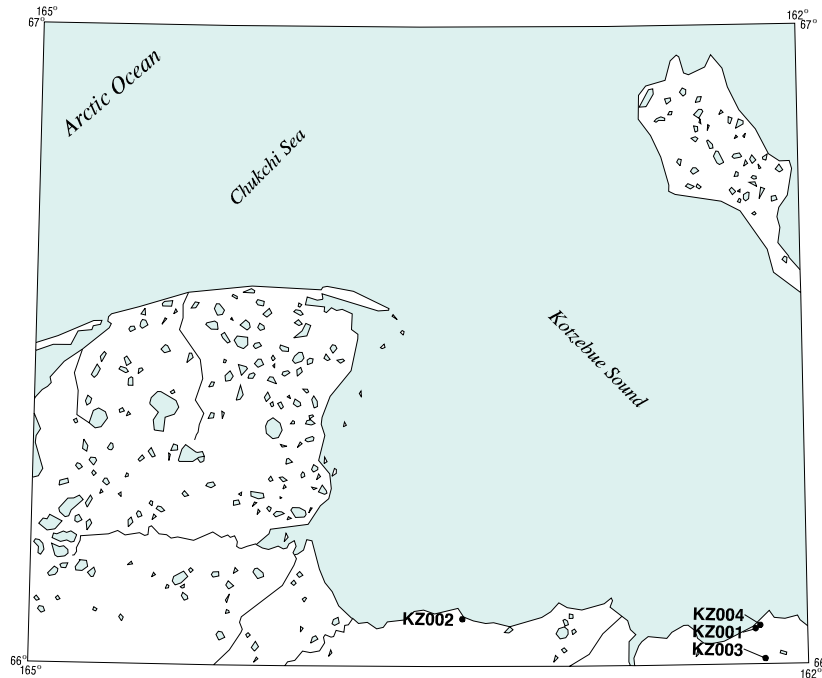


## Kotzebue quadrangle

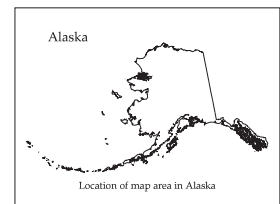
Descriptions of the mineral occurrences shown on the accompanying figure follow. See U.S. Geological Survey (1996) for a description of the information content of each field in the records. The data presented here are maintained as part of a statewide database on mines, prospects and mineral occurrences throughout Alaska.



*Distribution of mineral occurrences in the Kotzebue  
1:250,000-scale quadrangle, northwestern Alaska*

This and related reports are accessible through the USGS World Wide Web site <http://ardf.wr.usgs.gov>. Comments or information regarding corrections or missing data, or requests for digital retrievals should be directed to: Frederic Wilson, USGS, 4200 University Dr., Anchorage, AK 99508-4667, e-mail [fwilson@usgs.gov](mailto:fwilson@usgs.gov), telephone (907) 786-7448. This compilation is authored by:

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*This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards or with the North American Stratigraphic code. Any use of trade, product, or firm names is for descriptive purposes only and does not imply endorsement by the U.S. Government.*

**OPEN-FILE REPORT 99-579**

**Site name(s): Alder Creek**

**Site type:** Mine

**ARDF no.:** KZ001

**Latitude:** 66.056

**Quadrangle:** KZ A-1

**Longitude:** 162.201

**Location description and accuracy:**

The Alder Creek beach placer mine is at the mouth of Alder Creek on Kotzebue Sound. This site is in the NW1/4 of section 35, T. 8 N., R. 17 W., of the Kateel River Meridian.

**Commodities:**

**Main:** Au

**Other:**

**Ore minerals:** Gold

**Gangue minerals:**

**Geologic description:**

The Alder Creek beach placer gold deposit consists of about one foot of beach gravel on eroded, dark gray, schist bedrock of early Paleozoic age. Fine, bright gold and some wire gold was found on the bedrock surface. Beach diggings of limited extent were reported to produce \$8 to \$10 per man in 1901 (Moffit, 1905).

**Alteration:**

**Age of mineralization:**

Quaternary

**Deposit model:**

Placer Au-PGE (Cox and Singer, 1986; model 39a)

**Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):**

39a

**Production Status:** Yes; small

**Site Status:** Inactive

**Workings/exploration:**

Small-scale hand mining took place at the turn of the century and reportedly in 1927. The area was sampled by the U.S. Bureau of Mines in the early 1960's. At that time 7 pan concentrates were taken at the stream mouth.

**Production notes:**

A few hundred ounces of gold was recovered in 1902 and 1903 or about \$12,000 (gold at \$20.67/ounce) (Moffit, 1904). A little gold was reportedly mined from Alder Creek in 1927 (Cobb and Miller, 1981).

**Reserves:****Additional comments:****References:**

Mendenhall, 1902; Moffit, 1904; Moffit, 1905; Smith, 1930; Berryhill, 1962; Cobb, 1972 (MF 421); Cobb, 1973 (B 1374); Cobb, 1975 (OFR 75-627); Hudson and others, 1977; Cobb and Miller, 1981 (OFR 81-847A).

**Primary reference:** Moffit, 1905

**Reporter(s):** Anita Williams (Anchorage, AK)

**Last report date:** 11/30/99

**Site name(s): Rex Point****Site type:** Occurrence**ARDF no.:** KZ002**Latitude:** 66.078**Quadrangle:** KZ A-3**Longitude:** 163.32**Location description and accuracy:**

This beach placer is at the mouth of Rex Canyon on Kotzebue Sound about a mile southeast of Rex Point. This site is in section 21, T. 8 N., R. 22 W., of the Kateel River Meridian. Location is accurate to within 1,000 feet.

**Commodities:****Main:** W**Other:****Ore minerals:** Scheelite**Gangue minerals:****Geologic description:**

Beach sand at the mouth of Rex Creek contains a trace of scheelite, and minor to trace amounts of iron oxide minerals and zircon (Berryhill, 1962).

**Alteration:****Age of mineralization:**

Quaternary

**Deposit model:**

Placer tungsten?

**Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):****Production Status:** Undetermined**Site Status:** Inactive**Workings/exploration:**

The U.S. Bureau of Mines collected 15 pan concentrate samples from the beach at the

mouth of Rex Point (Berryhill, 1962).

**Production notes:**

**Reserves:**

**Additional comments:**

**References:**

Berryhill, 1962; Cobb, 1975 (MR-66); Cobb, 1975 (OFR 75-627).

**Primary reference:** Berryhill, 1962

**Reporter(s):** Anita Williams (Anchorage, AK)

**Last report date:** 11/30/99

**Site name(s): Anugi**

**Site type:** Prospect

**ARDF no.:** KZ003

**Latitude:** 66

**Quadrangle:** KZ A-1

**Longitude:** 162.161

**Location description and accuracy:**

The Anuyi prospect is at an elevation of about 350 feet, approximately 5 1/2 miles south of Motherwood Point. This site is in the SW1/4 of section 13, T. 7 N., R. 17 W., of the Kanteel River Meridian. The main portion of this deposit is located just to the south southwest in the Bendeleben quadrangle.

**Commodities:**

**Main:** Ag, Pb, Zn

**Other:**

**Ore minerals:** Galena, sphalerite

**Gangue minerals:** Calcite, hematite, limonite, quartz

**Geologic description:**

The Anuyi prospect narrow, hematite-rich gossan that trends south-southwest for a distance of approximately 1/2 mile. The gossan is hosted predominately in black, graphitic, quartz-mica schist. Hematite cobbles are common on the surface. Hematite is also found as cement in quartz breccia. The metamorphic bedrock is considered to be early Paleozoic in age and has undergone several periods of deformation. Several rock types are present. They include quartz-mica schist, quartzite, limestone, rhyolite, and possible aplitic dikes. Soil sampling and shallowing trenching indicate that the gossan has weathered in place. Soil samples contain anomalous values of lead, zinc, antimony, arsenic, silver, and occasionally gold. The following sample values are from Williams (1991, 1992). Sample T2-20, taken from Trench 2 across the gossan, contained 14,579 ppm Pb, 737 ppm Zn, 48 ppm Ag and 60 ppm Cu. Rock sample #1328 of gossan material contained 7,264 ppm Pb, 5,243 ppm Zn, 15.6 ppm Ag and 116 ppm Cu. Sample 1374, graphitic, quartz-mica schist, contained 6,469 ppm Pb, 1,597 ppm Zn, 78.2 ppm Ag and 380 ppm Cu. On the basis of soil samples having lead values greater than 500 ppm, the mineralized area extends over 9,000 feet in a south-southwest direction with a width of 500 to 2,000 feet.

The surface distribution of anomalous metal values, suggests that the deposit appears to be structurally controlled along a regional north-northeast trend. Samples from drill core

contain galena and sphalerite in carbonate veins, as disseminations in schist, and as small crystals of sphalerite in open fractures. A sample of black, quartz-mica schist from trench 3 had hematite alteration along small fractures. The model for Anugi is conjectural. It may be a Paleozoic strataform massive sulfide deposit remobilized during Cretaceous intrusion and/or Tertiary volcanism; or, perhaps more likely, a Cretaceous or younger structurally-controlled deposit hosted in Paleozoic rocks.

**Alteration:**

Hematite and limonite

**Age of mineralization:**

Mid-Paleozoic; Cretaceous or younger

**Deposit model:**

A) Paleozoic, stratiform lead-zinc deposit remobilized during Cretaceous or younger tectonic and intrusive events; or B) Cretaceous or younger structurally-controlled veins and disseminations of lead and zinc minerals in Paleozoic bedrock.

**Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):**

**Production Status:** None

**Site Status:** Active?

**Workings/exploration:**

The original discovery was made during a regional stream-sediment sampling program for NANA Regional Corp. Soil sampling has been done on a 500-foot grid over an area of approximately 3 square miles. Some select areas have been sampled on 250- and 100-foot spacing. Soil, rock and pan concentrate samples have also been collected from adjacent areas. Seven trenches were dug with a backhoe and were mapped and sampled at 5-foot intervals. VLF, magnetic and gravity surveys have been run across the deposit in several areas and six core holes were completed in 1994. An airborne magnetic survey of the area was done in 1995 by Kennecott.

**Production notes:****Reserves:****Additional comments:**

The Anugi Prospect is mostly in the Bendeleben quadrangle with the north-northeast portion extending into the Kotzebue quadrangle. Prospect is on NANA-owned lands. The area is underlain by permafrost.

**References:**

Degenhart and Bigelow, 1974; Williams, 1991; Williams, 1992; Ebish and Williams, 1994.

**Primary reference:** This description

**Reporter(s):** Anita Williams (Anchorage, AK)

**Last report date:** 11/30/99



**Site name(s): Eskimo Gulch (near Motherwood Point)**

**Site type:** Mine

**ARDF no.:** KZ004

**Latitude:** 66.061

**Quadrangle:** KZ A-1

**Longitude:** 162.183

**Location description and accuracy:**

The Eskimo Gulch placer mine is approximately 2 miles southwest of Motherwood Point. It is in a steep gully about 0.1 mile inland from Kotzebue Sound. This site is in section 26, T. 8 N., R. 17 W., of the Kateel River Meridian.

**Commodities:**

**Main:** Au

**Other:**

**Ore minerals:** Gold

**Gangue minerals:**

**Geologic description:**

This placer gold deposit consists of stream gravel several feet thick, overlain by 30 to 50 feet of frozen muck. Bedrock in this area is black, quartz-mica schist which forms natural riffles to catch and trap the gold. The deposit is in a narrow gully, locally called Eskimo Gulch (Paul Savok, oral communication, 1989).

**Alteration:**

**Age of mineralization:**

Quaternary

**Deposit model:**

Placer Au-PGE (Cox and Singer, 1986; model 39a)

**Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):**

39a

**Production Status:** Yes; small

**Site Status:** Probably inactive

**Workings/exploration:**

The mine was worked in the early 1950's. No production data are available. Hand work was done on the property occasionally during the 1980's.

**Production notes:****Reserves:****Additional comments:**

The mine is on NANA-owned lands.

**References:**

This description.

**Primary reference:** This description

**Reporter(s):** Anita Williams (Anchorage, AK)

**Last report date:** 11/30/99

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