UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUMMARY OF REFERENCES TO MINERAL OCCURRENCES (OTHER THAN MINERAL FUELS AND CONSTRUCTION MATERIALS) IN THE KENAI AND TYONEK QUADRANGLES, ALASKA

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By

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

Introduction

This summary of references is designed to aid in library research on metallic and nonmetallic (other than mineral fuels and construction materials) mineral deposits in the Kenai and Tyonek quadrangles, Alaska. References to most reports of the Geological Survey, U.S. Bureau of Mines, and State of Alaska Division of Geological and Geophysical Surveys and predecessor State and Territorial agencies released before September 1, 1979, are included. 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 Alaska Division of Geological and Geophysical Surveys and its predecessor agencies are not included. Also not included are data on geochemical anomalies and on many prospects and claims about which little more than their locations is known (for example, some of those in MacKevett and Holloway, 1977 (OF 77-169A)). These omissions should not be interpreted as a judgement on my part that the prospects and claims are not valid mineral occurrences, but only that there are insufficient data to describe any mineral deposits that might be present.

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 in the first section and in these introductory paragraphs.

Index map

Summaries of References

For each mineral occurence there is a page that gives the name of the occurrence; the mineral commodities present*(listed alphabetically); the mining district (Ransome and Kerns, 1954 (IC 7679)) in which the occurence is located; the name of the 1:250,000-scale topographic quadrangle; coordinates (as described by Cobb and Kachadoorian, 1961 (B 1139), p. 3-4); the metallic mineral resource map number (Cobb, 1972, in the reference list for each quadrangle) and the occurrence number on the 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 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 occurences would be given if such names appeared in the reports summarized. As the deposits described do not have proper names, but many are near named geographic features, the names of those features are shown in parentheses in lieu of proper names. All references to placer mining on a stream appear under the stream name rather than under the names of individual claims or of operators. Several deposits cannot be unamibiguously referred to named geographic features; such occurrences are called "Unnamed occurrence" or "Unnamed prospect" and appear at the end of this section.

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

B	U.S. Geological Survey Bulletin
C	U.S. Geological Survey Circular
GC	Alaska Division of Geological and Geophysical Surveys (and predecessor State agencies) Geochemical Report
IC	U.S. Bureau of Mines Information Circular
OF	U.S. Geological Survey Open-file Report (numbers with a hyphen in them are formal; numbers without a hyphen

* FM indicated uranium abd/or thorium.

are informal and are 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

TDM Alaska Territoral Department of Mines Pamphlet

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 avoid ambiguities.

(Indian Cr.) Gold

Homer district
MF-377, loc. 6

Kenai (20.9, 2.5)
60°07'N, 150°36'W

Summary: Has been small-scale placer mining of glacial and glaciofluvial gravels in stream and bench deposits derived from Kenai Mtns. Attempt at large-scale operation failed. Includes reference to placer gold near head of Tustumena Lake.

Brooks, 1904 (B 225), p. 48 -- Reported in 1903 that a large deposit of gold-bearing gravel is said to be rich enough for hydraulicking and that a plant was installed during summer.

Moffit, 1906 (B 277), p. 44 -- Small amounts of gold in small streams entering head of Tustumena Lake; has been some mining for several years at Indian Cr.; hydraulic plant was installed.

Martin and others, 1915 (B 587), p. 111 -- For a number of years a little mining was done; attempt to use elaborate hydraulic plant was not successful. Gold in stratified gravels which are many hundred feet thick.

Cobb, 1973 (B 1374), p. 36-37 -- Small-scale mining was carried on for several years, but attempt to establish an elaborate hydraulic operation in 1903 failed. Gold derived from thick glacial and glaciofluvial deposits with source in Kenai Mtns.

MacKevett and Holloway, 1977 (OF 77-169A), p. 29, loc. 4 -- Stream and bench placers; reference to Martin and others, 1915 (B 587).

(Kenai R.) Gold

Homer district
MF-377, loc. 2 (in part)

Kenai (24.75, 8.6)(in part)
60°28'N, 150°08'W (in part)

Summary: Has been some prospecting for possible dredging ground. Was a hydraulic plant 2 mi. above Skilak Lake in 1903; some gold recovered from top few inches of bench gravel. See also (Kenai R.) Seward quad.

Moffit, 1906 (B 277), p. 43-44 -- Immense gravel deposits along river. Hydraulic plant on high gravels about 2 mi. above Lake Skilak did not operate in 1904; small quantities of gold recovered in 1903 from a few inches of the top gravels.

Johnson, 1912 (B 520), p. 141, 163 -- Was prospect drilling near mouth of Killey R. [about 16 mi. west of loc. 2, MF-377]; no data on results.

Brooks, 1914 (B 592), p. 63 -- Testing of possible dredging ground continued in 1913.

Martin and others, 1916 (B 587), p. 111 -- Dredging has been proposed at several places between Killey R. and Kenai [town], but no operations have proceeded far enough to give conclusive tests.

p. 181-182 -- First discovery of gold in Alaska was on Kenai R. [whether in Kenai or Seward quads. not known], in 1848 by P. P. Doroshin. In 1850 and 1851 Doroshin and 14 workers prospected 2 streams flowing into Kenai R. between Kenai and Skilak Lakes and another stream tributary to Skilak Lake; gold found, but not in workable amounts.

p. 197 -- Quotation from Moffit, 1906 (B 277). Between Kenai [Seward quad.] and Skilak Lakes river flows between gravel benches which become progressively farther above river level downstream.

Cobb, 1973 (B 1374), p. 35-37 -- References to and data from Martin and others, 1915 (B 587).

MacKevett and Holloway, 1977 (OF 77-169A), p. 29, loc. 2 -- Reference to Martin and others, 1915 (B 587).

(Nikishka) Diatomaceous Earth

Hope district Kenai (13.8-13.9, 12.1-12.2)
61°41'N, 151°23'-151°24'W

Summary: Diatomaceous earth in postglacial lakes. Largest deposit (only one studied in detail) contains an estimated minimum of 200,000 cu. yds. (70,000 tons dry weight) of material composed of 65%-75% (by dry weight) of diatom tests 0.023 to 0.004 mm in diameter.

Plafker, 1956 (B 1039-B)--Diatoms flourished in postglacial lakes in area underlain by outwash; largest deposit is, on the average, 2-6 ft. (maximum 12 ft.) thick. Measurement of sea-cliff exposures and auger holes indicates a minimum of 200,000 cu. yds. of diatomaceous material with a calculated dry weight of about 70,000 tons. 65%-75% (by weight) of dry material is diatom tests from 0.023 to 0.004 mm in diameter. Material adequate for use as an insulator and construction material, but probably not pure enough for other commercial uses. Other similar deposits known in area are smaller and were not studied in detail; it is highly probable that prospecting would discover more deposits.

(Ninilchik) Gold(?)

Homer district Kenai (12.65, 2.3) approx.
MF-377, loc. 5 60°08'N, 151°33'W approx.

Summary: Beach-mining work reported in 1911. No data on results. [Gold probably present in minute amounts; probably derived from glacial and/or glaciofluvial deposits overlying Tertiary continental rocks.]

Martin and others, 1915 (B 587), p. 111 -- "Work was also in progress in the summer of 1911 at a locality several miles north of Ninilchik, and according to report, at several other places along the shore of Cook Inlet, but the results are not known." [Complete reference.]
Cobb, 1973 (B 1374), p. 36 -- Reference to above.
MacKevett and Holloway, 1977 (OF 77-169A), p. 29, loc. 3 -- Reference to above.

(Tuxedni Bay) Iron

Redoubt district Kenai (1.3, 4.25)
MF-377, loc. 1 60°15'N, 152°51'W

Summary: Metamorphosed volcanic rocks of Lower Jurassic Talkeetna Fm. and probably Upper(?) Triassic marble contact metamorphosed by granitic rocks of Aleutian Range batholith. Contact rocks garnet-rich hornfels and marble with a massive magnetite lens in marble and disseminated magnetite in hornfels. Massive magnetite lens more than 50% iron; resource estimated to be a few thousand tons, based on sea-cliff and cave exposures and a dip-needle survey. Disseminated material (based on analysis of one sample) contains 25.8% iron. Only development of prospect was a small excavation in the end of a sea cave.

Martin, 1920 (B 712), p. 35 -- Deposit of magnetite said to have been found, 1918.

Brooks, 1921 (B 714), p. 42 -- Deposit described by prospectors as being of considerable magnitude and to be near contact between granite intrusive and volcanic rocks. Deposit staked but not developed.

Moffit, 1927 (B 789), p. 55-56 -- Described by owner, not seen by Moffit. Apparently in volcanic rocks near granitic intrusive; considerable body of iron oxide in view. Analyses supplied by owner showed 88.89% Fe_2O_3 in one and 67.82% Fe in another; assay showed 0.01 oz. gold per ton, a trace of silver, and 0.40% copper.

Grantz, 1956 (B 1024-D) -- Country rocks largely andesitic lavas and pyroclastic rocks with interbedded sedimentary rocks; Late Triassic to Late Jurassic in age. Intruded in Middle or early Late Jurassic time by quartz diorite batholith and subsequently by slightly younger quartz monzonite dikes and stocks. Minor structures are in general parallel in trend to eastern border of batholith. Magnetite occurs in 2 bodies; one (the first found) is a lens of massive magnetite in skarn developed in marble along contact with hornfels; contact with marble hanging wall sharp; that with hornfels footwall less distinct; chief gangue mineral is garnet; traces of pyrite and probably chalcopyrite; exposed only in sea cliff, in sea caves, and in a small excavation at end of one of sea caves; body 30-35 ft. thick and exposed for about 55 ft. along both strike and dip; dip-needle survey suggests that body ends about 110 ft. back from sea cliff. Eastern deposit (discovered in this investigation) consists of magnetite disseminated in hornfels probably derived from volcanic rocks; 30-ft. thick zone separated by 20 ft. of country rock from a lower zone at least 10 ft. thick (base not exposed). Analyses of samples showed 50.4% to 67.82% Fe for western deposit and 25.8% Fe for eastern deposit. Assays showed no more than 0.01 oz. per ton gold, a trace of silver, and 0.40% copper; highest values in old private assay. Based on outcrop data, resource of iron ore only several thousand tons. Sulfur and phosphorus present in undesirable amounts.

Detterman and Hartsock, 1966 (P 512), p. 75 -- Most of data from Grantz, 1956 (B 1024-D). Island is mainly metamorphosed volcanic rock of Talkeetna Fm.; one small outcrop of probably Upper(?) Triassic marble; intruded by quartz diorite of Aleutian Range batholith and quartz monzonite

(Tuxedni Bay) -- Continued

Detterman and Hartsock, 1966 -- Continued
dikes and stocks. Country rock altered to hornfels and marble near intrusive. Contact rocks garnet rich and contains magnetite; one massive, high-grade lens.

Berg and Cobb, 1967 (B 1246), p. 22 -- Data from Grantz, 1956 (B 1024-D) [not specifically cited].

Cobb and others, 1968 (B 1260-K), p. K19 -- Reference to and data from Grantz, 1956 (B 1024-D).

MacKevett and Holloway, 1977 (OF 77-169A), p. 29, loc. 1 -- Reference to Grantz, 1956 (B 1024-D).

Unnamed prospect — Iron

Redoubt district — Kenai (7.0, 4.0)
60°13'N, 152°45'W

Summary: Contact-metamorphic deposit in Lower Jurassic rock contains massive and disseminated magnetite.

MacKevett and Holloway, 1977 (OF 77-169A), p. 29, loc. 8 -- Massive and disseminated magnetite in contact-metamorphic deposit in metamorphosed Lower Jurassic rock. Prospect with apparent post-1950 activity.

Unnamed prospect — Iron

Redoubt district — Kenai (1.7, 4.1)
69°14'N, 152°48'W

Summary: Contact-metamorphic deposit in Lower Jurassic rocks near Jurassic granitic rocks contains massive and disseminated magnetite.

MacKevett and Holloway, 1977 (OF 77-169A), p. 29, loc. 7 -- Massive and disseminated magnetite in contact-metamorphic deposit in metamorphosed Lower Jurassic rocks near Jurassic granitic rocks. Prospect with apparent post-1950 activity.

Unnamed occurrence

Hope district
MF-377, loc. 4

Tungsten

Kenai (25.6, 9.1)
60°29'N, 150°02'W

Summary: Scheelite in concentrate from stream-sediment sample.

Jasper, 1967 (GC 14), p. 43, loc. 180 -- Concentrate from stream-sediment sample contained 65%-75% magnetite and traces of zircon and scheelite. Stream float consisted of granite, greenstone, dike rock, graywacke, and argillite. Author considered sample to anomalous in molybdenum (8 ppm).

Unnamed occurrence

Tungsten

Hope district
MF-377, loc. 3

Kenai (25.3, 9.1)
60°29'N, 150°04'W

Summary: Scheelite in concentrate from stream-sediment sample.

Jasper, 1967 (GC 14), p. 42, loc. 174 -- Concentrate of stream-sediment sample contained 60%-70% magnetite and traces of zircon and scheelite. Creek float consisted of granite, dike rock, greenstone, graywacke, argillite, shale, sandstone, and a little quartz.

(Beluga R.)

Gold

Redoubt district

Tyonek
SE 1/4 quad.

Summary: Fine gold present; unsuccessful attempt at hydraulic mining in 1902. In 1909 was some drilling of prospective dredging ground; dredge never installed. Location on river not known.

Brooks, 1910 (B 442), p. 42 -- Prospecting for dredging ground, 1909; results not made public. Fine gold long known to be present. Attempt to mine with hydraulic methods in 1902 had soon been abandoned.

Brooks, 1911 (P 70), p. 163 -- Same as above.

Brooks, 1918 (B 662), p. 45 -- Unsuccessful attempt to mine by hydraulic methods in 1902; project badly managed. Drilling for dredging project, 1909; no dredge installed.

Cobb, 1973 (B 1374), p. 17 -- Reference to Brooks, 1918 (B 662).

(Hayes Glacier)

Gold, Lead, Molybdenum

Yentna district
MF-385, loc. 6

Tyonek (6.1, 13.4) approx.
61°46'N, 152°16'W approx.

Summary: Quartz veins and stringers in felsic stock contain molybdenite in concentrations that locally might be of economic interest; tonnage reported to be small. Veins also carry gold and lead.

Berg and Cobb, 1967 (B 1246), p. 37 -- Molybdenite and other sulfides in quartz lenses and stringers in felsic stock 3-4 mi. long and about a mile wide. Locally molybdenite may be sufficiently concentrated to be of economic interest, but tonnage is reported to be small. Veins also contain gold, lead, iron, and arsenic.

MacKevett and Holloway, 1977 (OF 77-169A), p. 76, loc. 5 -- Reference to above.

(Kahiltna R.)

FM, Gold, Monazite, Platinum, Tin, Tungsten

Yentna district
MF-385, loc. 7

Tyonek (18.35-18.75, 16.9-17.7)
61°57'-61°59'N, 150°44'-150°46'W

Summary: River bars contain gold, platinum, cassiterite, scheelite, monazite, uranothorianite, zircon, rutile, and other heavy minerals. Samples contained as much as 0.08% uranium and 0.083% thorium. Heavy minerals may have been reconcentrated from Tertiary continental rock, from glacial deposits, or carried downstream from sources to the north in the Talkeetna quad. Has been small placer gold production. See also (Kahiltna R.) Talkeetna quad.

Capps, 1912 (B 520), p. 199 -- Preliminary to Capps, 1913 (B 534).
Capps, 1913 (B 534), p. 71 -- Considerable fine gold recovered from bars, 1911 [may have been in Talkeetna quad.].
Brooks, 1918 (B 662), p. 23 -- In 1916 the finding of platinum, some nuggets the size of match heads, reported [may have been in Talkeetna quad.].
Brooks, 1919 (B 666), p. 96 -- Platinum present.
Martin, 1919 (B 692), p. 32-33 -- Prospect drilling for platinum on lower river, 1917.
Mertie, 1919 (B 692), p. 262-263 -- 7 men prospecting bars of lower Kahiltna R. in 1917. Concentrates contained magnetite, ilmenite, hematite, limonite, quartz, garnet, zircon, platinum, and fine gold. In the past somewhat more than $2,000 worth of gold has been mined from the bars.
Brooks, 1921 (B 714), p. 38 -- Reference to Mertie, 1919 B 692).
Smith, 1930 (B 810), p. 53 -- Platinum has been recovered [may have been from Talkeetna quad.].
Smith, 1930 (B 813), p. 60 -- Platinum present.
Smith, 1932 (B 824), p. 29 -- Mining, 1929 [may have been in Talkeetna quad.].
p. 66-67 -- Platinum present.
Smith, 1933 (B 836), p. 29 -- Small-scale mining in valley, 1930 [may have been in Talkeetna quad.].
p. 69 -- Platinum present.
Smith, 1933 (B 844-A), p. 67 -- Platinum present.
Smith, 1934 (B 857-A), p. 63 -- Platinum present.
Smith, 1934 (B 864-A), p. 31-32 -- Small-scale mining or prospecting in valley, 1933 [may have been in Talkeetna quad.].
p. 68-69 -- Platinum present.
Smith, 1936 (B 868-A), p. 33 -- Active prospecting in valley, 1934 [may have been in Talkeetna quad.].
p. 70-71 -- Platinum present.
Smith, 1937 (B 880-A), p. 36 -- Prospecting in valley [may have been in Talkeetna quad.].
p. 74-75 -- Platinum present.
Smith, 1938 (B 897-A), p. 84 -- Platinum present.
Smith, 1939 (B 910-A), p. 90 -- Platinum present.
Smith, 1939 (B 917-A), p. 84 -- Platinum present.
Smith, 1941 (B 926-A), p. 74 -- Platinum present.
Joesting, 1942 (TDM 1), p. 20 -- Reference to Smith, 1938 (B 897-A).
Smith, 1942 (B 933-A), p. 75 -- Platinum present.

(Kahiltna R.) -- Continued

Bates and Wedow, 1953 (C 202), p. 8 -- Concentrates from Roundbend and Red Hill Bars contain monazite and thorianite; 0.083% thorium.

Robinson and others, 1955 (B 1024-A), p. 2 -- Concentrates from Round Bend Bar collected before 1945 contained 0.023%-0.190% eU; one sample contained 0.08% uranium.

p. 21-22 -- Radioactivity due to monazite and uraninite(?). Other minerals present include: cassiterite, sphene, tourmaline, zircon, garnet, gold, and platinum. A prospector's concentrate sample, probably from a drill hole on Red Hill Bar, contained (among other things): monazite, zircon, platinum, scheelite, uranothorianite, garnet, cassiterite, sphene, rutile, and gold.

Overstreet, 1967 (P 530), p. 109 -- Reference to Bates and Wedow, 1953 (C 202).

Cobb, 1973 (B 1374), p. 22-23 -- References to Mertie, 1919 (B 692), Bates and Wedow, 1953 (C 202), and Robinson and others, 1955 (B 1024-A). Heavy minerals may have come from nearby Tertiary rocks, from glacial deposits, or even from Cache Cr. area [Talkeetna quad.].

MacKevett and Holloway, 1977 (OF 77-169A), p. 76, locs. 6, 7 -- References to Mertie, 1919 (B 692), Bates and Wedow, 1953 (C 202), and Robinson and others, 1955 (B 1024-A).

(Lewis R.) Gold

Redoubt district
MF-385, loc. 9

Tyonek (17.6-18.15, 6.55-7.8)
61°22'-61°26'N, 150°50'-150°55'W

Summary: Stream flows mainly in Jurassic or Cretaceous granitic rocks and a small patch of Tertiary conglomerate; lower part of course through coastal plain. Stream gravels carry angular gold, some fairly coarse and some with attached quartz. In 1916 more than $2,000 worth (about 97 fine oz.) recovered during what were essentially prospecting operations. Unknown, but probably small, amount mined in 1956-57. Gold probably derived from small quartz veins in granitic rocks; some may have been reconcentrated from Tertiary conglomerate.

Brooks, 1918 (B 662), p. 45-47 -- Drilling for possible dredging ground where river reaches coastal plain; bedrock 12-22 ft. below surface. In 1916 seven small placer operations (not much more than prospecting) in canyon between upper basin and flats produced over $2,000 in gold (worth $18.66 an ounce). In lower part of canyon bedrock is conglomerate; granite farther upstream. On 2 claims gold is coarse and rough with one $2 nugget found; on another claim where 18-ft.-deep excavation did not reach bedrock fine, angular gold with attached quartz was found in fine alluvium beneath coarse surface material.

Cobb, 1973 (B 1374), p. 17 -- Some of data from above. Valley in Jurassic or Cretaceous granitic rocks and a small patch of Tertiary conglomerate. Unknown but probably small amount of gold recovered in 1956-57. Major source of gold was probably small veins in granitic rock; some may have been reconcentrated from Tertiary rocks.

MacKevett and Holloway, 1977 (OF 77-169A), p. 76, loc. 9 -- Reference to Brooks, 1918 (B 662).

(Mt. Estelle) Copper, Gold, Lead

Yentna district Tyonek (0.85-1.2, 14.85-14.95)
MF-285, locs. 1, 2 61°51'N, 152°51'-152°54'W

Summary: Float samples from Mt. Estelle granodiorite-quartz monzonite pluton contain chalcopyrite, malachite, galena, pyrrhotite, arsenopyrite, pyrite, tourmaline, and probably gold. Stream-sediment samples contain above-average concentrations of gold, the other metallic elements to be expected from the minerals identified in rock samples, and antimony.

Reed and Elliott, 1970 (OF 413), p. 15 -- Sediment samples from streams draining Mt. Estelle pluton [from explanation of Pl. 1, Tertiary hornblende-biotite granodiorite and quartz monzonite] contain above-average concentrations of Au, As, Cu, Ag, and, less commonly, Zn, Pb, and B. Samples of mineralized float (mainly quartz vein rock; sheared intrusive rock and quartz-carbonate rock also present) contain significant amounts of Au, Ag, As, Cu, Pb, Sb, and Sn.

p. 21-22, samples E1-E10 -- Boulders and cobbles contain chalcopyrite, malachite, galena, pyrrhotite, arsenopyrite, pyrite, tourmaline and, probably, traces of gold.

MacKevett and Holloway, 1977 (OF 77-169A), p. 76, loc. 1 -- Data from above.

(Mt. Spurr area)

Redoubt district

Monazite

Tyonek
SW 1/4 quad.

Summary: Monazite and zircon in prospector's samples from Mt. Spurr area (no more definite location given).

Bates and Wedow, 1953 (C 202), p. 8 -- Prospector's placer samples contained monazite and zircon. [No location other than Mt. Spurr area given.]
Cobb, 1973 (B 1374), p. 17-18 -- Reference to above.

(Shirley Lake) FM

Yentna district Tyonek (4.9, 17.4) approx.
MF-385, loc. 4 62°00'N, 152°25'W approx.

Summary: Secondary uranium minerals deposited along joints in Tertiary tuff and tuff-breccia. All deposits small and low grade. Some or all of occurrence may be in Talkeetna quad.

Freeman, 1963 (B 1155), p. 29-30 -- Anomalous radioactivity in very small areas in and adjacent to joint surfaces in a unit of indurated tuff and tuff-breccia that appears unmetamorphosed except for the presence of a little epidote. Radioactive rock probably formed by deposition of small amounts of uranium that migrated with subsurface water moving along joints; may have been leached from tuff and then deposited when water evaporated on reaching surface. Exploration limited to a few shallow pits that did not disclose any extension of radioactive rock below surface or away from joints. Maximum amount of radioactivity in Geological Survey samples was 0.021% uranium; prospector reported assay of 0.29% uranium in one sample.

MacKevett and Holloway, 1977 (OF 77-169A), p. 76, loc. 3 -- Reference to above. In terrane largely of upper Mesozoic metasedimentary rocks.

Reed and others, 1978 (MF-870-D), loc. 37 -- Reference to Freeman, 1963 (B 1155). Secondary uranium minerals sporadically localized along joints in Tertiary tuff and tuff-breccia. Claims restaked in 1976.

(Skwentna R.)

Copper, Gold, Lead, Silver

Yentna district
MF-385, loc. 5

Tyonek (5.85, 16.85)
61°58'N, 152°17'W

Summary: Volcanic rocks and slate cut by granitic, dioritic, and syenitic dikes; contact zones and quartz veins contain pyrite, chalcopyrite, galena, gold, and silver. Basic reference published in 1900; no more recent information.

Spurr, 1900, p. 111-112 -- Folded volcanic rocks cut by granitic, dioritic, and syenitic dikes. Rock along contacts between dikes and volcanics decomposed and stained. Narrow quartz veins up to several inches wide very rich in pyrite, chalcopyrite, and galena. Other zones near, but not at, contacts generally follow stratification, are similarly mineralized, and contain gold and silver. A short distance upstream black slate is cut by granitic dikes; quartz veins carry much pyrite and chalcopyrite and some galena.

p. 259 -- Some of data given above are repeated. Assay of sample with pyrite and chalcopyrite showed 0.05 oz. gold and 0.15 oz. silver per ton. Assay of sample of quartz vein showed 0.1 oz. gold and 0.25 oz. silver per ton.

Berg and Cobb, 1967 (B 1246), p. 37 -- Data from above [not specifically cited].

Hawley and Clark, 1973 (P 758-A), p. A6 -- Reference to Spurr, 1900.

MacKevett and Holloway, 1977 (OF 77-169A), p. 76, loc. 4 -- Reference to Spurr, 1900.

(Texas Cr.) Gold

Yentna district Tyonek (15.8, 13.1)
MF-385, loc. 8 61°44'N, 151°06'W

Summary: Colors of fine gold in sediments above blue-clay false bedrock. Low-grade deposit. Some activity in 1933. Includes references to (Beluga Mtn.).

Smith, 1934 (B 864-A), p. 31-32 -- Prospecting, 1933, near Beluga Mtn. Ground difficult to work, gold tenor low, and much of gold very fine. Most of gold probably reconcentrated from glacial deposits; some may have a local bedrock source.

Smith, 1936 (B 868-A), p. 33 -- Work in 1933 failed to find workable ground and was discontinued.

Cobb, 1973 (B 1374), p. 23 -- In 1933 18 claims had been staked. Shallow trench 200 ft. long had reached false bedrock of blue clay; a few colors of fine gold found; grade of deposit low.

MacKevett and Holloway, 1977 (OF 77-169A), p. 76, loc. 8 -- Reference to Cobb, 1973 (B 1374).

Unnamed occurrence	Copper, Lead, Zinc
Yentna district MF-385, loc. 3	Tyonek (0.0, 9.25) 61°32'N, 153°00'W

Summary: Boulder of altered, sheared, fine-grained igneous rock contains small to trace amounts of disseminated pyrite, galena, sphalerite, and arsenopyrite.

Reed and Elliott, 1970 (OF 413), p. 21, sample S30 -- Boulder of altered, sheared, fine-grained igneous rock contains minor disseminated pyrite (2%) and galena (1%-2%), and traces of sphalerite and arsenopyrite.

Unnamed prospect

Molybdenum

Yentna district

Tyonek (8.0, 11.9) approx.
61°41'N, 152°02'W approx.

Summary: Molybdenite-bearing quartz veins in Tertiary granite. Prospect with apparent post-1950 activity.

MacKevett and Holloway, 1977 (OF 77-169A), p. 77, loc. 15 -- Molybdenite-bearing quartz veins in Tertiary granite. Prospect with apparent post-1950 activity.

Unnamed prospect	Molybdenum
Yentna district	Tyonek (7.7, 12.9) approx. 61°44'N, 152°05'W approx.

Summary: Molybdenite-bearing quartz veins in Tertiary granite. Prospect with apparent post-1950 activity.

MacKevett and Holloway, 1977 (OF 77-169A), p. 77, loc. 14 -- Molybdenite-bearing quartz veins in Tertiary granite. Prospect with apparent post-1950 activity.

Unnamed prospect

Yentna district

Molybdenum

Tyonek (7.0, 13.6) approx.
61°46'N, 152°10'W approx.

Summary: Molybdenite-bearing quartz veins mainly in Tertiary granite. Apparent post-1950 activity.

MacKevett and Holloway, 1977 (OF 77-169A), p. 77, loc. 13 -- Molybdenite-bearing quartz veins mainly in Tertiary granite. Prospect with apparent post-1950 activity.

Synonym and Owner

Trachsel -- see (Tuxedni Bay)
(Tustumena Lake) -- see (Indian Cr.)

(Beluga Mtn.) -- see (Texas Cr.)
Bessie -- see (Lewis R.)
(Boulder Bench) -- see (Kahiltna R.)
Daisy -- see (Lewis R.)
Granite -- see (Lewis R.)
(Leslies Bar) -- see (Kahiltna R.)
(Red Hill Bar) -- see (Kahiltna R.)
(Round Bend Bar) -- see (Kahiltna R.)

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