; it and top 1-5 ft. of bedrock contain all of the gold. Black sand, garnet, rutile, and pyrite also present. Mining in 1903-04 was by open cuts and drifting.
p. 83-84 -- Bedrock is quartzite schist (Birch Creek) and locally porphyritic granite and gneiss. Gravels locally derived.
Purington, 1905 (B 263), p. 32, 42, 53-54 -- Data on mining methods, costs, etc., in 1904.
p. 208 -- Gold worth $18.40 per oz.
Prindle, 1906 (B 284), p. 111 -- Has been mining (1905).
p. 118 -- Distribution of values irregular.
Brooks, 1907 (B 314), p. 36 -- Mining, 1906.
Prindle, 1908 (B 337), p. 29 -- Quotation from B 314.
p. 39 -- Gold discovered, 1902. Has been a major producer.
Prindle and Katz, 1909 (B 379), p. 190, 193 -- Mining, 1908.
p. 191 -- Depth to bedrock 9-35 ft.
Ellsworth, 1910 (B 442), p. 232 -- Mining, 1909.
Ellsworth and Parker, 1911 (B 480), p. 154-155 -- Mining, 1910.
Ellsworth, 1912 (B 520), p. 241 -- Mining, 1911.
Ellsworth and Davenport, 1913 (B 542), p. 206 -- Mining, 1912.
Prindle and Katz, 1913 (B 525), p. 105-106 -- Mining, 1908. In some places gold has been found through 8 ft. of gravel and 4 ft. of bedrock; in other places it is confined to bedrock.
p. 109 -- Depth to bedrock 8-40 ft.
p. 111 -- Production, 1903-10, worth $1,250,000.
p. 113 -- Gold worth $17.68 per oz.
Brooks, 1914 (B 592), p. 68 -- Mining, 1913.
Chapin, 1914 (B 592), p. 359 -- Mining, 1913.
Eakin, 1915 (B 622), p. 234 -- Mining, 1914.
Brooks, 1916 (B 642), p. 59 -- Mining, 1915.
Smith, 1917 (BMB 142), p. 22-23 -- Mining, 1915.
Smith, 1917 (BMB 153), p. 51 -- Mining, 1916.
Brooks, 1918 (B 662), p. 54 -- Mining, 1916.
Smith, 1929 (B 797), p. 20 -- Mining, 1926.
Smith, 1930 (B 810), p. 25 -- Mining, 1927.
Smith, 1930 (B 813), p. 28 -- Mining, 1928.
Smith, 1932 (B 824), p. 33 -- Mining, 1929.

(Pedro Cr.) - Continued

Smith, 1933 (B 836), p. 32-33 -- Dredging, 1930.
Smith, 1933 (B 844-A), p. 32 -- Mining, including dredging, 1931.
Smith, 1934 (B 857-A), p. 30 -- Mining, including dredging, 1932.
Smith, 1934 (B 864-A), p. 34-35 -- Mining, including dredging, 1933.
Smith, 1936 (B 868-A), p. 35-36 -- Mining, including dredging, 1934.
Smith, 1937 (B 880-A), p. 39 -- Mining, including dredging, 1935.
Smith, 1938 (B 897-A), p. 46 -- Mining, including dredging, 1936.
Smith, 1939 (B 910-A), p. 46 -- Mining, 1937 [no mention of dredge].
Smith, 1939 (B 917-A), p. 43-44, 74 -- Dredge operated, 1938.
Smith, 1941 (B 926-A), p. 40, 70 -- Dredge operated, 1939.
Joesting, 1942 (TDM 1), p. 32 -- Rare placer cassiterite.
Smith, 1942 (B 933-A), p. 38, 67 -- Dredge operated, 1940.
Wedow, Killeen, and others, 1954 (C 331), p. 6 -- Windrows of dredge tailings conspicuous in valley bottom.
Koschmann and Bergendahl, 1968 (P 610), p. 26 -- Workable placers discovered, 1902; first in area.
Cobb, 1973 (B 1374), p. 128 -- First gold discovery in district, 1902.

Peterson	Gold (?)
Fairbanks district	Fairbanks (17.9, 16.75) 64°56'N, 147°36'W

Summary: Prospect holes in barren schist and in overburden.

Hill, 1933 (B 849-B), p. 153 -- Prospect holes, most of which are in overburden or barren schist; some "promising float" in surficial material.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 849-B.

Prometheus — Antimony, Copper, Gold, Silver

Fairbanks district — Fairbanks (14.85, 15.55)
MF-410, loc. 14 — 64°52'N, 148°00'W

Summary: Quartz vein, possibly as much as 5 ft. wide, contains 2 generations of quartz, gold, stibnite, arsenopyrite, jamesonite, tetrahedrite, covellite, and chalcopyrite. Silver content very high (6.4 oz. per ton in assay of a grab sample). At least 60 tons of ore (on dump in 1931) mined from shaft 60 ft. deep; no record that any ore was milled or sold.

Smith, 1913 (B 525), p. 208 -- Hess and others have sunk a 60-ft. shaft on a quartz vein carrying stibnite and disseminated sulfides. Visible gold reported to be fairly common.

Smith, 1913 (B 542), p. 194 -- Same as B 525.

Chapin, 1914 (B 592), p. 355 -- Samples from dump contained quartz (2 generations) cut by fine veinlets of stibnite. Some rocks have greenish-yellow antimony oxide stain.

Brooks, 1916 (B 649), p. 39 -- Quotation from B 592, p. 355.

Hill, 1933 (B 849-B), p. 71 -- Argentite may be present; if so it could account for high silver content of ore.

p. 148 -- Vein apparently strikes N 40° E; reported to be 5 ft. wide. 60 tons of ore on dump; white quartz cut by gray quartz with sulfides; grab sample assayed $9.52 in gold and silver (6.40 oz. Ag per ton); a specimen contained arsenopyrite, jamesonite, and covellite.

Killeen and Mertie, 1951 (OF 42), p. 16 -- References to B 525, B 592, and B 849-B.

Chapman and Foster, 1969 (P 625-D), p. D18 -- References include B 525, B 592, and B 849-B. Minerals listed in these references, plus chalcopyrite and tetrahedrite.

Ptarmigan

Tungsten

Fairbanks district
MF-410, loc. 32

Fairbanks (19.6, 17.6) approx.
64°59'N, 147°23'W approx.

Summary: Scheelite in quartz and silicates that replaced limy horizons in schist. See also Franklin.

Chapin, 1919 (B 692), p. 327 -- Scheelite in quartz and silicates that presumably selectively replaced limestone. Lodes strike N 40° E and dip NW.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 692. Limestone here considered to be limy horizons in schist.

Rambler — Antimony, Gold, Lead, Silver

Bonnifield district — Fairbanks (8.1, 1.15) approx.
MF-410, loc. 37 — 64°04'N, 148°57'W

Summary: Small lenticular bodies of stibnite in black slaty schist. Several tunnels and a shaft. About 2 tons of ore mined (may not have been sold). Sample contained 47% antimony and traces of gold, silver, arsenic, and lead. Includes reference to antimony lode on Cody Cr.

Maddren, 1918 (B 662), p. 368 -- Stibnite lode in basin of Cody Cr.

Overbeck, 1918 (B 662), p. 351 -- Stibnite lode; relocated in 1916.

p. 357 -- Stibnite in crystal aggregate.

p. 360-361 -- Two lenticular bodies of stibnite in greatly oxidized sericite schist exposed by a cut; greatest thickness about 5 in.; greatest length about 3 ft.; larger lens cuts across schistosity at slight angle. Another stibnite body (apparently larger) was explored by a shaft (caved when visited in 1916).

Joesting, 1942 (TDM 1), p. 12 -- Stibnite occurs in small discontinuous bunches in black slaty schist; exposed in face of small cliff; cut off by fault a few feet back from cliff face. 3 tunnels, one 90 ft. long, driven into cliff. About 2 tons of high-grade stibnite mined and sacked during prospecting [no mention that any was shipped]. Sample contained 47% Sb and traces of Au, Ag, As and Pb.

Berg and Cobb, 1967 (B 1246), p. 203 -- 2 tons of ore containing 47% Sb mined from small discontinuous bunches of stibnite in black slaty schist. The ore also contained traces of Au, Ag, As, and Pb.

Ready Bullion | Antimony, Gold

Fairbanks district | Fairbanks (14.5, 15.1)
MF-410, loc. 10 | 64°51'N, 148°03'W

Summary: Bedrock mica schist and quartzite. Ore is lenses and stringers of quartz and mineralized schist in gouge in a crushed zone as much as 15 ft. wide and in other shear zones and thin quartz veins. Ore minerals are free gold, arsenopyrite, stibnite, and one or more antimony sulfosalts. Mine developed from tunnels 600 ft. and 1,280 ft. long and shafts, one at least 180 ft. deep; several hundred feet of other workings. Mining in 1912-13, 1926-31, 1933 was reported, but total production was not given; one stope yielded about 3,600 tons of $6.09 ore; much of the rest that was mined was richer. Includes references to: Borovich (& Stevens), Hudson, Stevens & Borovich.

Smith, 1913 (B 525), p. 203-206 -- Country rock is chlorite schist cut by many small quartz veins (up to an inch or so thick) and a fault marked by gouge and slickensided surfaces and containing masses of barren quartz. Silicified country rock suggests proximity of an intrusive. Richest ore is quartz stringers (which carry visible gold), but nearby schist is also auriferous. Sulfide content of ore is low. Mine developed by 2 shafts. Small mill expected to be operating by fall of 1912.

Smith, 1913 (B 542), p. 189-192 -- Same as B 525.

Chapin, 1914 (B 592), p. 325 -- Coating of manganese oxide on vugs in quartz veins.

p. 350-352 -- In 1913 shaft had been sunk 180 ft. Several levels; principal work on 100-ft. level. "Big lead" appears to be a crushed zone 15 ft. wide dipping 45° NW and filled with stringers and lenses of quartz and masses of mineralized schist enveloped in gouge; followed for 160 ft.; cut off by fault that dips 60° SW. A 4-in. quartz vein with many cavities and sparse stibnite was followed for 200 ft. Other veins also found in drifts. Best ore in stringers in "big lead" from surface to 70-ft. level.

Brooks, 1916 (B 649), p. 40-41 -- Reference to B 592, p. 350-352. [Attitude given by Brooks does not agree with that given by Chapin in the cited reference.]

Smith, 1932 (B 824), p. 19 -- Mining and milling, 1929.

Hill, 1933 (B 849-B), p. 123-127 -- 18 claims. Bedrock is mica schist and quartzite. Ore is in several veins and shear zones; "main vein" as much as 8 ft. thick; other veins are thinner and some shear zones wider. Veins contain several varieties [generations?] of quartz, gold, arsenopyrite, stibnite, and an antimony-lead sulfide (bournonite or boulangerite?). Some oxidation in all of workings (maximum depth 160 ft.). Mine developed from 2 tunnels (600 ft. and 1,280 ft. long); several hundred feet more of crosscuts, drifts, raises, etc. One stope yielded about 3,600 tons of $6.09 ore; much other ore was richer. [No data on total production.] Major development was in 1926 and following years;

Ready Bullion - Continued

mining in 1931.
Smith, 1933 (B 836), p. 18 -- Mining, 1930.
Smith, 1933 (B 844-A), p. 18 -- Mining, 1931.
Smith, 1934 (B 864-A), p. 20 -- Mining, 1933.
Smith, 1938 (B 897-A), p. 22 -- Prospecting and development, 1936.
Smith, 1939 (B 910-A), p. 24 -- Parts of Ready Bullion and Stay acquired by Bartholmae Oil Corp., 1937. Much activity, but no production.
Killeen and Mertie, 1951 (OF 42), p. 20-21 -- References to B 592 and B 849-B.
Chapman and Foster, 1969 (P 625-D), p. D19 -- Data mainly from B 849-B.

(Ready Bullion Cr.) Gold

Fairbanks district
MF-410, loc. 44

Fairbanks (14.5-14.7, 15.1-15.45)
64°51'-64°52'N, 148°02'-148°04'W

Summary: Placer gravels as much as 80 ft. below surface. Mined from 1907 to 1914. Production well over 25,000 fine oz. Several hundred tons of ore said to have been mined from broken veins and masses of quartz in schist on ridge SW of creek.

Ellsworth, 1910 (B 442), p. 234 -- Mining, 1909.
Ellsworth and Parker, 1911 (B 480), p. 157-158 -- Winter mining and sluicing, 1910. Hot exhaust from pump engines kept sluices and water unfrozen.
Ellsworth, 1912 (B 520), p. 243 -- Mining, 1911.
Ellsworth and Davenport, 1913 (B 542), p. 209 -- Winter mining, 1911-12.
Prindle and Katz, 1913 (B 525), p. 110 -- Depth to bedrock 80 ft.
p. 112-113 -- Production, 1907-10, worth $500,000. Gold worth $16.38 per oz.
Chapin, 1914 (B 592), p. 359 -- Mining, 1913.
Eakin, 1915 (B 622), p. 235 -- Mining, 1914.
Chapman and Foster, 1969 (P 625-D), p. D19 -- "Several hundred tons of high-grade ore were mined from broken sections of veins and quartz masses in schist." Shown on pl. 1 as on ridge SW of creek.

(Rex Cr.) Antimony, Copper, Gold

Bonnifield district Fairbanks (8.9, 1.9)
MF-410, loc. 64 64°06'N, 148°50'W

Summary: Stream heads in schist; lower part of course cut in Tertiary coal-bearing rocks. Both stream and bench gravels contain irregularly distributed gold. Most placer mining was between 1905 and 1910; total production was probably less than 250 oz. of gold. Quartz veins carry stibnite, chalcopyrite, and pyrite; no development reported.

Capps, 1911 (B 480), p. 221-222, 224 -- Preliminary to B 501.
Capps, 1912 (B 501), p. 44 -- Mining, 1910.
p. 47 -- Prospecting since 1905. Stream heads in schist hills with remnants of gravel capping; lower part of course in coal-bearing rocks. Both stream and bench gravels carry irregularly distributed gold. Ground worked was 6-8 ft. deep with gold close to or in top foot of decayed schist bedrock.
Maddren, 1918 (B 662), p. 380-383 -- Upper 5 mi. in schist; lower 3 mi. in coal-bearing rocks; schist probably only recently stripped of coal-bearing rocks. Best gold prospects and only mining 3-4 mi. above mouth. Bench 50 ft. above stream was mined in 1910; reference to B 501, p. 47. Has been prospecting of creek gravels. Total production through 1916 worth about $5,000. No mining in 1916 and probably none since 1910.
Smith, 1939 (B 917-A), p. 54 -- Large tract acquired by Bartholomae Oil Corp., 1938; dragline mining contemplated.
Smith, 1941 (B 926-A), p. 51 -- Prospect drilling begun, 1939.
Joesting, 1942 (TDM 1), p. 12 -- Stibnite lode reported about 2 mi. NE of Cody Cr. [Rambler] prospect.
Berg and Cobb, 1967 (B 1246), p. 202-203 -- Quartz veins carry stibnite, pyrite, and chalcopyrite.

Ridge	Gold
Fairbanks district MF-410, loc. 26	Fairbanks (18.1, 16.45) 64°55'N, 147°34'W

Summary: Quartz vein; 2 shallow shafts; sample from dump contained gold worth $15.96 per ton.

Hill, 1933 (B 849-B), p. 153 -- Two shafts sunk about 15 ft. on a vein about 14 in. wide that strikes N 50° E and dips south. Grab sample of ore on dump assayed $15.96 per ton.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 849-B.

Rogach	Gold (?)
Fairbanks district	Fairbanks (14.3, 15.75) 64°53'N, 148°05'W

Summary: Gold (?) prospect. No other data.

Chapman and Foster, 1969 (P 625-D), p. D18 -- Listed in table as a prospect; no other data.

(Roosevelt Cr.) Gold

Bonnifield district Fairbanks (14.1, 1.3) approx.
MF-410, loc. 76 64°04'N, 148°10'W approx.

Summary: Small, flat, well-worn pieces of gold in 2 ft. of stream gravel on interbedded clay, sand, gravel, and coal of Tertiary coal-bearing formation, which is overlain by Nenana gravel, which is the probable source of the gold. No hard rocks in basin. Small-scale mining in 1910 and 1916 reported.

Prindle, 1907 (B 314), p. 210-211 -- Bedrock is clay and sand of coal-bearing formation. Stream gravel, and probably the gold, derived from overlying thick gravel bed. Gold in small, flat, well-worn pieces.

Brooks, 1911 (P 70), p. 173-174 -- Same as B 314.

Capps, 1911 (B 480), p. 221-222, 225-226 -- Preliminary to B 501.

Capps, 1912 (B 501), p. 44 -- Mining, 1910.

p. 48-49 -- No hard rock in basin. Gold derived from high gravels on clayey or sandy layers of coal-bearing series. Small-scale mining in 1910.

Maddren, 1918 (B 662), p. 399-400 -- Rises on ridge of Nenana Gravel; lower part of stream course has cut down into coal-bearing formation. Placer gold in about 2 ft. of gravel on clay, sand, gravel, and lignite of coal-bearing formation; gold probably derived from Nenana Gravel. Mining, 1916.

(Rose Cr., lode) Antimony

Fairbanks district Fairbanks (18.45, 17.35)
MF-410, loc. 28 64°58'N, 147°29'W

Summary: Tiny veinlets of stibnite in a quartz-feldspar lode that is 6-8 inches wide, strikes N 30° E, and dips 70° NW. Apparently has been no exploration or development since 1913.

Smith, 1913 (B 525), p. 198 -- Lode located by Isaac Ogram.
Smith, 1913 (B 542), p. 184 -- Same as B 525.
Chapin, 1914 (B 592), p. 346 -- Quartz-feldspar lode 6-8 in. wide strikes N 30° E, dips 70° NW; opened by 15-ft. shaft and incline; parallel veins opened by pits. Only mineralization is tiny veinlets of stibnite.
Brooks, 1916 (B 649), p. 24 -- A little antimony ore has been found.
p. 41 -- Quotation from B 592, p. 346.
Killeen and Mertie, 1951 (OF 42), p. 6 -- Minor occurrence of stibnite.
p. 39 -- References to B 592 and B 649, p. 24.
Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 592.
Mulligan, 1974 (IC 8626), p. 13 -- Data same as in P 625-D.

(Rose Cr., placer)

Gold, Tungsten

Fairbanks district
MF-410, loc. 55

Fairbanks (18.35-18.4, 17.4-17.45)
64°58'-64°59'N, 147°31'-147°32'W

Summary: Has been placer gold mining. Scheelite in concentrates. Includes reference to (New Years Pup).

Prindle and Katz, 1913 (B 525), p. 113 -- Gold worth $18.00 per oz.
Chapin, 1914 (B 592), p. 359 -- Coarse gold mined on New Years Pup, 1913.
Byers, 1957 (B 1024-I), p. 188 -- Scheelite in concentrates.
p. 210-211 -- Scheelite from nearby lodes.

Royal Flush

Gold

Fairbanks district
MF-410, loc. 16

Fairbanks (15.25, 15.7)
64°54'N, 148°00'W

Summary: Quartz vein 3 ft. wide; production was 208 tons of $47.50 ore, probably in 1937.

Smith, 1939 (B 910-A), p. 25 -- Gold production reported, 1937.
Chapman and Foster, 1942 (P 625-D), p. D18 -- Produced 208 tons of ore averaging $47.50 in gold per ton from a 3-ft.-wide vein that strikes N 42° E and dips 70° W.

Ryan — Antimony, Gold

Fairbanks district — Fairbanks (15.0, 15.4)
MF-410, loc. 18 — 64°52'N, 147°59'W

Summary: Mineralized fault zone contains sheared schist and quartz veins in a lode 40-70 ft. wide. Metallic minerals are gold, arsenopyrite, and stibnite. Large body of low-grade material and a few tens of thousands of tons of $10 (old gold price) material. Extensive underground workings (nearly a mile) and trenching, but not much ore mined and milled.

Brooks, 1912 (B 520), p. 33 -- Work on ledge in 1911; shipment of ore to custom mill reported.

Smith, 1913 (B 525), p. 207 -- Vein as much as 16 in. wide; faulted near bottom of shaft (about 90 ft. deep). Considerable gouge near fault.

Smith, 1913 (B 542), p. 193 -- Same as B 525.

Mertie, 1918 (B 662), p. 413 -- Prospecting, 1916. On Monte and Eva claims lode is shattered mixture of quartz and country rock 15-20 ft. thick and striking N 25° E. Much arsenopyrite. On Ryan claim 35-foot-deep shaft reached mineralized zone in schist; quartz, gold, arsenopyrite, stibnite.

Chapin, 1919 (B 692), p. 323 -- Development work Oct. 1916-June 1917. Lode strikes about north and dips steeply east; carries considerable stibnite.

Moffit, 1927 (B 792), p. 12 -- Shaft and open cuts expose a vein a few inches thick with gangue along footwall.

Smith, 1930 (B 810), p. 15 -- Large body of low-grade quartz. Property reported sold to an English company, 1927.

Smith, 1930 (B 813), p. 17 -- Property reported optioned to an English company, 1928.

Smith, 1932 (B 824), p. 20 -- No activity, 1929.

Hill, 1933 (B 849-B), p. 135-138 -- 7-1/4 patented claims. Lode is a fault zone in schist; crushed schist and quartz veins 40-70 ft. wide; strikes N 20°-25° E, dips 45°-70° (average 50°) E. Most of metal content is fairly persistent zone of quartz 9-20 ft. wide near hanging-wall side of lode. Fault movement was mainly post-mineralization. Sampling indicates a considerable tonnage of low-grade material and a few tens of thousands of tons of $10 ore. No record of production as of 1931 [see B 520, p. 33]. Prospect explored by shallow shafts and pits, a tunnel 300 ft. long, and a shaft 200 ft. deep. Deposit contains some arsenopyrite and stibnite.

Smith, 1933 (B 836), p. 19 -- Rumors that mine will be reopened, 1930.

Smith, 1933 (B 844-A), p. 18-19 -- Investigated and sampled by engineer, 1931. Lode is wide and of low grade.

Smith, 1936 (B 868-A), p. 20 -- Option for exploration, 1934.

Smith, 1939 (B 917-A), p. 26 -- Bartholomae Oil Co. got options in 1938. Cleaned out old shaft to depth of 160 ft., drove 330 ft. of drift and several hundred feet of crosscuts and raises. Ore taken out during development was milled at another property.

Ryan - Continued

Smith, 1941 (B 926-A), p. 23 -- Work suspended for most of 1939 season.
Joesting, 1942 (TDM 1), p. 11 -- Lenses of stibnite have been found.
Smith, 1942 (B 933-A), p. 23 -- Large amount of development work (trenches and geophysical work), 1940; little if any production.
Killeen and Mertie, 1951 (OF 42), p. 17 -- References to B 692 and B 849-B.
Chapman and Foster, 1969 (P 625-D), p. D17 -- Most of data from above references.
Warfield and Thomas, 1972 (USBM OF 23-72) -- Fault zone of crushed schist and quartz veins 40-70 ft. wide (strike N 20°-25° E, dip 45°-70° E) is hanging wall of major shear zone 750-1,500 ft. wide. Major metallic minerals in vein system are gold, arsenopyrite, and stibnite. In 1916-17 about 500 ft. of shaft and winze and 970 ft. of drifts and crosscuts; thorough sampling. Additional exploration and development, 1917-30, included a 65-ft. shaft and a crosscut. 1938-42 saw more than 1,500 ft. of shafts, 2,000 of drifts, adits, and crosscuts, and more than 2,800 ft. of trenches. Ore removed during development put through custom mill. Minor trenching and drilling, 1954-58. USBM drilling program in 1969-70 was a pilot study to compare rotary drilling and bulldozer trenching from cost and environmental damage points of view and was not intended to result in new knowledge about the deposit.

(St. Patrick Cr.) Gold

Fairbanks district
MF-410, loc. 49

Fairbanks (15.2, 15.55) approx.
64°56'N, 147°58'W approx.

Summary: Placer mining or prospecting between 1909 and 1916. No good data on amount produced, but it was undoubtedly small by Fairbanks district standards. Many lode mines and prospects in drainage basin.

Ellsworth, 1910 (B 442), p. 234 -- Work [mining or prospecting], 1909.
Ellsworth and Parker, 1911 (B 480), p. 158 -- Very little actual mining in 1910.
Ellsworth, 1912 (B 520), p. 243 -- Mining, 1911.
Prindle and Katz, 1913 (B 525), p. 112-113 -- Production, 1910, worth $17,000. Gold worth $17.50 per oz. [This does not agree with B 480, p. 158.]
Eakin, 1915 (B 622), p. 235 -- Mining, 1914.
Smith, 1917 (BMB 142), p. 23 -- Mining, 1915.
Smith, 1917 (BMB 153), p. 51 -- Mining, 1916.

St. Paul — Antimony, Gold

Fairbanks district — Fairbanks (14.8, 15.4)
MF-410, loc. 15 — 64°52'N, 148°01'W

Summary: Barren quartz vein fractured and then gold was deposited. Stibnite and arsenopyrite in ore. Country rock schist. 1,000 tons of $30 ore mined and milled.

Mertie, 1918 (B 662), p. 409-410 -- Extensive prospecting, 1916; mill installed and 370 tons of ore milled. Workings are shaft, incline, and tunnel (total length 257 ft.). Vein of massive vitreous quartz about 3 ft. thick strikes about N 40° E and dips 38° NW. Quartz and schist country rock decayed, shattered, and iron stained. Stibnite and its alteration products along footwall; gold content lower near stibnite. Mertie thinks that deposition of gold was later than quartz vein, but was localized by shattered nature of vein along a post-vein fault.

Chapin, 1919 (B 692), p. 323 -- Mine operated throughout 1917. Mill has capacity of 20 tons per day.

Martin, 1920 (B 712), p. 40 -- Mining, 1918; 150 ft. of tunnel driven; none of ore milled. Mill operated on ore from Billy Sunday and Mohawk.

Brooks and Martin, 1921 (B 714), p. 81 -- A little mining, 1919.

Hill, 1933 (B 849-B), p. 128-129 -- Tunnel driven 250 ft. on a vein that trends N 30° E and dips 45°-70° W. 6-8 in. of quartz next to hanging wall; lode 3-4 ft. wide. 1,000 tons of $30 ore mined and milled. Dump had pieces of stibnite-arsenopyrite-quartz ore.

Killeen and Mertie, 1951 (OF 42), p. 15-16 -- References to B 662 and B 849-B.

Chapman and Foster, 1969 (P 625-D), p. D18 -- References to B 662 and B 849-B.

Sanford

Gold

Fairbanks district
MF-410, loc. 12

Fairbanks (14.8, 15.9)
64°54'N, 148°01'W

Summary: Gold quartz vein opened by inclined shaft, drifts, and stope. 150 tons of ore milled yielded $6,700.

Hill, 1933 (B 849-B), p. 149 -- Inclined shaft sunk 105 ft. on vein that strikes N 40° E and dips 45° SE; several drifts and stopes. About 150 tons of ore mined and milled yielded $6,700; some of ore averaged $52 per ton. Another vein (said to have covered some high-grade ore) strikes N 20° E and is vertical.

Chapman and Foster, 1969 (P 625-D), p. D18 -- Reference to B 849-B and note that mine was also called Lone Tree.

Schubert

Tungsten

Fairbanks district
MF-410, loc. 31

Fairbanks (19.4, 17.45)
64°59'N, 147°23'W

Summary: Sparsely scattered grains of scheelite in 2-in. band in silicated limestone near contact between schist and porphyritic granite.

Byers, 1957 (B 1024-I), p. 189 -- Probably staked on a small lens of scheelite-bearing silicated schist.

p. 201 -- 35-ft. trench exposed granite-schist contact. Bedding is vertical and strikes N 35°-40° E. Log of bottom of trench is: 20 ft. porphyritic granite, 1/2 ft. glassy quartz, 7-1/2 ft. hornfelsic mica schist, 7 ft. scheelite-bearing silicated limestone and limestone. Scheelite occurs as sparsely scattered grains in a 2-in. band in silicated limestone.

Berg and Cobb, 1967 (B 1246), p. 220 -- Sparse scheelite in metamorphosed limestone at contact of porphyritic granite.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 1024-I, p. 201.

Seattle Fraction	Gold (?)
Fairbanks district	Fairbanks (14.9, 15.4) 64°52'N, 148°00'W

Summary: Gold (?) prospect. No other data.

Chapman and Foster, 1969 (P 625-D), p. D17 -- Listed in table as a prospect; no other data.

(Sheep Cr.)

Gold

Fairbanks district
MF-410, loc. 47

Fairbanks (14.85-15.0, 16.05-16.2)
64°59'N, 147°59'-148°00'W

Summary: Has been placer mining.

Chapman and Foster, 1969 (P 625-D), pl. 1 -- Area shown as having been placer mined.

Silver Dollar	Gold
Fairbanks district MF-410, loc. 5	Fairbanks (14.45, 15.3) 64°52'N, 148°03'W

Summary: Quartz vein about 5 ft. wide crushed by postmineralization faulting. About $4,000 in gold produced from a shaft and tunnel.

Hill, 1933 (B 849-B), p. 127-128 -- Vein strikes N 30° E, dips 68° SE, is about 5 ft. wide; consists mainly of crushed quartz with some altered schist. Developed by shaft and tunnel. Production about $4,000. A second tunnel has been driven 515 ft., but has not hit vein.

Chapman and Foster, 1969 (P 625-D), p. D19 -- Data mainly from B 849-B.

(Smallwood Cr.) Gold

Fairbanks district
MF-410, loc. 60

Fairbanks (19.7, 16.6-16.75)
64°55'N, 147°21'W

Summary: Bedrock is schist with granite at head of creek. Placer ground is deep (40 ft. near head of creek increasing downstream to more than 300 ft.); gold in 3-4 ft. of gravel and upper part of bedrock. Mining reported from 1907 to 1916 and in 1927. No data on total production or composition of concentrates.

Brooks, 1908 (B 345), p. 41-42 -- Has been prospecting and some production for several years (1907). New discovery 5 mi. below older mining area at depth of 320 ft.; no idea if it might be commercial.

Prindle, 1908 (B 337), p. 46-47 -- Bedrock of most of basin probably is mica schist; some granite. Depth to bedrock increases from about 40 ft. near head of creek to 200 ft. 5 mi. below, to 317 ft. at claim 17 below.

Prindle and Katz, 1909 (B 379), p. 191 -- Depth to bedrock 100-140 ft.; muck 17-40 ft. thick.

Ellsworth, 1912 (B 520), p. 244 -- Mining, 1911.

Ellsworth and Davenport, 1913 (B 542), p. 208 -- Mining, 1912.

Prindle and Katz, 1913 (B 525), p. 103 -- Heads in granite [Gilmore Dome]. Ground is deep. Productive gravels reported to be 120 ft. wide, 3-4 ft. thick. Gold also upper part of bedrock. Nuggets valued at $2.75 and $11.50 reported.

p. 110 -- Depth to bedrock 50-317 ft.

p. 112-113 -- Production, 1908, worth $12,000. Gold worth $18.11 per oz.

Brooks, 1914 (B 592), p. 68 -- New discovery made, 1913.

Chapin, 1914 (B 592), p. 361 — Mining, 1913.

Smith, 1917 (BMB 142), p. 23 -- Mining (not extensive), 1915.

Smith, 1917 (BMB 153), p. 51 -- Mining, 1916.

Smith, 1930 (B 810), p. 25 -- Mining, 1927.

Social Security

Gold

Fairbanks district
MF-410, loc. 6

Fairbanks (14.3, 15.0)
64°51'N, 148°05'W

Summary: Gold in a lode prospect. No other data.

Chapman and Foster, 1969 (P 625-D), p. D19 -- Gold in a lode prospect. No other data.

(Spruce Cr.)

Antimony, Gold, Silver

Bonnifield district
MF-410, loc. 38

Fairbanks (8.25, 1.55)
64°05'N, 148°55'W

Summary: Jamesonite-bearing veins contain 0.44 oz. gold and 5.4 oz. silver per ton. Gold-bearing quartz veins also present.

Joesting, 1943 (TDM 2), p. 14 -- Antimony-bearing veins and gold-quartz veins near head of creek. Sample of antimony-bearing vein contained arsenopyrite, scorodite, and jamesonite. Assay indicated 0.44 oz. Au and 5.4 oz. Ag per ton.

Berg and Cobb, 1967 (B 1246), p. 202-203 -- A few gold-bearing lodes and small jamesonite-bearing veins.

Spruce Hen — Molybdenum, Tungsten; Fluorite

Fairbanks district — Fairbanks (18.5, 17.1)
MF-410, loc. 29 — 64°57'N, 147°31'W

Summary: Schist with some interbedded limestone and metamorphosed basic igneous rock. Lode is a skarn deposit with scheelite, fluorite, garnet, and other typical contact-metamorphic minerals that replaced limestone; about 3 ft. thick. Lode is cut by scheelite-bearing quartz vein. Scheelite in zones in blocks of altered igneous rock (mainly hornblende) on dump. A little molybdenite reported in ore. Workings consisted of 70-ft. inclined shaft, pits, and trenches. No record of any production.

Mertie, 1918 (B 662), p. 422-423 -- Along western periphery of large body of porphyritic granite. 5 lodes being prospected by trenches. One lode is 3-4 ft. wide, made up of schist and metamorphosed basic rock, and averages 1-2 percent scheelite; no gold. A similar lode is 4 ft. wide, strikes N 33° E, and dips 40° NW.

Chapin, 1919 (B 692), p. 326-327 -- Silicates have replaced limestone beds and are cut by quartz veins; both rich in scheelite; also a little molybdenite. Seams of gouge along both walls of lode, which strikes N 50° E and dips 45° NW.

Martin, 1920 (B 712), p. 40 -- Some work done, 1918.

Smith, 1942 (B 926-C), p. 196 -- Reference to B 692, p. 326-327.

Thorne and others, 1948 (RI 4174), p. 24-25 -- Quotation from B 662.

Byers, 1957 (B 1024-I), p. 188 -- Ground-water leaching of scheelite in weathered zone may have occurred.

p. 201-203 -- Staked by summer, 1916. Development work, 1916-18, consisted of 2 shafts (one to prospect for gold) and many pits and trenches. Inclined shaft reported to have been sunk 70 ft. on a NW-dipping ore body 3 ft. thick. Mineralized zone trends N 60° E; appears to be more than one lode. In 1943 a pit and a trench exposed a badly weathered lode 3-3.2 ft. wide. Small grains of scheelite are disseminated through lode along with fluorite, garnet, and many other typical contact-metamorphic minerals. Samples averaged 0.44% WO_3. Concentrations of scheelite in zones as much as 6 in. wide in blocks of fine-grained altered igneous rock now mainly hornblende on an old dump.

Berg and Cobb, 1967 (B 1246), p. 220 -- On ridge between Steele and First Chance Creeks where the scheelite deposits are in tactite, silicated limestone, granite and pegmatitic dikes, and small quartz veins in schist.

Chapman and Foster, 1969 (P 625-D), p. D16 -- References to above reports.

Mulligan, 1974 (IC 8626), p. 13 -- Data same as in P 625-D, p. D16.

Stay

Antimony (?), Gold

Fairbanks district
MF-410, loc. 19

Fairbanks (15.0, 15.2)
64°51'N, 148°00'W

Summary: Quartz veins in schist near altered quartz porphyry; veins and schist wall rock mineralized; quartz porphyry has very little gold. Developed by several hundred feet of underground workings. Mining sometime between 1910 and 1913, in 1930-31, 1933, 1936, and probably in some of the intervening years; probably none since 1936. Total production not known; was about 700 tons that yielded $16,000 in gold for 1930-31. May be some stibnite in ore. Includes references to Little Eva.

Brooks, 1912 (B 520), p. 32-33 -- Little Eva claim staked, 1910. About 180 ft. of underground workings; 12-inch vein found.

Smith, 1913 (B 525), p. 206-207 -- Quartz vein trends N 60° W and dips 68° SW. Developed by shaft, tunnels, open cut. Easily accessible ore stoped out; more mining would require pumping. [Occurrence not called by name.]

Smith, 1913 (B 542), p. 192-193 -- Same as B 525.

Hill, 1933 (B 849-B), p. 129-133 -- Vein in Little Eva workings is 6-18 in. wide, vertical, and strikes N 27° W; offset to the left along several normal faults. Developed by adit 570 ft. long. Ore that panned an ounce or more per ton stoped out above adit level; several winzes. Elsewhere on property shafts 12 to 60 ft. deep developed similar veins; some of schist wall rock also mineralized. Bedrock at north end of property is altered quartz porphyry that does not carry much gold, even in quartz veinlets (strike N 50° W, dip 50° NE). Total production in 1930-31 was about 700 tons of ore that yielded about $16,000 in gold when milled [no data on earlier production]. Hill calculates about 1,350 tons of $15 ore remain in main vein at Little Eva workings.

Smith, 1934 (B 864-A), p. 20 -- Some production reported, 1933.

Smith, 1938 (B 897-A), p. 22 -- Claims leased; usual output not maintained; 1936.

Smith, 1939 (B 910-A), p. 24 -- Part of Ready Bullion and Stay acquired by Bartholomae Oil Corp., 1937. Much activity, but no production.

Chapman and Foster, 1969 (P 625-D), p. D17 -- Gold (has been mined) and stibnite (?) in quartz veins in schist near a shattered, iron-stained, mineralized quartz porphyry intrusive.

(Steel(e) Cr., lode) — Gold

Fairbanks district — Fairbanks (18.85, 17.0)
64°57'N, 147°27'W

Summary: Quartz vein with sparse gold. No data on tenor or record of type of prospecting.

Smith, 1913 (B 525), p. 210 -- Prospecting; all ore in area said to be low grade.
Smith, 1913 (B 542), p. 196 -- Same as B 525.
Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 525.
Mulligan, 1974 (IC 8626), p. 13 -- Quartz vein with sparse gold.

(Steel Cr., placer)	Gold
Fairbanks district	Fairbanks (18.6, 16.6) 64°55'N, 147°30'W

Summary: Has been not particularly profitable drift mining of deeply buried frozen gold placer.

Mulligan, 1974 (IC 8626), p. 14 — Deeply buried frozen gold placer. Drift mining in early days reportedly not very profitable. Claims patented.

Stepovich

Antimony, Beryllium, Molybdenum, Tungsten

Fairbanks district
MF-410, loc. 32

Fairbanks (19.6, 17.6)
64°59'N, 147°22'W

Summary: Crystalline limestone bed in schist that thickened in crests and troughs largely replaced by calsilicate minerals, quartz, and scheelite; richest ore shoots at intersections of scheelite-bearing quartz pegmatites with limestone. Scheelite (not ore grade) in silicated schist. Other minerals in deposit include small amounts of pyrite, pyrrhotite, molybdenite, and the beryllium mineral meliphanite. Lode offset by several steep faults. About 2,000 feet of underground workings. Total production, 1915-18 and 1942-44, was about 4,000 units of WO_3. Includes references to: Alaska Tungsten Mines, Johnson, Scheelite, and Tungsten if obviously to claim of that name on this property.

Brooks, 1916 (B 642), p. 61-62 -- In 1915 Johnson discovered a scheelite bearing lode in a crystalline limestone bed in schist. Lode has been traced for 200 ft.; a few inches to 4 ft. wide. Opened by a 40-ft. incline. Scheelite appears to be a primary mineral in a pegmatite.

Mertie, 1918 (B 662), p. 419-421 -- Scheelite discovered in summer of 1915; mining began in fall. Development, Aug. 1916, was 80-ft. incline, 2 drifts. Bedrock largely crystalline limestone with some silicated horizons containing calcite, pyroxenite, hornblende, and quartz. Scheelite occurs disseminated in mineralized zones or as ore shoots in country rock. Scheelite in euhedral crystals and appears to be secondary [younger than?] to other rock minerals. Also a scheelite bearing pegmatite. 210 tons of ore mined from Tungsten claim in 1915-16, concentrated locally, and sold. 250 tons of unconcentrated ore from inclined shaft on Scheelite claim shipped, 1915-16.

Chapin, 1919 (B 692), p. 325-326 — Principal lode is parallel to schistosity of country rock (strike N 70° E, 20°-40° W); vein 2-12 ft. thick. Inclined shaft 160 ft. deep; stopes and chambers. Mill installed in 1917; in September turned out 500 lbs. concentrate per day. No work on Scheelite claim in 1917.

Martin, 1920 (B 712), p. 40 -- Some work done, 1918; tailing to be remilled.

Capps, 1924 (B 755), p. 148 -- Summary of data in B 662, p. 419-421.

Hill, 1933 (B 849-B), p. 157 -- Only tungsten property on which there was development work in 1931.

Joesting, 1943 (TDM 2), p. 22-23 -- Considerable surface and underground (about 200 ft. of shaft and drifts) exploration, 1942-early 1943. About 110 tons of ore with estimated 4.5% WO_3 mined; 63 tons sold. Ore is scheelite in zone of silicated limestone and calcareous schist.

Stepovich -- Continued

Bain, 1946 (IC 7379), p. 68 -- Tungsten mined during World War I. Examined in 1943 by USBM. In 1944 shipped 17 tons of 64.27% concentrates and 12 tons of 15.56% material.

Thorne and others, 1948 (RI 4174), p. 4 -- USBM, USGS, and Alaska Territorial Dept. of Mines investigations, 1942-43.

p. 6-12 -- Claims are along strike of Cleary Hill ore zone. First work done in 1915. In 1916-17 two inclined shafts (deeper 180 ft.) were sunk. Through 1918 production was 10 tons concentrate (65% WO_3) and 300 tons sorted ore (8% WO_3). 1942-44 mining was from a new inclined shaft 150 ft. on slope and 2 levels. Production was 60 tons of ore (4.55% WO_3) and 38.3 tons of concentrate (49.7% WO_3). Property is 13 claims. Country rock mainly schist; small crystalline limestone bodies; porphyritic granite. Scheelite mineralization generally parallel to cleavage of schist; some disseminated in parts of granite. Contact metamorphic deposits; irregular small lenses in thin (no more than 20 ft. thick) limestone bed in Birch Creek Schist; some scheelite in quartz veins. Maximum diameter of any one lens is not much more than 50 ft.; average thickness about a foot; 1.5% to 20% WO_3. Gangue minerals are quartz, calcite, pyroxene, hornblende, garnet, sphene, and apatite. Pyrite, pyrrhotite, and molybdenite present but very rare.

p. 13, 15-23 -- Details of USBM project; description of underground workings (1,262 ft. total); and data on beneficiation tests.

Byers, 1957 (B 1024-I), p. 183 -- Cleary Hill Mines Co. from 1942 to 1944 produced 2,196 units of WO_3, largely as concentrates containing more than 64% WO_3.

p. 188-198 -- Since discovery in 1915 about 2,000 ft. of underground work has been done. During 1915-18 inclined shafts were driven down dip of lode. In 1931 a 170-ft. adit did not reach lode. In 1942-44 Cleary Hill Mines Co. sank 170-ft. inclined shaft on lode with levels at 50 ft. and 150 ft. down shaft; adit intersected drift on 150 Level. World War I production was 10 tons concentrate (about 65% WO_3) and 300 tons sorted ore (8% WO_3; only 2% WO_3 recoverable). Production 1942-44 was about 98.4 tons of ore and concentrate that yielded 2,196 units of WO_3. Rocks that constitute lode are crystalline limestone, granular scheelite ore (replacement of limestone), quartz pegmatite, and silicated mica schist (contains some scheelite, but not enough to be ore). Crystalline limestone is in discontinuous, irregular bodies at same stratigraphic horizon in schist; average thickness 2 ft.; may be 10 ft. in troughs and crests of folds; contains some small cavities. Granular scheelite ore localized at intersections of limestone and scheelite-bearing quartz pegmatite; irregular lenses that replaced limestone. Typical contact-metamorphic minerals (including the beryllium mineral meliphanite) formed. Green amphibolite (metamorphosed sill or lava flow) form footwall of

Stepovich -- Continued

lode below 50 Level near shaft. Lode generally strikes about N 70° W, dips about 35° NW; many variations because of drag folding. Lode offset as much as several tens of feet along steep northward striking faults. Scheelite in upper part of lode in places seems to have been leached and redeposited. Weighted average tenor of 32 channel samples is 6.1% WO_3; tenor of mined ore was somewhat less than 5%.

Berg and Cobb, 1967 (B 1246), p. 220 -- Total production, 1915-18 and 1942-44, was about 4,000 units of WO_3. Limestone lenses largely replaced by calcsilicate minerals, quartz, and scheelite. Richest ore shoots at intersections of limestone and pegmatite dikes.

Chapman and Foster, 1969 (P 625-D), p. D15 -- Reference to B 1024-I, p. 189-198.

Stepovich, M.

Gold (?)

Fairbanks district

Fairbanks (19.9, 17.55)
64°59'N, 147°19'W

Summary: Quartz vein contains bunches of arsenopyrite and a little pyrite; fractures cemented by scorodite. No data on possible gold content.

Smith, 1913 (B 525), p. 166 -- Has been prospecting (1912).
Smith, 1913 (B 542), p. 151 -- Same as B 525.
Chapin, 1914 (B 592), p. 330 -- 38-foot shaft sunk on quartz vein that strikes N 70° E and dips 70° NW. Quartz on dump contains bunches of arsenopyrite and a little pyrite; fractures cemented by scorodite.
Chapman and Foster, 1969 (P 625-D), p. D15 -- References to B 525, B 592.

Stibnite

Antimony

Fairbanks district
MF-410, loc. 14

Fairbanks (14,85, 15,55)
64°52'N, 148°01'W

Summary: Massive stibnite lenses (largest was 100 ft. long, 7 ft. wide, 4 ft. thick) mixed with schist in a shear zone that also contains an iron-stained quartz vein. 300 tons of ore mined in 1915 and 1926. Deposit probably mined out.

Brooks, 1916 (B 642), p. 29 -- Producing mine, 1915.

Brooks, 1916 (B 649), p. 17 -- Small-scale mining, 1915.

p. 38-39 -- In shear zone in schist; strike about N 30° W, dip 70°-90° N. Iron-stained quartz vein forms hanging wall of antimony lode. Shear zone is 1-2-1/2 ft. wide and has been traced for about 150 ft. Stibnite shoots are pods or lenses that pitch northward and in smaller kidneys of stibnite, quartz, and fragments of schist. Stibnite is in granular aggregates with some columnar masses; some has been sheared. Gangue is vitreous quartz. Ore shipped was hand broken and sorted from open cuts and pits.

Joesting, 1942 (TDM 1), p. 8 -- Reference to B 649.

Ebbley and Wright, 1948 (RI 4173), p. 38 -- About 300 tons of ore produced from large stibnite lenses.

Killeen and Mertie, 1951 (OF 42), p. 12 -- Ore sample contained 45.65% Sb.

p. 14-15 -- Significant quantities of stibnite have been mined. Shear zone trends N 17° W, dips 70°-89° S, and is 12-30 in. wide; contains iron-stained quartz vein and lenses of stibnite mingled with schist; lenses pitch to the north. One lens was 100 ft. x 7 ft. x 4 ft. Total production, in 1915 and 1926, was 300 tons of stibnite. Shipments in 1915 contained 51.5% Sb. Deposit probably mined out.

Berg and Cobb, 1967 (B 1246), p. 219 -- Shear zone 12-30 in. wide cuts schist, contains lenses of stibnite and quartz. Total past production, 300 tons of ore.

Chapman and Foster, 1969 (P 625-D), p. D18 -- References to B 649, p. 38-39, and OF 42, p. 15.

Tanana

Fairbanks district
MF-410, loc. 27

Gold, Tungsten

Fairbanks (18.3, 17.0)
64°57'N, 147°32'W

Summary: Auriferous quartz-scheelite veinlets are in stringers of decomposed quartzite schist that also carries some scheelite and gold. Gold-quartz vein cuts scheelite lode, which is 3 ft. thick. No production.

Mertie, 1918 (B 662), p. 422-423 -- Active prospecting, 1916. Six scheelite lodes discovered on 5 claims. Bedrock is quartzite schist (schistosity strikes N 30° E, dips 35° NW). Scheelite in stringers of decomposed schist that contain quartz-scheelite veinlets that carry some gold; schist also carries scheelite and gold; zone 3 ft. thick. Gold-quartz vein (strike N 8° W, dip 60° E) cuts scheelite lode. Prospect is along western periphery of large porphyritic granite body.

Capps, 1924 (B 755), p. 148 -- Data summarized from B 662, p. 422-423.

Thorne and others, 1948 (RI 4174), p. 23-24 -- Quotation from B 662.

Byers, 1957 (B 1024-I), p. 201 -- Had been located by summer of 1916.
p. 204-205 -- Not much could be seen in 1942-43. Quotation from B 662, p. 422.

Berg and Cobb, 1967 (B 1246), p. 220 -- On ridge between Steele and First Chance Creeks where the scheelite deposits are in tactite, silicated limestone, granite and pegmatitic dikes, and small quartz veins in schist.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 1024-I, p. 204-205.

Mulligan, 1974 (IC 8626), p. 13 -- Same as P 625-D, p. D16.

Thomas & Hess — Gold (?)

Fairbanks district — Fairbanks (15.0, 15.4) approx. 64°52'N, 147°59'W approx.

Summary: Prospecting only.

Smith, 1913 (B 525), p. 209 -- Prospecting, but no mining, in St. Patrick Cr. basin. Shafts 100 ft. deep said to have been sunk on some properties and promising veins discovered. Thomas & Hess were among those prospecting. A location (?) is shown on fig. 20, p. 204.

Smith, 1913 (B 542), p. 195 -- Same as B 525.

(Totatlanika R.)(Cr.) Gold

Bonnifield district Fairbanks (11.1-11.2, 0.55-2.4)
MF-410, locs. 69-71 64°02'-64°07'N, 148°32'-148°33'W

Summary: Bedrock mainly schist cut by siliceous dikes and quartz veins. Stream flows through a succession of broad basins and narrow canyons. Gold is in stream gravels, on bedrock, and in cracks and crevices in top few feet of bedrock; may have been derived from quartz veins or reconcentrated from now-removed Tertiary high gravels. Mining began in about 1905 and continued intermittently until as recently as 1940. Production, 1905-16, probably worth about $15,000; no more recent data, but undoubtedly as much or more.

Prindle, 1907 (B 314), p. 208-209 -- Bedrock mainly schist and andesite. Gravels derived from this bedrock and from coal-bearing deposits. Mining on gravel bars and in stream bed during low water stages. Gold in gravel, on bedrock, and in bedrock crevices. Gold flat. Mining, 1906.

Brooks, 1911 (P 70), p. 172 -- Same as B 314.

Capps, 1911 (B 480), p. 221-223 -- Preliminary to B 501.

Capps, 1912 (B 501), p. 44-45 -- Mining in 1910. Large stream that flows through a succession of narrow canyons and broad open areas. Gold in gravels, on bedrock, and in top foot of bedrock where broken and decayed. Only one claim being worked in 1910.

Maddren, 1918 (B 662), p. 388 -- Colors can be found almost any place from California Cr. upstream for 20 mi. [into Healy quad.]. Most of mining in middle basin from 1/2 mi. above Homestake Cr. downstream to Murphy Canyon [not located, but assumed to be just below mouth of Fourth of July Cr.].

p. 391-394 -- Gold discovered, 1905, and mined intermittently to 1916; total production worth about $15,000. Bedrock is schist, cut by siliceous dikes and many quartz veins, which Maddren considers as the source of the placer gold. Tertiary coal-bearing rocks and Nenana Gravel have been eroded away. Gold in typical stream gravels 4-6 ft. deep and in cracks in top 2-3 ft. of schist bedrock. Gold below mouth of [Fourth of] July Cr. probably derived from that creek.

Brooks and Capps, 1924 (B 755), p. 40 -- Mining near mouth of Iron Cr., 1922.

Capps, 1924 (B 755), p. 138-139 -- Mining, 1922.

Moffit, 1933 (B 836), p. 345 -- Hydraulic plant being installed, 1930.

Smith, 1939 (B 917-A), p. 54 -- Mining, 1938.

Smith, 1941 (B 926-A), p. 51 -- Mining, 1939.

Smith, 1942 (B 933-A), p. 48-49 -- Mining, 1940.

(Trixey Cr.) Gold

Bonnifield district Fairbanks
SE 1/8 quad. (?)

Summary: Placer gold mined, 1937. No other data given. Creek may also be known by another name; may be in Healy quadrangle.

Smith, 1939 (B 910-A), p. 55 -- Placer gold mined, 1937.

Tungsten Hill — Gold, Tungsten

Fairbanks district — Fairbanks (18.3, 17.0)
MF-410, loc. 27 — 64°57'N, 147°32'W

Summary: Scheelite in 4 zones as much as 14 ft. wide of decayed schist. Cut by auriferous quartz vein. Specimens of scheelite-bearing material on a dump contained as much as 8% WO_3.

Mertie, 1918 (B 662), p. 422-424 -- On western periphery of large porphyritic granite body. Four scheelite lodes discovered by Aug. 1916. Scheelite in zones (as much as 14 ft. wide) of decayed schist. Quartz vein containing a little gold cuts one lode.

Chapin, 1919 (B 692), p. 327 -- Reference to B 662.

Joesting, 1943 (TDM 2), p. 23 -- Little work since 1918. Specimens of high-grade ore (as much as 8% WO_3) on dumps.

Thorne and others, 1948 (RI 4174), p. 24-26 -- Quotations from B 662.

Byers, 1957 (B 1024-I), p. 201 -- Had been located by summer of 1916. p. 205 -- Work done in 1916 obliterated by 1942-43. Quotation from B 662, p. 424.

Berg and Cobb, 1967 (B 1246), p. 220 -- On ridge between Steele and First Chance Creeks where scheelite deposits are in tactite, silicated limestone, granite and pegmatitic dikes, and small quartz veins in schist.

Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 1024-I, p. 205.

Mulligan, 1974 (IC 8626), p. 13 -- Same as P 625-D, p. D16.

Tyndall & Finn(Ready Bullion Cr.) Gold

Fairbanks district
MF-410, loc. 11

Fairbanks (14.7, 15.15)
64°51'N, 148°02'W

Summary: Auriferous quartz vein exposed in adit.

Smith, 1913 (B 525), p. 208 -- Several lode claims explored by many openings, including adits 60 ft. and 50 ft. long. Small-well-defined quartz vein exposed in one adit; all gold appears to be in vein.
Smith, 1913 (B 542), p. 194 -- Same as B 525.
Chapman and Foster, 1969 (P 625-D), p. D19 -- Reference to B 525.

U.S. Smelting, Refining & Mining Co. Bismuth, Gold, Tin, Tungsten

Fairbanks district

Fairbanks
N 1/2 NE 1/4 quad.

Summary: Major gold placer operator of district with extensive operations on Cripple, Ester, Goldstream, Pedro and other creeks. Began preparatory work in 1925; began dredging in 1928; still operating in 1956. Channel samples of dump of dredge concentrates contained 0.1% WO_3, 2.23% tin, and 0.01% bismuth. Successor to Fairbanks Exploration Co.; see also U.S. Smelting, Refining & Mining, Co., Livengood quad.

Moffit, 1927 (B 792), p. 14, 17 -- Preparations for large-scale operations, 1925.
Smith, 1929 (B 797), p. 19-20 -- Ditch building and other preparatory work, 1926.
Smith, 1930 (B 810), p. 25 -- Preparatory work, 1927.
Smith, 1930 (B 813), p. 28-29, 47 -- Large-scale operations; dredge on Goldstream, 1928.
Smith, 1932 (B 824), p. 32-34, 52 -- Dredging, 1929.
Smith, 1933 (B 836), p. 24, 32-33, 54 -- Dredging, 1930.
Smith, 1933 (B 844-A), p. 32-33, 54 -- Dredging, 1931.
Smith, 1934 (B 857-A), p. 30-31, 51 -- Dredging, 1932.
Smith, 1934 (B 864-A), p. 34-36, 56 -- Dredging, 1933.
Smith, 1936 (B 868-A), p. 35-37, 58 -- Dredging, 1934.
Smith, 1937 (B 880-A), p. 39-40, 61 -- Dredging, 1935.
Smith, 1938 (B 897-A), p. 46-48, 71 -- Dredging, 1936.
Smith, 1939 (B 910-A), p. 46-48, 76 -- Dredging, 1937.
Smith, 1939 (B 917-A), p. 43-46, 74 -- Dredging, 1938.
Smith, 1941 (B 926-A), p. 40-42, 70 -- Dredging, 1939.
Smith, 1942 (B 933-A), p. 38-40, 67 -- Dredging and hydraulicking, 1940.
Bain, 1946 (IC 7379), p. 26-28 -- Data on thawing, stripping, and vital statistics of dredges.
Byers, 1957 (B 1024-I), p. 211 -- Channel samples of dump of all of the company's dredge concentrates contained 0.1% WO_3, 2.23% Sn, and 0.01% Bi.
Péwé, 1958 (GQ-110) -- Between 1928 and 1948 company mined more than $100,000,000 worth of gold (at 1956 price) [more than 2,857,000 fine oz,] from the Fairbanks area. In 1956 8 gold dredges were operated.

Vog(h)t

Bismuth, Gold, Tungsten

Fairbanks district
MF-410, loc. 33

Fairbanks (19.65, 17.8)
65°00'N, 147°21'W

Summary: Quartz veins cut biotite granite; contain scheelite and (in other parts of veins) intergrown gold, bismuth, and bismuthinite. Tellurium determined chemically. Includes references to: Granite Hill, Monte Cristo, and bismuth near Melba and Monte Cristo Creeks.

Chapin, 1914 (B 592), p. 325 — Native bismuth and bismuthinite in rich gold-bearing vein quartz. Presence of tellurium detected chemically. [Described as on Melba Cr.]

p. 330-331 -- Bismuth-bearing gold quartz vein about 5 in. thick trends east, is nearly vertical, and cuts biotite granite. Visible gold plentiful in intergrown bismuth and bismuthinite and in quartz. Tellurium present, but mineral in which it occurs was not determined.

Mertie, 1918 (B 662), p. 412 -- Country rock is porphyritic biotite granite. Two quartz veins separated by 3 ft. of shattered granite strike N 5° W, dip 80° W. They contain gold, scheelite, bismuthinite, and (according to assay) some tellurium mineral. Scheelite and gold-bismuth minerals (intergrown) do not occur in the same parts of the veins. Also reference to B 592, p. 330-331.

Brooks, 1919 (B 666), p. 98 -- Bismuth in gold prospect [noted as on Melba Cr.].

Brooks, 1921 (B 714), p. 41 -- Reference to B 592, p. 330-331.

Hill, 1933 (B 849-B), p. 71 — Bismuth and bismuthinite in very rich gold-bearing vein quartz on Melba Cr.; tellurium present, but mineral association not determined.

Wedow, Killeen, and others, 1954 (C 331), p. 7 -- Reference to B 592, p. 330-331.

Wedow, White, and others, 1954 (C 335), p. 1-2 -- Reference to B 592, p. 330-331; when visited in July 1949 workings were completely caved. All that remained was highly disintegrated rock on dumps around an old filled shaft and in the ruins of a small mill [only mention of shaft or mill in literature]. No bismuth-bearing material could be found.

Chapman and Foster, 1969 (P 625-D), p. D15 -- References to above reports.

Vuyovich (Ester Cr.) — Antimony, Gold

Fairbanks district — Fairbanks (14.7, 15.15)
MF-410, loc. 11 — 64°51'N, 148°01'W

Summary: Quartz veinlets in crushed, iron-stained zone in schist. Gold, arsenopyrite, and stibnite. Tunnel 100 ft. long. No record of production.

Hill, 1933 (B 849-B), p. 128 -- Tunnel driven about 100 ft. on a crushed, iron-stained zone in schist that contains quartz veinlets. Strike of zone N 20° E, dip 85° E. Some lenses of arsenopyrite, stibnite, or a mixture of both. Free gold can be panned from oxidized material near face of tunnel.

Killeen and Mertie, 1951 (OF 42), p. 21 -- Reference to B 849-B.

Chapman and Foster, 1969 (B 625-D), p. D19 -- Reference to B 849-B.

Vuyovich (Ready Bullion Cr.) Gold

Fairbanks district Fairbanks (14.55, 15.55)
MF-410, loc. 9 64°52'N, 148°03'W

Summary: Rich ore said to have been mined from a vein no more than 6 in. thick in mica schist. Crushed, iron-stained quartz on dump contains free gold and arsenopyrite.

Hill, 1933 (B 849-B), p. 128 — Vein, maximum width 6 in., strikes about N 50° E; in mica schist. Tunnel (caved in 1931) probably 50 to 60 ft. long. Some very rich ore said to have been mined. Crushed, iron-stained quartz on dump contains free gold and arsenopyrite.

Chapman and Foster, 1969 (P 625-D), p. D19 -- Reference to B 849-B.

Wandering Jew

Gold

Fairbanks district
MF-410, loc. 14

Fairbanks (14.85, 15.55)
64°52'N, 148°00'W

Summary: 120 tons of gold ore mined from a white quartz vein 4 to 18 in. thick that is less crushed than most in the area. Shaft 50 ft. deep, 60 ft. of drifts, stope to the surface.

Hill, 1933 (B 849-B), p. 147 -- White quartz vein (some sulfides) 4-18 in. wide strikes N and dips 75°-80° E; not as badly crushed as many in area; iron and arsenic oxide stains; sample assayed $25.35 per ton. Developed by shaft 50 ft. deep, 60 ft. of drift, and a stope to the surface. On 30-ft. level vein is cut off by a fault 25 ft. north of shaft. 75 tons of $21 ore and 45 tons of $10 ore mined, 1930-31.

Chapman and Foster, 1969 (P 625-D), p. D18 -- Reference to B 849-B.

White Association — Tungsten

Fairbanks district — Fairbanks (19.95, 17.8)
MF-410, loc. 36 — 64°59'N, 147°19'W

Summary: Ore shoot of scheelite strikes N 75° E, dips 75° NW along schistosity of hornblende and mica schists. Includes reference to Murphy claim on Yellow Pup.

Mertie, 1918 (B 662), p. 421 -- Lode prospecting on placer claims on Pearl Cr. One or more shafts encountered an ore shoot of scheelite in hornblende and mica schists along schistosity (strike N 75° E, dip 75° N).

Chapin, 1919 (B 692), p. 326 -- vein said to be 4 ft. wide and to strike N 75° E.

Chapman and Foster, 1969 (P 625-D), p. D15 -- Reference to B 662, p. 421.

Woodpecker

Gold

Fairbanks district
MF-410, loc. 30

Fairbanks (18.6, 17.2) approx.
64°58'N, 147°30'W approx.

Summary: Auriferous weathered granite.

Chapin, 1914 (B 592), p. 346 -- Seams of quartz and quartz-feldspar rock in granite. Small quantities of gold in weathered granite.
Chapman and Foster, 1969 (P 625-D), p. D16 -- Reference to B 592.
Mulligan, 1974 (IC 8626), p. 13 -- "Auriferous weathered granite."

Yellow Pup

Tungsten

Fairbanks district
MF-410, loc. 34

Fairbanks (19.8, 17.6)
64°59'N, 147°20'W

Summary: Quartz pegmatite 1-2 ft. thick with scattered scheelite and apatite is between walls of garnet tactite. Sample from 5-ton ore pile contained 0.59% WO_3. Explored by pits and a 12-ft. tunnel; 35 tons of ore mined; mill test [amount of ore milled not stated] yielded 225 lbs. of 70% WO_3 concentrate. Elsewhere on property (extension of Colbert lode) trenches exposed scheelite-bearing garnet tactite and green silicate rock.

Bain, 1946 (IC 7379), p. 68 -- Examined by USBM in 1943.

Thorne and others, 1948 (RI 4174), p. 4 -- USBM established continuity between Yellow Pup and Colbert deposits.

p. 6 -- Claims contiguous with those of Colbert property and adjoin south side of Stepovich property.

p. 8-9 -- Discovered, 1942. Pits and tunnel driven 12 ft. on vein, which is cut off by a fault. 35 tons of ore from tunnel stockpiled; mill test yielded 225 lbs. of 70% WO_3 concentrate. USBM found faulted extension of vein. Property is 6 unpatented claims.

p. 14-16 -- USBM project 3 short trenches; vein is continuous with Colbert mineralized zone. Tungsten mineralization forms a series of irregular lenses erratically distributed horizontally and vertically; in places may comprise enough of replacement [of limestone] zone to constitute ore. Distance to underlying granite (on basis of magnetometer survey) is probably 600-1,000 ft. USBM collected 6 samples from trenches.

Byers, 1957 (B 1024-I), p. 189 -- On apparent extension of Colbert lode to NE.

p. 200-201 -- Scheelite-bearing zone 1-2 ft. wide dips steeply N. Footwall and hanging wall probably originally were garnet tactite. Ore is quartz pegmatite with scattered scheelite and apatite. Exposed in open cut. Sample from 5-ton ore pile contained 0.59% WO_3. Near west boundary of property pits and trenches exposed scheelite-bearing garnet tactite and green silicate rock. Seem to be on extension of Colbert lode.

Berg and Cobb, 1967 (B 1246), p. 220 — About 1,000 ft. south of, parallel to, and similar to Stepovich lode.

Chapman and Foster, 1969 (P 625-D), p. D15 -- Reference to B 1024-I, p. 200-201.

Unnamed occurrence

Antimony

Fairbanks district
MF-410, loc. 4

Fairbanks (14.45, 15.6)
64°53'N, 148°04'W

Summary: Fragments of quartz-stibnite vein make it appear that vein is 2-3 ft. thick and strikes N 60° E. Country rock is schist. No development of prospect (?).

Brooks, 1916 (B 649), p. 41 -- Stibnite-bearing vein. Cut about 75 ft. long had caved when visited by Prindle in 1908. From fragments vein appears to be 2-3 ft. wide and to strike about N 60° E. Country rock is mica-quartz schist. Vein matter chiefly quartz and stibnite.

Chapman and Foster, 1969 (P 625-D), p. D19 -- Reference to B 649.

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. Descriptions of placer deposits commonly give little information on the location of individual mines or claims, so the names of all operators and owners of placer mines and claims are in this section with a notation to refer to the description of the stream that was mined or prospected.

Adler -- see Royal Flush
Alaska Metals Mining Co. -- see Stepovich, Yellow Pup
Alaska Mineral & Development Co. -- see Ryan
Alaska Tungsten Mines Co. -- see Stepovich, White Association
Aurora -- see Stepovich

Barlow & Koska -- see Rambler
Bartholomae Oil Corp. -- see (Rex Cr.), Ready Bullion, Ryan, Social Security, Stay
Bearpaw -- see Liberty Bell
Berry (& Hamil Co.) -- see (Gold King Cr.)
Berton -- see (Cripple Cr.)

Bethis -- see Alexander & Bethis
Big Chief -- see Colbert
Bigelow -- see McDonald, Merian
(Big Moose Cr.) -- see (Moose Cr.)
Bill Sunday Fraction -- see Billy Sunday

Black Bear -- see Blossom
Black Diamond -- see Jennie C.
Blue Bird -- see Fair Chance, McDonald
Blue Bird Mining Co. -- see McDonald
Bondholder -- see Mohawk

Borovich (& Stevens) -- see Ready Bullion
Camp -- see Ready Bullion
Caucasian -- see Stepovich
Chippewan -- see Stepovich
Christenson -- see Yellow Pup

Cleary Hill Mines Co. -- see Colbert, Stepovich
Columbia Mining Co. -- see Columbia, Spruce Hen
Combination -- see McDonald
Comet -- see Stay
Comstock -- see Crown Point

Cosgrove & Krutsch -- see Dorothy & Dorice
Curlew -- see Stay
Daly Bench -- see (Eva Cr., Fairbanks dist.)
Danzinger -- see (California Cr., lode)
Diebold -- see (Caribou Cr., trib. California Cr.)

Edna -- see Ryan
(Eldorado Cr.) -- see (Big Eldorado Cr.)
(Esther Cr.) -- see (Ester Cr.)
Eva, Fairbanks dist. -- see Ryan
Eva Creek Mining Co., Bonnifield dist. -- see Liberty Bell

Eva (Mining Co.), Bonnifield dist. -- see Liberty Bell
Eva No. 2 -- see Stay
Eva Quartz Mining Co., Bonnifield dist. -- see Liberty Bell
Eva Quartz Mining Co., Fairbanks dist. -- see Ready Bullion
Ewers -- see Stepovich

Excelsior -- see Ryan
Fairbanks Exploration Co. -- see U.S. Smelting, Refining & Mining Co.
(First Chance Cr., trib. Fish Cr.) -- see (Last Chance Cr.)
Frisco -- see Fair Chance
Garnet -- see Yellow Pup

Gem -- see Ryan
General Joffre -- see Tungsten Hill
Geneva -- see Ready Bullion
Golden Champion -- see (Cripple Cr.)
(Gold Hill) -- see (Cripple Cr.), (Ester Cr.)

Gold King Hydraulic Mining Co. -- see (Gold King Cr.)
Gold Lodes, Inc. -- see Ryan
(Gold Run (Cr.)) -- see (Gold King Cr.)
Goldstream Mining Co. -- see (Goldstream Cr.)
Grand Duke Nikolas -- see Tungsten Hill

Granite Hill -- see Vogt
Grant, near Nugget Cr. -- see Blue Bonanza
Grant & Hirschberger -- see Tanana
Hanot Bros. -- see (Pedro Cr.)
Hansen -- see (First Chance Cr., trib. Goldstream Cr.)

Happy Creek -- see Dorothy & Dorice, Elmes
Happy Home -- see (Eva Cr., Fairbanks dist.)
Harrais -- see Tungsten Hill
Hellerich -- see Alexander & Bethis
Henderson (& McGinn) -- see Mohawk

Hess -- see Prometheus
Hightower -- see Mohawk
Horseshoe -- see Ready Bullion
Hosanna -- see Ready Bullion
Hudson -- see Ready Bullion

Hudson Bros. -- see Farmer
Ijim -- see Ryan
Irene -- see Liberty Bell
Irishman -- see Grant, near Happy Cr.
Isaacson -- see Ridge

Johnson -- see Stepovich
Johnson, Norberg & Erickson -- see Liberty Bell
Jolly Roger(s) -- see Prometheus
(July Cr.) -- see (Fourth of July Cr.)
Kennecott Copper Corp. -- see Ryan

Keys -- see (Moose Cr.)
Krutsch & Cosgrove -- see Dorothy & Dorice
Leah -- see Billy Sunday
Lean Fraction -- see Billy Sunday
Liberty -- see Mohawk

Little Eva -- see Stay
Locle Fraction -- see Ready Bullion
Lone Tree -- see Sanford
Lounsbury -- see Clipper
Lucky -- see Stepovich

Lundbled & Anderson -- see Blossom
Makaich -- see Silver Dollar
Marie -- see Yellow Pup
Mary Stay -- see Ready Bullion
M. B. Mining Co. -- see (Goldstream Cr.)

McCann & Olsen -- see Flower
McCann, Thomas, Mickley & Hagel -- see St. Paul
McDonald, Michley, Hess, Thomas & McCann -- see Clipper
McGlone -- see Fair Chance
McGlone & Smith -- see Billy Sunday, Dorothy & Dorice, Fair Chance

McLaughlin, Franklin & Stay -- see First Chance
McQueen -- see Jennie C.
Meier (, Hoffman & Wallace) -- see Columbia
Melba -- see Yellow Pup
Mihalcik Bench -- see (Ready Bullion Cr.)

Midnight Sun -- see Blue Bonanza
Miller & O'Connor -- see Fair Chance
Minnesota -- see (Eva Cr., Fairbanks dist.)
Monte -- see Ryan
Monte Cristo -- see Vogt

Montie -- see Ryan
Murphy -- see (Fourth of July Cr.), Mother, White Association
Murphy & Perrault -- see American, American Eagle
Murray & Savage -- see Yellow Pup
Native Daughter -- see Ready Bullion

Neimi -- see Yellow Pup
(New Years Pup) -- see (Rose Cr., placer)
Nickaloff -- see Elmes
Norris -- see Social Security
North Pole -- see Ready Bullion

Ogram -- see (Rose Cr., lode)
Old Granite -- see Stay
Olsen -- see Cottonblossom
Orion -- see Stepovich
Owl -- see (Engineer Cr.)

Pearl -- see Colbert
Pegleg -- see Mohawk
Perrault (& Murphy) -- see American, American Eagle
Pilgrim -- see Grant, near Happy Cr.
Polaris -- see Stepovich

Prospect Mining Co. -- see (California Cr., lode)
Radovich -- see Silver Dollar
Rose, Bonnifield dist. -- see Liberty Bell
Rose, Fairbanks dist. -- see Stay
St. Jude -- see Cottonblossom

Scheelite -- see Stepovich
September 1st -- see Colbert
September 2nd -- see Colbert
Short -- see Liberty Bell
Silver Ridge Mining Co. -- see (Antimony Ridge)

Slav -- see Stepovich
Smallwood -- see Colbert
Smith & McGlone -- see Billy Sunday
Smith & McGonnigle -- see Billy Sunday
Smith Bros. -- see Billy Sunday

South Pole -- see Ready Bullion
Spite Fraction -- see Mohawk
Standard Mines, Inc. -- see (Eva Cr., Bonnifield dist.)
Star Crystal -- see Fair Chance
Stay & Co. -- see Fair Chance

Stevens & Borovich -- see Ready Bullion
Stipp, Logan & Murphy -- see Mother
Stohl (, Birklid & Anderson) -- see Yellow Pup
Strand & Diebold -- see (Eagle Cr.)
Sunflower -- see Ready Bullion

Swanson & Mountaine -- see Liberty Bell
Titanic -- see Stepovich
Triangle -- see Colbert
Triple X Placers -- see (Moose Cr.)
Tungsten -- see Stepovich, Tungsten Hill

Turnbarge -- see Lookout
Tyndall & Finn, St. Patrick Cr. -- see Mohawk
Tyndall, Finn & McGlaughlin -- see Mohawk
Tyndall, Finn & McLaughlin -- see Mohawk
Tyndall & Flynn -- see Mohawk

Tyndall, Henderson & McLaughlin -- see Mohawk
Venus -- see Stepovich
Verdin -- see (Fox Cr.)
Wild Goose, Bonnifield dist. -- see Liberty Bell
Wild Goose, Fairbanks dist. -- see (Engineer Cr.)

Yellow Jacket -- see Mohawk
(Yellow Pup Cr.) -- see (Pearl Cr.)
Zimmerman -- see Franklin, Ptarmigan, Spruce Hen

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