Alaska Resource Data File, Cordova quadrangle, Alaska

By Steven W. Nelson [1]

Open-File Report 01-110

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[1] Anchorage, Alaska

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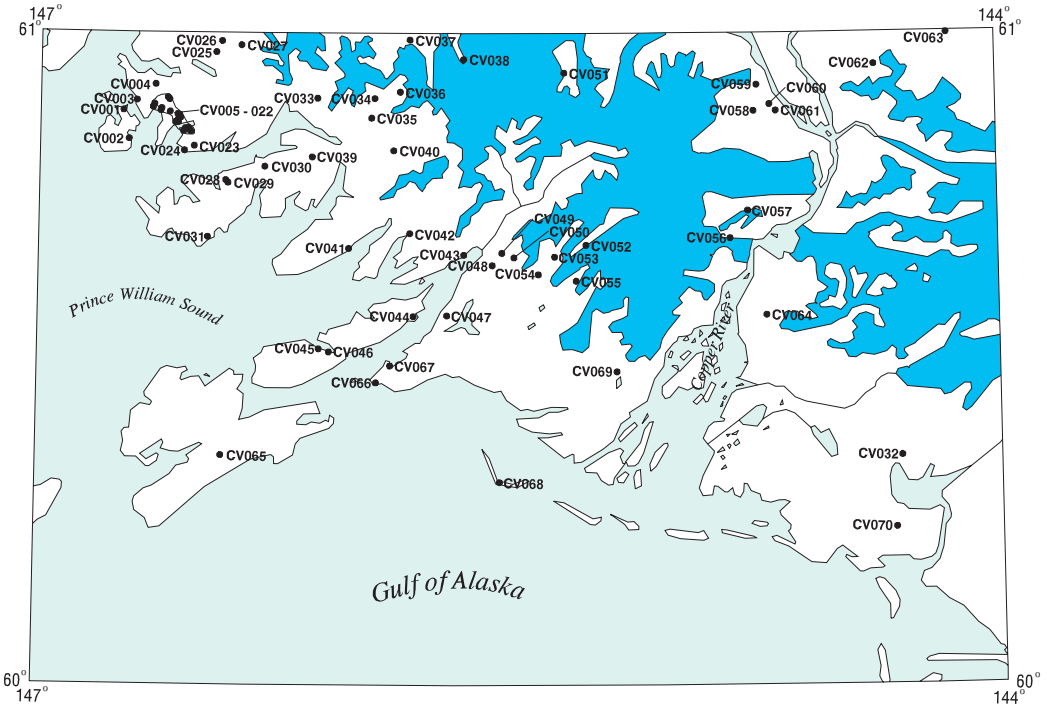
Alaska Resource Data File

Cordova 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 Cordova 1:250,000-scale quadrangle, Alaska

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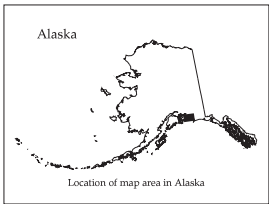

U.S. DEPARTMENT OF THE INTERIOR · MARCH 3, 1849 ·

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OPEN-FILE REPORT 01-110

Site name(s): Bligh Island (Alaska Commercial Co.)

Site type: Prospect

ARDF no.: CV001

Latitude: 60.88 **Quadrangle:** CV D-8

Longitude: 146.74

Location description and accuracy:

This prospect is at sea level near the northeastern end of Bligh Island. It is in the N1/2 sec. 36, T. 11 S., R. 9 W., of the Copper River Meridian. The site is accurately located to within 2000 ft. This prospect is shown as site C-94 in Jansons and other (1984) and as loc. 2 in Cobb (1972: MF-392).

Commodities:

Main: Au

Other:

Ore minerals:

Gangue minerals: Quartz

Geologic description:

The prospect is in volcanic rock of the Tertiary Orca Group (Nelson and other, 1985). Capps and Johnson (1913) describe an auriferous quartz vein in greenstone. In 1915 they reported values of 121 oz Au/ton, but that the prospect was mined out (Capps and Johnson, 1915) and the shaft caved.

Recent sampling of the prospect area yielded values of gold ranging from <0.03 ppm to 0.03 ppm (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rock.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Recent sampling of the prospect area yielded values of gold ranging from <0.03 ppm to 0.03 ppm (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Capps and Johnson, 1913; Capps and Johnson, 1915; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Cobb, 1972 (MF-392)

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Cloudman Bay

Site type: Prospect

ARDF no.: CV002

Latitude: 60.836 **Quadrangle:** CV D-8

Longitude: 146.722

Location description and accuracy:

This prospect is at sea level in the south bight of Cloudman Bay on Bligh Island. It is located in the SW1/4 sec. 7, T. 12 S., R. 8 W., of the Copper River Meridian. The site is accurately located to within 1000 ft. This prospect is shown as site C-93 in Jansons and others (1984) and as loc. 3 in Cobb (1972: MF-392).

Commodities:

Main: Ag, Au

Other:

Ore minerals: Chalcopyrite, pyrite, sphalerite

Gangue minerals: Quartz

Geologic description:

The country rock at this prospect is slate of the Tertiary Orca Group (Nelson and others, 1985). Capps and Johnson (1915) reported a 20-to 30-foot-wide quartz stockwork zone in the slate carrying chalcopyrite, pyrite, and sphalerite.

Capps and Johnson (1913) reported 40 feet of stripping at the site. Samples across a 30 foot width of stockwork ran a few dollars/ton when gold was $20/oz. (Capps and Johnson, 1915). Site could not be located in the early 1980s (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Capps and Johnson (1913) reported 40 feet of stripping at the site. Samples across a 30 foot width of stockwork ran a few dollars/ton when gold was $20/oz. (Capps and Johnson, 1915). Site could not be located in the early 1980s (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Capps and Johnson, 1913; Capps and Johnson, 1915; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Cobb, 1972 (MF392)

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Ellamar; Gladhaugh

Site type: Mine

ARDF no.: CV003

Latitude: 60.8956 **Quadrangle:** CV D-8

Longitude: 146.6985

Location description and accuracy:

The Ellamar mine is at and below sea level at the Ellamar townsite in Virgin Bay. It is in the SW1/4 sec. 19, T. 11 S., R 8 W., of the Copper River Meridian. The location is accurate to within 100 ft. This prospect is shown as #4 in Cobb (1972: MF-392) and as C-91 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other: Ag, Au

Ore minerals: Bornite, chalcopyrite, cubanite, galena, pyrite, pyrrhotite, sphalerite

Gangue minerals: Calcite, epidote, quartz

Geologic description:

The country rocks at the Ellamar mine are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit is associated with pillow basalt and a diabase dike, and consists of steeply-pitching stratabound lenticular sulfide ore bodies in folded and sheared graywacke and slate (argillite). The ore bodies consist chiefly of masses of pyrite, pyrrhotite, chalcopyrite, cubanite, bornite and sphalerite that form lenses up to 240 ft. wide and 500 ft. long. Gangue minerals are calcite, epidote, and quartz. One 35-foot-thick lens of pyrite overlies and is parallel to lenses of other sulfides (Moffit, 1954).

Three core holes were drilled in 1955-1956. Hole no. 2 cut 10 ft. of ore containing 0.02% Cu, 0.02 oz. Au/ton, and 0.02 oz. Ag/ton; hole no. 3 cut 28 ft. of pyrite which contained 0.5% Cu, 0.085 oz. Au/ton, and 0.75 oz. Ag/ton (Jansons and others, 1984). Jansons and others (1984) sampled the property in the 1980s. A chip sample assayed 5.4% Cu, and 0.10 oz. Au/ton. A grab sample from the dump contained 50 ppm Cu, 0.006 oz. Au/ton, and 0.2 oz. Ag/ton.

Alteration:

Age of mineralization:

Early Tertiary based on the age of the host rocks.

Deposit model:
Besshi massive sulfide (Cox and Singer, 1986; model 24b)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24b

Production Status: Yes; medium

Site Status: Inactive

Workings/exploration:
The Ellamar mine was developed by about 9300 feet of underground workings on eight levels, with connecting stopes between the levels. It was mined from about 1897 to 1920 when the workings flooded. Three core holes were drilled in 1955-1956. Hole no. 2 cut 10 ft. of ore containing 0.02% Cu, 0.02 oz. Au/ton, and 0.02 oz. Ag/ton; hole no. 3 cut 28 ft. of pyrite which contained 0.5% Cu, 0.085 oz. Au/ton, and 0.75 oz. Ag/ton (Jansons and others, 1984). Jansons and others (1984) sampled the property in the 1980s. A chip sample assayed 5.4% Cu, and 0.10 oz. Au/ton. A grab sample from the dump contained 50 ppm Cu, 0.006 oz. Au/ton and 0.2 oz. Ag/ton.

Production notes:
15,761,337 lbs. Cu, 51,305 oz. Au, and 191,615 oz. Ag were recoverd from 301,835 tons of ore (Jansons and others, 1984).

Reserves:
Indicated **Reserves:** 36,000 tons @ 2% Cu, 0.1 oz. Au/ton, and 0.5 oz. Ag/ton. Inferred **Reserves:** 500,000 tons @ 0.5% Cu, 0.085 oz. Au/ton, and 0.75 oz. Ag/ton (Jansons and others, 1984).

Additional comments:
Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Moffit, 1954; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): McNaughton and Turner

Site type: Prospect

ARDF no.: CV004

Latitude: 60.92 **Quadrangle:** CV D-8

Longitude: 146.64

Location description and accuracy:

This prospect is at the 500 foot elevation about 0.5 mile west of Turner Lake. It is in the E1/2 sec. 16, T. 11 S., R 8 W., of the Copper River Meridian. The location is accurate to within 2000 ft. This prospect is shown as #5 in Cobb (1972: MF-392) and as C-90 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other:

Ore minerals: Chalcopyrite, malachite, sphalerite

Gangue minerals: Quartz

Geologic description:

The country rocks at this prospect are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of lenses of quartz, chalcopyrite, malachite, and sphalerite in a shear zone in graywacke near the contact of mafic volcanic rock (Cobb, 1979: OFR 79-973).

Alteration:

Local oxidation of sulfides.

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

One 70 foot tunnel reported by Cobb (1979: OFR 79-973) that could not be located in the early 1980s (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Cobb, 1972 (MF-392); Cobb, 1979 (OFR 79-973); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Cobb, 1979 (OFR 79-973)

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Wagner

Site type: Prospect

ARDF no.: CV005

Latitude: 60.8899 **Quadrangle:** CV D-8

Longitude: 146.6434

Location description and accuracy:

The adit of the Wagner prospect is at the 300 foot elevation on the west side of Boulder Bay. The site is in the NE1/4 sec. 28, T. 11 S., R 8 W., of the Copper River Meridian. The location is accurate to within 500 ft. This prospect is shown as #6 in Cobb (1972: MF-392) and as C-89 in Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals: Chalcopyrite

Gangue minerals: Quartz

Geologic description:

The country rocks at this prospect are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of quartz-chalcopyrite lenses in a shear zone in graywacke (Cobb, 1979: OFR 79-973).

Workings visible in the 1980s consisted of one caved adit (Jansons and others, 1984), originally reported to be 285 feet long (Cobb, 1979: OFR 79-973). A selected grab sample from the dump contained 39 ppm Cu (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

Workings visible in the 1980s consisted of one caved adit (Jansons and others, 1984), originally reported to be 285 feet long (Cobb, 1979: OFR 79-973). A selected grab sample from the dump contained 39 ppm Cu (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

This site is shown as a 'mine' on the map. Since there was no production from this deposit it is designated herein as a 'prospect.'

References:

Capps and Johnson, 1915; Cobb, 1972 (MF-392); Cobb, 1979 (OFR 79-973); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Rua

Site type: Prospect

ARDF no.: CV006

Latitude: 60.8839 **Quadrangle:** CV D-8

Longitude: 146.6437

Location description and accuracy:

The map site of this prospect is at the position of the main tunnel, which is at the 500 foot elevation on the west side of Boulder Bay. The site is in the SE1/4 sec. 28, T. 11 S., R 8 W., of the Copper River Meridian. The location is accurate to within 500 ft. This prospect is shown as #6 in Cobb (1972: MF-392) and as C-88 in Jansons and others (1984).

Note: This site is different from the Rua Cove prospect on Knight Island in Prince William Sound.

Commodities:

Main: Cu, Zn

Other:

Ore minerals: Pyrite, pyrrhotite

Gangue minerals:

Geologic description:

The country rocks at this prospect are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of lenses of pyrite and pyrrhotite in a shear zone in mafic volcanic rocks (Jansons and others, 1984).

This prospect was explored in the early 1900s by a 60-foot-long adit. Cobb (1979: OFR 79-973) reports some 'sacks of ore on beach.' One chip sample contained 900 ppm Cu and 0.19% Zn (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: None

Site Status: Inactive

Workings/exploration:
This prospect was explored in the early 1900s by a 60-foot-long adit. Cobb (1979: OFR 79-973) reports some 'sacks of ore on beach.' One chip sample contained 900 ppm Cu and 0.19% Zn (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:
Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

This site is shown as a 'mine' on the map. Since there was no production from this deposit it is designated herein as a 'prospect'.

References:
Cobb, 1972 (MF-392); Cobb, 1979 (OFR 79-973); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Reynolds-Alaska Development Co.

Site type: Mine

ARDF no.: CV007

Latitude: 60.883 **Quadrangle:** CV D-8

Longitude: 146.628

Location description and accuracy:

The map site of this mine is at the position of the main tunnel, which is at sea level on the east side of Boulder Bay. The site is in the S1/2 sec. 27, T. 11 S., R 8 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This mine is shown as #7 in Cobb (1972: MF-392) and as C-87 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other: Ag

Ore minerals: Chalcopyrite, pyrrhotite, sphalerite

Gangue minerals:

Geologic description:

The country rocks at this mine are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of massive sulfide lenses, and sulfide veins, disseminations, and thin selvages in shear zones (Jansons and others,1984). The sulfide minerals are chalcopyrite, pyrrhotite, and sphalerite. The ore minerals are restricted to north-trending and steeply-dipping shears at the contact of volcanic and sedimentary rock.

Grant and Higgins (1909) report that some large beach boulders were shipped as ore. Chip samples collected in the 1980s contained 0.6 to 1.7% Cu, 225 ppm to 0.61% Zn, and 2.4 ppm to 8.9 ppm Ag; grab samples contained 60 ppm to 6% Cu, 67 ppm to 1.7% Zn, and 1.1 ppm to 13 ppm Ag (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:
The mine was developed in the early 1900s by 2100 feet of drifts (main tunnel), numerous crosscuts, winzes and raises, and at least 500 ft. of additional tunnels (Capps and Johnson, 1915). One 200 ft. tunnel was caved by the early 1980s (Jansons and others, 1984). Grant and Higgins (1909) report that some large beach boulders were shipped as ore. Chip samples collected in the 1980s contained 0.6 to 1.7% Cu, 225 ppm to 0.61% Zn, and 2.4 ppm to 8.9 ppm Ag; grab samples contained 60 ppm to 6% Cu, 67 ppm to 1.7% Zn, and 1.1 ppm to 13 ppm Ag (Jansons and others, 1984).

Production notes:
215,000 lbs. Cu were recoverd from 2,850 tons of ore (Jansons and others, 1984).

Reserves:
Inferred reserves of 600 tons @ 1.37% Cu, 0.28% Zn, and 6.67 ppm Ag (Jansons and others, 1984).

Additional comments:
Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Grant and Higgins, 1909; Capps and Johnson, 1915; Cobb, 1972 (MF-392);
Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Fielder and Hemple

Site type: Prospect

ARDF no.: CV008

Latitude: 60.88 **Quadrangle:** CV D-7

Longitude: 146.624

Location description and accuracy:

This prospect is at an elevation of about 200 feet approximately one mile NW of Bells Butte in the S1/2 sec. 27, T. 11 S., R. 8 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This prospect is shown as C-86 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other:

Ore minerals: Chalcopyrite, pyrite, pyrrhotite

Gangue minerals: Quartz

Geologic description:

The country rocks at this prospect are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of irregular masses of quartz, chalcopyrite, pyrite, and pyrrhotite in a 30-foot-wide shear zone cutting mafic volcanic rocks (Jansons and others, 1984).

The prospect was explored by two adits. One is 250 ft. long and the other is 20 ft. long. Five grab and two chip samples contained 50 ppm to 0.5% Cu and 440 ppm to 0.1% Zn (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

The prospect was explored by two adits. One is 250 ft. long and the other is 20 ft. long. Five grab and two chip samples contained 50 ppm to 0.5% Cu and 440 ppm to 0.1% Zn (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Mogul (Banta and Cameron)

Site type: Prospect

ARDF no.: CV009

Latitude: 60.9 **Quadrangle:** CV D-7

Longitude: 146.601

Location description and accuracy:

This prospect is at an elevation of about 1800 feet on the west side of Vesuvius Valley, approximately one mile west-southwest of Millard Lake. It is in W1/2 sec. 23, T. 11 S., R. 8 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This prospect is shown as #8 in Cobb (1972: MF-392) and as C-85 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other:

Ore minerals: Chalcopyrite, pyrite, pyrrhotite, sphalerite

Gangue minerals:

Geologic description:

The country rocks at these prospects are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of irregular masses of chalcopyrite, pyrite, pyrrhotite, and sphalerite in a shear zone up to four feet wide in mafic volcanic rocks (Jansons and others, 1984).

The prospect was explored by a 13-foot shaft and several surface excavations. Six chip samples contained 620 ppm to 0.37% Cu (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

The prospect was explored by a 13-foot shaft and several surface excavations. Six chip samples contained 620 ppm to 0.37% Cu (Jansons and others, 1984).

Production notes:

Reserves:

Inferred reserves of 400 tons @ 0.25% Cu (Jansons and others, 1984).

Additional comments:

Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Copper Mountain

Site type: Prospect

ARDF no.: CV010

Latitude: 60.897 **Quadrangle:** D-7

Longitude: 146.596

Location description and accuracy:

This prospect is at an elevation of about 1500 feet on the west side of Vesuvius Valley, approximately one mile southwest of Millard Lake. It is in S1/2 sec. 23, T. 11 S., R. 8 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This prospect is shown as C-84 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other: Ag, Co

Ore minerals: Chalcopyrite

Gangue minerals: Quartz

Geologic description:

The country rocks at this prospect are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of quartz and chalcopyrite in a 6-inch-wide shear zone cutting mafic volcanic rock (Jansons and others, 1984).

One 20-foot adit was sampled in the early 1980s (Jansons and others, 1984). A chip sample contained 1.87% Cu, 800 ppm Zn, and 10.9 ppm Ag; one grab sample contained 11.7% Cu, 0.35% Zn, 43.5 ppm Ag, and 770 ppm Co.

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

One 20-foot adit was sampled in the early 1980s (Jansons and others, 1984). A chip sample contained 1.87% Cu, 800 ppm Zn, and 10.9 ppm Ag; one grab sample contained 11.7% Cu, 0.35% Zn, 43.5 ppm Ag, and 770 ppm Co.

Production notes:

Reserves:

Inferred reserves of 300 tons @ 1.87% Cu (Jansons and others, 1984).

Additional comments:

Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Galena Bay Mining Co. (Vesuvius Valley)

Site type: Prospects

ARDF no.: CV011

Latitude: 60.878 **Quadrangle:** CV D-7

Longitude: 146.594

Location description and accuracy:

This site represents several prospects in a roughly circular, half-mile-square, area at about 2000 feet elevation on the northeast face of Bells Butte. The area is in the N1/2 secs. 26 and 35, T. 11 S., R. 8 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This area of prospects is shown in Cobb (1972: MF-392) as sites #9 and #10; in Jansons and others it is shown as site C-83.

Commodities:

Main: Cu, Zn

Other: Ag, Au

Ore minerals: Chalcopyrite, pyrite, pyrrhotite, sphalerite

Gangue minerals: Calcite, quartz

Geologic description:

The country rocks at these prospects are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of shear-zone-hosted masses of calcite, quartz, chalcopyrite, pyrite, pyrrhotite, and sphalerite. Capps and Johnson (1915) reported that most of the ore was found in numerous 1- to 20-ft.-wide shear zones in pillow basalt (greenstone). The shear zone containing most of the early workings is 1000 ft. long.

Jansons and others (1984) collected chip samples that contained 58 ppm to 13% Cu, 46 ppm to 2% Zn, and <0.1 ppm to 32.8 ppm Ag; their grab samples contained 80 ppm to 6.1% Cu, 790 ppm to 20.1% Zn, and 1.1 ppm to 20 ppm Ag. Small amounts of gold were reported in earlier assays (Capps and Johnson, 1915).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: None

Site Status: Inactive

Workings/exploration:
Capps and Johnson (1915) reported nine adits with a total of about 3000 ft. of underground workings, and some open cuts and buildings. The longest (2200 ft) adit was caved by the early 1980s (Jansons and others, 1984). Jansons and others (1984) collected chip samples that contained 58 ppm to 13% Cu, 46 ppm to 2% Zn, and <0.1 ppm to 32.8 ppm Ag; their grab samples contained 80 ppm to 6.1% Cu, 790 ppm to 20.1% Zn, and 1.1 ppm to 20 ppm Ag. Small amounts of gold were reported in earlier assays (Capps and Johnson, 1915).

Production notes:

Reserves:
Inferred reserves of 5,800 tons @ 7.9% Cu, 1.3% Zn, and 5 ppm Ag (Jansons and others, 1984).

Additional comments:
Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Capps and Johnson, 1915; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Threeman Mining Co.

Site type: Prospect

ARDF no.: CV012

Latitude: 60.874 **Quadrangle:** CV D-7

Longitude: 146.57

Location description and accuracy:

This prospect is at an elevation of about 1600 ft., approximately 0.75 mi. northeast of Copper Mountain. It is in S1/2 sec. 36, T. 11 S., R. 8 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This site is shown as C-82 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other: Ag

Ore minerals: Chalcopyrite, pyrrhotite

Gangue minerals:

Geologic description:

The country rocks at this prospect are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of up to foot-thick lenses of chalcopyrite and pyrrhotite
in two-foot- to 15-foot-wide shear zones.

Three chip samples contained 200 ppm to 1% Cu, 145 ppm to 0.89% Zn, and <0.2 to 6 ppm Ag; a grab sample from the dump contained 4.9% Cu, 0.49% Zn, and 50 ppm Ag (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

One 41-foot-long adit. Three chip samples contained 200 ppm to 1% Cu, 145 ppm to 0.89% Zn, and <0.2 to 6 ppm Ag; a grab sample from the dump contained 4.9% Cu, 0.49% Zn, and 50 ppm Ag (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Tibbit

Site type: Prospect

ARDF no.: CV013

Latitude: 60.873 **Quadrangle:** CV D-7

Longitude: 146.564

Location description and accuracy:

The Tibbit prospect is at an elevation of about 1600 ft., approximately 0.75 mi. northeast of Copper Mountain. It is in S1/2 sec. 36, T. 11 S., R. 8 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This prospect is shown as #11 in Cobb (1972: MF-392) and as C-81 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other: Ag, Au

Ore minerals: Chalcopyrite, pyrite, pyrrhotite

Gangue minerals:

Geologic description:

The country rocks at this prospect are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of chalcopyrite, pyrite, and pyrrhotite in one- to eight- foot wide shear zones (Cobb, 1979: MF-392).

Jansons and others (1984) report that two grab samples contained 0.59% and 2% Cu, and 1.8 ppm and 6.4 ppm Ag; two chip samples contained 430 ppm and 0.93% Cu, 240 ppm and 0.13% Zn, and 3.4 ppm and 12.7 ppm Ag. Cobb (1979: OFR 79-973) reported one assay value of 1.9 oz Au/ton.

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

The deposit was explored in the early 1900s by four adits and by open cuts (Cobb, 1979: MF-392). However, in the 1980s only one 20 ft. adit could be found (Jansons and others, 1984). Jansons and others (1984) report that two grab samples contained 0.59% and 2% Cu, and 1.8 ppm and 6.4 ppm Ag, and that two chip samples contained 430 ppm and 0.93% Cu, 240 ppm and 0.13% Zn, and 3.4 ppm and 12.7 ppm Ag. Cobb (1979: OFR 79-973) reported one assay value of 1.9 oz Au/ton.

Production notes:

Reserves:

Inferred reserves of 500 tons @ 0.72% Cu.

Additional comments:

Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Cobb, 1972 (MF-392); Cobb, 1979 (OFR 79-973); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Reynolds-Alaska Development Co.

Site type: Prospect

ARDF no.: CV014

Latitude: 60.869 **Quadrangle:** CV D-7

Longitude: 146.561

Location description and accuracy:

This prospect is at an elevation of about 1700 feet, approximately 0.75 mile northeast of Copper Mountain. It is in S1/2 sec. 36, T. 11 S., R. 8 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This prospect is shown as #12 in Cobb (1972: MF-392) and as C-79 in Jansons and others (1984).

Commodities:

Main: Cu

Other: Ag, Zn

Ore minerals: Chalcopyrite, pyrrhotite, sphalerite

Gangue minerals: Calcite, quartz

Geologic description:

The country rocks at this prospect are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of chalcopyrite, pyrrhotite, and sphalerite in a 1-to 20- foot-wide shear zone in volcanic rocks (Capps and Johnson, 1915).

Capps and Johnson (1915) reported assays of 11.4 to 12.5% Cu and 0.18 oz Au and 0.26 oz Ag per ton. Later development included four adits with about 820 ft. of underground workings and some open cuts. Three of the adits are caved or flooded (Jansons and others, 1984). Chip samples from the open cuts contained 0.18% to 8.4% Cu, 170 ppm to 0.25% Zn, and 0.8 ppm to 28 ppm Ag (Jansons and other, 1984). Grab samples gave the following values: 100 ppm to 9.75% Cu, 100 ppm to 1.05% Zn, and 0.8 ppm to 9.5 ppm Ag.

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: None

Site Status: Inactive

Workings/exploration:
Site was discovered in 1899 and by 1912 there were 900 feet of underground workings. Capps and Johnson (1915) reported assays of 11.4 to 12.5 % Cu; and 0.18 oz Au and 0.26 oz Ag per ton. Later development included four adits with about 820 ft. of underground workings and some open cuts. Three of the adits are caved or flooded (Jansons and others, 1984). Chip samples from the open cuts contained 0.18% to 8.4% Cu, 170 ppm to 0.25% Zn, and 0.8 ppm to 28 ppm Ag (Jansons and other, 1984); Grab samples gave the following values: 100 ppm to 9.75% Cu, 100 ppm to 1.05% Zn, and 0.8 ppm to 9.5 ppm Ag.

Production notes:

Reserves:
Inferred reserves of 3000 tons @ 4.6% Cu, 0.14% Zn, and 15.65% Ag (Jansons and others, 1984).

Additional comments:
Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Capps and Johnson, 1915; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Falck

Site type: Prospect

ARDF no.: CV015

Latitude: 60.866 **Quadrangle:** CV D-7

Longitude: 146.569

Location description and accuracy:

The Falck prospect is at an elevaation of about 2400 ft., about 0.5 mile east of Copper Mountain. It is in S1/2 sec. 36, T. 11 S., R. 8 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This prospect is shown as #12 in Cobb (1972: MF-392) and as C-78 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other: Ag

Ore minerals: Chalcopyrite, native Cu, pyrite, pyrrhotite, sphalerite

Gangue minerals: Calcite, quartz

Geologic description:

The country rocks at this prospect are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of sulfide minerals and native copper in veinlets and as disseminations in a northwest-striking, steeply-dipping shear zone in the volcanic and sedimentary rocks (Capps and Johnson, 1915). The sulfides are chalcopyrite, pyrite, pyrrhotite, and sphalerite.

Analyses of chip samples contained 0.11% to 7.5% Cu, 240 ppm to 0.68% Zn, and 0.7 ppm to 18.3 ppm Ag (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

Capps and Johnson (1915) report a 25 ft. adit and a 15 ft. adit, along with minor surface cuts. In the 1980s only the 25 ft. adit was still accessible (Jansons and others, 1984). Analyses of chip samples contained 0.11% to 7.5% Cu, 240 ppm to 0.68% Zn, and 0.7 ppm to 18.3 ppm Ag (Jansons and others, 1984).

Production notes:

Reserves:

Inferred reserves of 200 tons @ 2.03% Cu, 0.23% Zn, 13 ppm Ag (Jansons and others, 1984).

Additional comments:

Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Capps and Johnson, 1915; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Standard Copper Mines Co.

Site type: Mine

ARDF no.: CV016

Latitude: 60.862 **Quadrangle:** CV D-7

Longitude: 146.577

Location description and accuracy:

This mine is at an elevation of about 1800 feet, about 0.5 mile southeast of Copper Mountain. It is in the NW1/4 sec. 1, T. 12 S., R. 8 W., of the Copper River Meridian. The location of the site is accurate to within 1000 ft. This site is loc. 13 in Cobb (1972: MF-392) and loc. C-77 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other: Ag, Au

Ore minerals: Chalcopyrite, pyrite, pyrrhotite, sphalerite

Gangue minerals: Quartz, calcite

Geologic description:

The country rocks at this mine are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of quartz, calcite, and massive sulfides in shear zones cutting the volcanic rocks. A 6 ft. x 32 ft. lens of massive sulfide was observed by Mihelich and Wells (1957), but most of the sulfide bodies are smaller (Jansons and others, 1984). The sulfide minerals are chalcopyrite, pyrite, pyrrhotite, and sphalerite.

Chip samples collected in 1955 (Mihelich and Wells,1957) contained 0.07% to 6.1% Cu. Jansons and others (1984) report that three chip samples from the 660-ft.-long adit contained 280 ppm to 0.89% Cu, 200 ppm to 0.9% Zn, 0.01 ppm to 0.11 ppm Au, and 0.5 ppm to 2.5 ppm Ag. Three grab samples from the adit contained 0.70% to 2% Cu, 200 ppm to 2% Zn, 0.08 ppm to 0.19 ppm Au, and 2.3 ppm to 6.1 ppm Ag.

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: Yes

Site Status: Inactive

Workings/exploration:
Grant and Higgins (1909) report five adits on the steep slopes of Copper Mountain and a tram to an ore bunker on the shore of Landlocked Bay. Only three of the adits could be located in the 1980s (Jansons and others, 1984). Chip samples collected in 1955 (Mihelich and Wells,1957) contained 0.07% to 6.1% Cu. Jansons and others (1984) report that three chip samples from the 660-ft.-long adit contained 280 ppm to 0.89% Cu, 200 ppm to 0.9% Zn, 0.01 ppm to 0.11 ppm Au, and 0.5 ppm to 2.5 ppm Ag. Three grab samples from the adit contained 0.70% to 2% Cu, 200 ppm to 2% Zn, 0.08 ppm to 0.19 ppm Au, and 2.3 ppm to 6.1 ppm Ag.

Production notes:
32,000 lbs. Cu, 518 oz. Ag, and 36 oz. Au were recovered from 1,100 tons of ore. However, it is felt that not all the recovered gold and silver were reported (Mihelich and Wells, 1957).

Reserves:
Inferred reserves of 4,300 tons @ 2.89% Cu (Jansons and others, 1984).

Additional comments:
Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Grant and Higgins, 1909; Mihelich and Wells, 1957; Cobb, 1972 (MF-392);
Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Montezuma (Threeman Mining Co.)

Site type: Prospect

ARDF no.: CV017

Latitude: 60.862 **Quadrangle:** CV D-7

Longitude: 146.568

Location description and accuracy:

The Montezuma prospect is at an elevation of about 1500 feet, about 0.5 mile southeast of Copper Mountain. It is in the N1/2 sec. 1, T. 12 S., R. 8 W., of the Copper River Meridian. The site location is accurate to within 1000 ft. This prospect is shown as site C-76 in Jansons and others (1984) and as site #13 in Cobb (1972: MF-392).

Commodities:

Main: Cu

Other: Ag, Au

Ore minerals: Chalcopyrite, pyrite, pyrrhotite

Gangue minerals: Quartz

Geologic description:

The country rocks at this prospect are mafic volcanic rocks and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of irregular lenses of quartz, chalcopyrite, pyrite, and pyrrhotite in several highly mineralized shear zones in the volcanic rocks (Mihelich and Wells, 1957).

A sample from a quartz-filled shear zone one foot wide in volcanic rocks contained 0.5% Cu, 0.08 oz. Ag/ton, and 0.18 oz. Au/ton (Mihelich and Wells, 1957). Jansons and others (1984) report that chip samples contained 0.74% to 3.2% Cu, 3.2 ppm to 20 ppm Ag, and grab samples contained 125 ppm to 0.75% Cu, and 0.92 ppm to 10 ppm Ag.

Alteration:

Age of mineralization:

Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

Mihelich and Wells (1957) report more than 300 feet of underground workings and 900 feet of surface stripping. A sample from a quartz-filled shear zone one foot wide in volcanic rocks contained 0.5% Cu, 0.08 oz. Ag/ton, and 0.18 oz. Au/ton (Mihelich and Wells, 1957). Jansons and others (1984) report that chip samples contained 0.74% to 3.2% Cu, 3.2 ppm to 20 ppm Ag, and grab samples contained 125 ppm to 0.75% Cu, and 0.92 ppm to 10 ppm Ag.

Production notes:

Reserves:

Inferred reserves of 200 tons @ 1.67% Cu and 9.88 ppm Ag (Jansons and others, 1984).

Additional comments:

Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Mihelich and Wells, 1957; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Alaska-Pioneer-Sourdough, Steinmetz, and Alaska Commercial Co.

Site type: Mine and prospect

ARDF no.: CV018

Latitude: 60.855 **Quadrangle:** CV D-7

Longitude: 146.543

Location description and accuracy:

This site represents a mine and several prospects on the north side of inner Landlocked Bay. The map site is at an elevation of about 500 feet on a south-facing bluff above the bay. It is in the SW1/4 sec. 6, T. 12 S., R. 7 W., of the Copper River Meridian. The site is accurately located to within 1000 ft. This location is a combination of sites C-72, C-75, and C-80 of Jansons and others (1984), and site #14 of Cobb (1972: MF-392).

Commodities:

Main: Cu, Pb, Zn

Other: Ag, Au

Ore minerals: Arsenopyrite, bornite, chalcopyrite, marcasite, pyrite, specularite

Gangue minerals: Quartz

Geologic description:

The mineral deposits at this site are in sheared mafic volcanic rocks of the Tertiary Orca Group (Nelson and others, 1985). They consist of 2-inch- to 4-ft.-wide lenses of massive sulfide accompanied by quartz gangue. Metalliferous minerals include arsenopyrite, bornite, chalcopyrite, marcasite, pyrite, and specularite.

Early copper values reportedly were 11.4% to 12.5% Cu (Grant, 1906). Jansons and others (1984) report that a grab sample from the area contained 7.9% Cu. Chip samples contained 0.2%-3.9% Cu, along with a trace to 0.11 oz Au/ton.

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rock.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:
The first discovery of copper (1897) in Prince William Sound was made in this area (Schrader, 1900). Capps and Johnson (1915) reported several adits, open cuts and a shaft. Early copper values reportedly were 11.4% to 12.5% Cu (Grant, 1906). Jansons and others (1984) report that a grab sample from the area contained 7.9% Cu. Chip samples contained 0.2%-3.9% Cu, along with a trace to 0.11 oz Au/ton.

Production notes:
720 lbs. copper from 70 tons of ore shipped in 1905 (Grant, 1906).

Reserves:
500 tons @ 2.27% Cu inferred reserves (Jansons and others, 1984).

Additional comments:
Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Schrader, 1900; Grant, 1906; Capps and Johnson, 1915; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Fielder & Hemple

Site type: Prospect

ARDF no.: CV019

Latitude: 60.858 **Quadrangle:** CV D-7

Longitude: 146.54

Location description and accuracy:

This prospect is at an elevation of about 700 ft. on the north side of inner Landlocked Bay, and about 0.5 mile north of VABM Dick. It is in the W1/2 sec. 6, T. 12 S., R. 7 W., of the Copper River Meridian. The site location is accurate to within 1000 ft. This location corresponds to site C-74 in Jansons and other (1984) and to #14 in Cobb (1972: MF-392).

Commodities:

Main: Cu, Zn

Other: Ag, Au

Ore minerals: Chalcopyrite, pyrite, pyrrhotite

Gangue minerals: Quartz

Geologic description:

The deposit at this prospect is in mafic volcanic and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). It consists of a 24-foot-wide shear zone in pillow basalts and slates that contains small masses of sulfides and quartz as well as sulfide-rich stringers. The zone is traceable for at least 1,500 feet along strike (Capps and Johnson, 1913). The sulfide minerals are chalcopyrite, pyrite, and pyrrhotite.

Sampling by Mihelich and Wells (1957) gave the following results: five chip samples from the 1200 ft. adit contained <0.1% to 1.1% Cu, <0.1 to 1.3% Zn, trace to 0.32 oz. Au/ton, and 0.02 to 0.32 oz.Ag/ton. Sampling by Jansons and others (1984) gave the following results: five chip samples contained 0.19% to 2.6% Cu, 800 ppm to 0.7% Zn, 2.6 ppm to 3.7 ppm Ag, and <0.03 ppm to 0.12 ppm Au. Selected grab samples contained 4.5% and 4.6% Cu, 1.7% and 1.8% Zn, 4.1 ppm and 13 ppm Ag, and 0.06 ppm and 3.1 ppm Au.

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:
Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:
Capps and Johnson (1913) reported four adits having the following lengths: 1200 ft., 250 ft., 65 ft., and 18 ft. There were also minor surface workings. Only two adits could be found during later exploration (Jansons and others, 1984). Sampling by Mihelich and Wells (1957) gave the following results: five chip samples from the 1200 ft. adit contained <0.1% to 1.1% Cu, <0.1 to 1.3% Zn, trace to 0.32 oz. Au/ton, and 0.02 to 0.32 oz. Ag/ton. Sampling by Jansons and others (1984) gave the following results: five chip samples contained 0.19% to 2.6% Cu, 800 ppm to 0.7% Zn, 2.6 ppm to 3.7 ppm Ag, and <0.03 ppm to 0.12 ppm Au. Selected grab samples contained 4.5% and 4.6% Cu, 1.7% and 1.8% Zn, 4.1 ppm and 13 ppm Ag, and 0.06 ppm and 3.1 ppm Au.

Production notes:

Reserves:
Inferred reserves (Mihelich and Wells, 1957) are 6,300 tons @ 1.3% Cu.

Additional comments:
Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Capps and Johnson, 1913; Mihelich and Wells, 1957; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Threeman (Standard Copper)

Site type: Mine

ARDF no.: CV020

Latitude: 60.855 **Quadrangle:** CV D-7

Longitude: 146.537

Location description and accuracy:

The mine is at an elevation of about 300 feet above the north shore of inner Landlocked Bay, and about 0.25 mile north-northeast of VABM Dick. It is in the S1/2 sec. 6, T. 12 S., R. 7 W., of the Copper River Meridian. The site location is accurate to within 1000 ft. The location corresponds to site C-73 in Jansons and others (1984) and to #14 in Cobb (1972: MF-392).

Commodities:

Main: Cu, Zn

Other: Ag, Au, Co

Ore minerals: Chalcopyrite, cubanite, galena, pyrite, pyrrhotite, sphalerite

Gangue minerals:

Geologic description:

The deposit at this mine is in mafic volcanic and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). It consists of two sulfide lenses up to about 6 ft wide and over 300 ft. long in pillow basalt and sedimentary rocks (Mihelich and Wells, 1957). Sulfide minerals include chalcopyrite, cubanite, galena, pyrite, pyrrhotite, and sphalerite.

Chip and grab samples contained 53 ppm to 5.25% Cu, 40 ppm to 2.85% Zn, <0.02 ppm to 0.10 ppm Au, <1 ppm to 22 ppm Ag, and 5 to 700 ppm Co (Jansons and others, 1984). Sixteen chip samples taken in 1955 contained 0.3 % to 8.6% Cu, 0.05% to 0.64% Zn, trace to 0.07 oz.Au/ton and trace to 0.78 oz. Ag/ton (Mihelich and Wells, 1957).

Alteration:

Age of mineralization:

Probably Tertiary baased on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: Yes; medium

Site Status: Inactive

Workings/exploration:
There are several thousand feet of workings on three levels. Three adits were caved when visited by this reporter in 1974 and 1986 (also see Sainsbury, 1993). Chip and grab samples contained 53 ppm to 5.25% Cu, 40 ppm to 2.85% Zn, <0.02 ppm to 0.10 ppm Au, <1 ppm to 22 ppm Ag, and 5 to 700 ppm Co (Jansons and others, 1984). Sixteen chip samples taken in 1955 contained 0.3 % to 8.6% Cu, 0.05% to 0.64% Zn, trace to 0.07 oz.Au/ton and trace to 0.78 oz. Ag/ton (Mihelich and Wells, 1957).

Production notes:
1,159,660 lbs. Cu, 101 oz. Au, 5,308 oz. Ag from 6,196.5 tons ore (Mihelich and Wells, 1957).

Reserves:
Inferred reserves of 1,902,000 tons @ 1.05% Cu (Sainsbury, 1953).

Additional comments:
Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Mihelich and Wells, 1957; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Mihelich and Wells, 1957

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Hoodoo and South Landlocked Bay Mining Co.

Site type: Mine/prospect

ARDF no.: CV021

Latitude: 60.85 **Quadrangle:** CV D-7

Longitude: 146.55

Location description and accuracy:

This site represents a mine and a prospect along the south shore of Landlocked Bay. The map site is at an elevation of about 150 feet, just inland from the bay. It is in the NW1/4 sec. 7, T. 12 S., R. 7 W., of the Copper River Meridian. The site location is accurate to within 2000 ft. This site combines both sites C-70 and C-71 of Jansons and others (1984) and site #15 of Cobb (1972: MF-392).

Commodities:

Main: Cu, Zn

Other: Ag, Au

Ore minerals: Chalcopyrite, native copper, sphalerite

Gangue minerals: Quartz

Geologic description:

The mineral deposits at this site are in mafic volcanic rocks (greenstone) of the Tertiary Orca Group (Nelson and others, 1985) and consist of massive sulfide lenses in shear zones 1.5 ft. to 3 ft. wide (Jansons and others, 1984). The ore minerals are mainly chalcopyrite and sphalerite; native copper is also reported.

Development work began in 1904 (Cobb, 1979: OFR 79-973). Extensive surface stripping at 230 feet elevation exposed about 75 feet of a 3-foot-wide mineralized zone in metavolcanic rock striking N45W, and dipping 60 NE. Four tunnels were driven, the longest of which was 180 feet (Capps and Johnson, 1913). In 1953 one tunnel was inaccessible (Mihelich and Wells, 1957). Early assays contained 0.48 to 1.06 oz. Au/ton. Recent sampling (Jansons and others, 1984) of five chip samples from one adit contained 0.11 ppm to 2.9% Cu, 680 ppm to 0.95% Zn, <0.03 to 0.03 ppm Au, and 0.2 to 13.9 ppm Ag. Three grab samples contained 1.14% to 19.3% Cu, 0.95 to 2.25% Zn, 0.15 ppm to 44 ppm Au, and 0.23 ppm to 34 ppm Ag.

Alteration:

Oxidation of copper minerals.

Age of mineralization:
Tertiary based on the age of the host rocks.

Deposit model:
Cyprus massive sulfide (Cox and SInger, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:
Development work began in 1904 (Cobb, 1979: OFR 79-973) Extensive surface stripping at 230 feet elevation exposed about 75 feet of a 3-foot-wide mineralized zone in metavolcanic rock striking N45W, and dipping 60 NE. Four tunnels were driven, the longest of which was 180 feet (Capps and Johnson, 1913). In 1953 one tunnel was inaccessible (Mihelich and Wells, 1957). Early assays contained 0.48 to 1.06 oz. Au/ton. Recent sampling (Jansons and others, 1984) of five chip samples from one adit contained 0.11 ppm to 2.9% Cu, 680 ppm to 0.95% Zn, <0.03 to 0.03 ppm Au, and 0.2 to 13.9 ppm Ag. Three grab samples contained 1.14% to 19.3% Cu, 0.95 to 2.25% Zn, 0.15 ppm to 44 ppm Au, and 0.23 ppm to 34 ppm Ag.

Production notes:
None reported from Hoodo. The South Landlocked Bay mine produced 74, 240 lbs. Cu (Mihelich and Wells, 1957).

Reserves:
Hoodo: inferred reserves of 300 tons @ 1.29% Cu, 0.34% Zn, and 7.97 ppm Ag. South Landlocked Bay: inferred reserves of 600 tons @ 4.7% Cu and 2.6% Zn (Jansons and others, 1984).

Additional comments:
Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Capps and Johnson, 1913; Cobb, 1972 (MF-392); Cobb, 1979 (OFR 79-973); Mihelich and Wells, 1957; Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Chisna Consolidated (Buckeye Group)

Site type: Mine

ARDF no.: CV022

Latitude: 60.848 **Quadrangle:** CV D-7

Longitude: 146.529

Location description and accuracy:
This mine is on the south shore of inner Landlocked Bay, just east of the mouth of China Creek. It is in the NE1/4 sec. 7, T. 12 S., R. 7 W., of the Copper River Meridian. The location of the site is accurate to within 1000 ft. This mine is shown as site C-69 in Jansons and others (1984) and as #16 in Cobb (1972: MF-392).

Commodities:

Main: Cu

Other: Ag, Au

Ore minerals: Chalcopyrite, pyrite

Gangue minerals:

Geologic description:
The deposit is in mafic volcanic rocks of the Tertiary Orca Group (Nelson and others, 1985). It consists of thin films of chalcopyrite and pyrite along fractures within shear zones in the hanging wall of the Landlocked Bay fault (Mihelich and Wells, 1957).
Samples contained 0.64% Cu and trace amounts of Au and Ag (Mihelich and Wells, 1957). Chip samples collected by Jansons and others (1984) contained 0.2% to 0.38% Cu.

Alteration:

Age of mineralization:
Probably Tertiary based on the age of the host rocks.

Deposit model:
Cyprus massive sulfide (Cox and SInger, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:

Two exploratory shafts sunk into shear zone. Samples contained 0.64% Cu and trace amounts of Au and Ag (Mihelich and Wells, 1957). Chip samples collected by Jansons and others (1984) contained 0.2% to 0.38% Cu.

Production notes:

Some ore shipped (Mihelich and Wells, 1957).

Reserves:

Inferred reserves of 1,200 tons @ 0.26% Cu and 1,200 tons @ 0.3% Cu (Mihelich and Wells, 1957).

Additional comments:

Nelson and others (1985) interpret the country rocks as accreted ocean crust. Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Mihelich and Wells, 1957; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993.

Primary reference: Mihelich and Wells, 1957

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Threeman Mining Co.; Billygoat Mountain

Site type: Prospect

ARDF no.: CV023

Latitude: 60.826 **Quadrangle:** CV D-7

Longitude: 146.517

Location description and accuracy:

This prospect is at an elevation of about 900 feet, about 0.25 mile south of the summit of Billygoat Mountain. It is in the SW1/4 sec. 17, T. 12 S., R. 7 W., of the Copper River Meridian. The location of the site is accurate to within 1000 ft. This prospect is shown as site C-68 by Janson and others (1984) and as #18 by Cobb (1972: MF-392).

Commodities:

Main: Cu, Zn

Other: Ag

Ore minerals: Chalcopyrite, pyrite, pyrrhotite

Gangue minerals:

Geologic description:

This prospect consists of two sulfide-bearing shear zones in mafic volcanic rocks of the Tertiary Orca Group (Nelson and others, 1985). The zones range in width from a few inches to five feet and contain lenses and stringer zones of chalcopyrite, pyrite, and pyrrhotite. Samples grade up to 6% Cu (Capps and Johnson, 1913).

Capps and Johnson (1913) reported adits at 1150 ft. and 1750 ft. elevation. The lower adit was 30 ft. long and the upper adit was 70 ft. long. Jansons and others (1984) reported that a grab sample from the 70 ft. adit contained 3.8% Cu, 0.2% Zn, and 7.5 ppm Ag. Gossan from the area contained 1.55% Cu, 0.4% Zn, and 13 ppm Ag.

Alteration:

Local oxidation of sulfide minerals.

Age of mineralization:

Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: None

Site Status: Inactive

Workings/exploration:
Capps and Johnson (1913) reported adits at 1150 ft. and 1750 ft. elevation. The lower adit was 30 ft. long and the upper adit was 70 ft. long. Jansons and others (1984) reported that a grab sample from the 70 ft. adit contained 3.8% Cu, 0.2% Zn, and 7.5 ppm Ag. Gossan from the area contained 1.55% Cu, 0.4% Zn, and 13 ppm Ag.

Production notes:

Reserves:

Additional comments:
Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Capps and Johnson, 1913; Cobb, 1972 (MF-392); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Banzer

Site type: Prospect

ARDF no.: CV024

Latitude: 60.81 **Quadrangle:** CV D-7

Longitude: 146.54

Location description and accuracy:

The Banzer prospect is at an elevation of less than 100 feet, about 0.75 mile northeast of Graveyard Point at the mouth of Landlocked Bay. It is in the NW1/4 sec. 19, T. 12 S., R. 7 W., of the Copper River Meridian. The location of the site is accurate to within 2000 ft. This site is loc. C- 67 in Jansons and others (1964) and loc. 17 in Cobb (1972: MF-392).

Commodities:

Main: Au,Cu, Pb, Zn

Other:

Ore minerals: Chalcopyrite, galena, pyrite, pyrrhotite

Gangue minerals: Calcite, quartz

Geologic description:

The Banzer prospect consists of sulfide-bearing quartz-calcite veins and of irregular clumps and stringers of sulfides in mafic volcanic rocks of the Tertiary Orca Group (Nelson and others, 1985; Cobb, 1979: OF 79-973). Sulfides reportedly include chalcopyrite, galena, pyrite, and pyrrhotite.

Capps and Johnson (1915) reported that there were two shafts and more than 200 feet of stripping completed by 1912. Assays of ore yielded values of 2.42 oz. Au/ton. The prospect could not be located in the early 1980s but assays of two grab samples of float from the general area of the prospect contained 0.08 ppm to 0.22 ppm Au, 0.1 ppm to 6.9 ppm Ag, and 22 ppm to 0.24% Cu (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rock.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: None

Site Status: Inactive

Workings/exploration:
Capps and Johnson (1915) reported that there were two shafts and more than 200 feet of stripping completed by 1912. Assays of ore yielded values of 2.42 oz. Au/ton. The prospect could not be located in the early 1980s but assays of two grab samples of float from the general area of the prospect contained 0.08 ppm to 0.22 ppm Au, 0.1 ppm to 6.9 ppm Ag, and 22 ppm to 0.24% Cu (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:
Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Capps and Johnson, 1915; Cobb, 1972 (MF-392); Cobb, 1979 (OFR 79-973); Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Jack Bay #3

Site type: Prospect

ARDF no.: CV025

Latitude: 60.97 **Quadrangle:** CV D-7

Longitude: 146.45

Location description and accuracy:

The Jack Bay #3 prospect is at an elevation of about 2000 feet, approximately 2.2 miles north of Silver Lake. It is in the NW1/4 sec. 27, T. 10 S., R. 7 W., of the Copper River Meridian. The location is accurate to within 2000 ft. This prospect is shown as C-95 in Jansons and others (1984).

Commodities:

Main: Au

Other:

Ore minerals: Arsenopyrite?, native gold

Gangue minerals: Limonite, quartz

Geologic description:

The area of this prospect is underlain by Upper Cretaceous Valdez Group metasedimentary rocks (Nelson and others, 1985). A well-defined quartz vein, 6 inches to 3 feet thick and traceable in outcrops for several hundred yards, cross cuts thick-bedded fine-grained graywacke. The vein contains small amounts of arsenopyrite(?) and native gold.

Gold mineralization in veins cutting the rocks of the Valdez Group is interpreted by Goldfarb and others (1992) to be the result of Tertiary metamorphism.

Alteration:

Age of mineralization:

Tertiary based on the age of the mineralizing event (Goldfarb and others, 1992).

Deposit model:

Chugach-type low-sulfide Au-quartz veins (Bliss, 1992; model 36a.1; Goldfarb and others, 1986)

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

36a.1

Production Status: Undet.

Site Status: Inactive

Workings/exploration:

Surface workings could not be found at this site (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Site is in the Chugach National Forest.

References:

Jansons and others, 1984; Nelson and others, 1985; Goldfarb and others, 1986; Goldfarb and others, 1992; Bliss, 1992.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Jack Bay #2

Site type: Prospect

ARDF no.: CV026

Latitude: 60.985 **Quadrangle:** CV D-7

Longitude: 146.43

Location description and accuracy:

The site is at an elevation of 150 feet in a river valley southeast of Jack Bay, and about 2 miles upstream from the head of the bay. It is in the SW1/4 sec. 23, T. 10 S., R. 7 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This prospect is shown as C-96 in Jansons and others (1984).

Commodities:

Main: Au, Cu

Other:

Ore minerals: Chalcopyrite, pyrrhotite

Gangue minerals: Quartz

Geologic description:

The area of this prospect is underlain by Upper Cretaceous Valdez Group metasedimentary rocks (Nelson and others, 1985). A well-defined, 6-inch- wide, quartz vein in slate contains chalcopyrite and pyrrhotite . One grab sample contained 140 ppm Cu and 0.006 oz. Au/ton (Jansons and others, 1984).

Gold mineralization in veins cutting the rocks of the Valdez Group is interpreted by Goldfarb and others (1992) to be the result of Tertiary metamorphism.

Alteration:

Age of mineralization:

Tertiary based on the age of the mineralizing event (Goldfarb and others, 1992).

Deposit model:

Chugach-type low-sulfide Au-quartz veins (Bliss, 1992; model 36a.1; Goldfarb and others, 1986)

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

36a.1

Production Status: None

Site Status: Inactive

Workings/exploration:

Production notes:

Reserves:

Additional comments:

References:

Jansons and others, 1984; Nelson and others, 1985; Goldfarb and others, 1986; Goldfarb and others, 1992; Bliss, 1992.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (tributary to Jack Bay)

Site type: Occurrence

ARDF no.: CV027

Latitude: 60.981 **Quadrangle:** CV D-7

Longitude: 146.371

Location description and accuracy:

This placer occurrence is along a river flowing west-northwest into Jack Bay. The placer is about 2 miles long, and extends upstream from a point about 3 miles from Jack Bay. The map site is at about the midpoint of the placer, in the SW1/4 sec. 19, T. 10 S., R. 6 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This prospect is shown as P21 in Jansons and others (1984).

Commodities:

Main: Au

Other:

Ore minerals:

Gangue minerals:

Geologic description:

This occurrence consists of small amounts of placer gold in alluvial gravels derived from slate and graywacke country rocks of the Valdez Group (Nelson and others, 1985).

Alteration:

Age of mineralization:

Holocene.

Deposit model:

Placer gold (Cox and SInger, 1986; model 39a)

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

39a

Production Status: None

Site Status: Inactive

Workings/exploration:

One 0.1-cubic-yard sample assayed 0.0012 oz Au/cubic yard (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

References:

Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Fidalgo-Alaska; Schlosser

Site type: Mine

ARDF no.: CV028

Latitude: 60.774 **Quadrangle:** CV D-7

Longitude: 146.417

Location description and accuracy:

The Fidalgo-Alaska mine is at an elevation of about 500 feet, about 0.8 mile east of the mouth of Irish Cove and 0.5 mile north of peak 1430. It is in the NW1/4 sec. 2, T. 13 S., R. 7 W., of the Copper River Meridian. The site is accurately located to within 1000 ft. This mine is shown as site C-28 in Jansons and others (1984) and site #19 in Cobb (1972: MF-392).

Commodities:

Main: Cu, Zn

Other: Ag, Au

Ore minerals: Chalcopyrite, pyrite, pyrrhotite, sphalerite

Gangue minerals: Calcite, quartz

Geologic description:

This deposit consists of sulfide-bearing quartz-calcite veins in 150- to 300-foot-wide shear zones in folded and sheared slate and graywacke of the Tertiary Orca Group (Nelson and others, 1985). The sulfide minerals include chalcopyrite, pyrite, pyrrhotite, and sphalerite.

This mine was developed and productive from 1913 to about 1920 (Cobb, 1979: OF 79-973). Five adits with the following lengths are reported (Jansons and others, 1984): 1800 ft., 540 ft., 410 ft., 250 ft., and 50 ft. U.S Bureau of Mines samples from various adit levels and of surface materials contained 0.02% to 19.5% Cu, 150 ppm to 29% Zn, 2 ppm to 15 ppm Ag, and <0.02 ppm to 5.8 ppm Au. Industry evaluation of the property was undertaken in 1986 (B. Ellis, personal commun., 2000).

Alteration:

Age of mineralization:

Early Tertiary age based on the age of the host rocks (Nelson and others, 1985).

Deposit model:

Besshi massive sulfide (Cox and Singer, 1986; model 24b)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24b

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:
This mine was developed and productive from 1913 to about 1920 (Cobb, 1979: OF 79-973). Five adits with the following lengths are reported (Jansons and others, 1984): 1800 ft., 540 ft., 410 ft., 250 ft., and 50 ft. U.S Bureau of Mines samples from various adit levels and of surface materials contained 0.02% to 19.5% Cu, 150 ppm to 29% Zn, 2 ppm to 15 ppm Ag, and <0.02 ppm to 5.8 ppm Au. Industry evaluation of the property was undertaken in 1986 (B. Ellis, personal commun., 2000).

Production notes:
4,160,820 lbs. Cu and 1,384 oz Ag were produced from 21,434 tons of ore. Average grade was 10% Cu.

Reserves:
Jansons and others (1984) report indicated reserves of 25,625 tons @ 3% Cu and inferred reserves of 224,000 tons @ 3.18% Cu.

Additional comments:
Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Cobb, 1972 (MF-392); Cobb, 1979 (OFR 79-973); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Dickey Copper Co.; Mason & Gleason Co.

Site type: Mine

ARDF no.: CV029

Latitude: 60.77 **Quadrangle:** CV D-7

Longitude: 146.41

Location description and accuracy:

This mine is at an elevation of about 500 feet about 1.3 miles east of Irish Cove, and 0.5 mile southeast of peak 1430. It is in the S1/2 sec. 2, T. 13 S., R. 7 W., of the Copper River Meridian. The location is accurate within 2000 ft. The mine is about 0.25 mile east of its position shown as site C-65 in Jansons and others (1984) (B. Ellis, personal commun., 2000).

Commodities:

Main: Au, Cu

Other: Ag, Co, Pb, Zn

Ore minerals: Chalcopyrite, pyrite, pyrrhotite, sphalerite

Gangue minerals: Calcite, quartz

Geologic description:

This deposit consists of sulfide-bearing quartz-calcite veins in 6- to 8-foot-wide shear zones in slate and graywacke of the Tertiary Orca Group (Nelson and others, 1985). The sulfide minerals include chalcopyrite, pyrite, pyrrhotite, and sphalerite.

The mine was active in the period 1910-1913, but most of the production was in 1917 (Moffit and Fellows, 1950). Two principal adits at 470 ft. and 540 ft. were connected by raises. There reportedly were additional crosscuts and drifts (Moffit and Fellows, 1950). Jansons and others (1984) report four adits having the following lengths: 500 ft., 125 ft., 35 ft. (caved), and 10 ft. There was some industry reevaluation in 1986 (B. Ellis, personal commun., 2000).

Jansons and others (1984) report the following analyses: Five grab samples from the 500 ft. adit contained 0.01% to 1.23% Cu, 0.02% to 1.5% Zn, <0.03 ppm to 12.5 ppm Au, <0.01 ppm to 28 ppm Ag, and 0.01 to 0.13% Pb. A selected grab sample contained 15.5 ppm Au. Five grab samples from the 125-ft.-long adit contained 0.3% to 4.3% Cu, 1.43% to 14% Zn, <0.03 ppm to 5.25 ppm Au, 25 to 26 ppm Ag, 80 ppm to 0.13% Pb, and 14 ppm to 740 ppm Co. A grab sample from the crosscut contained 1.6% Cu, 3.1% Zn, 2.8 ppm Au and 10 ppm Ag. A 262-pound bulk sample from the ore bunkers contained 8.65% Cu, 9.6% Zn, 0.072 oz. Au/ton, 0.62 oz. Ag/ton, and 0.04% Co.

Alteration:

Age of mineralization:
Probably Tertiary based on the age of the host rocks (Crowe and others, 1992).

Deposit model:
Besshi massive sulfide (Cox and Singer, 1986: model 24b)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24b

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:
The mine was active in the period 1910-1913, but most of the production was in 1917 (Moffit and Fellows, 1950). Two principal adits at 470 ft. and 540 ft. were connected by raises. There reportedly were additional cross cuts and drifts (Moffit and Fellows, 1950). Jansons and others (1984) report four adits having the following lengths: 500 ft., 125 ft., 35 ft. (caved), and 10 ft. There was some industry reevaluation in 1986 (B. Ellis, personal commun., 2000).

Jansons and others (1984) report the following analyses: Five grab samples from the 500 ft. adit contained 0.01% to 1.23% Cu, 0.02% to 1.5% Zn, <0.03 ppm to 12.5 ppm Au, <0.01 ppm to 28 ppm Ag, and 0.01 to 0.13% Pb. A selected grab sample contained 15.5 ppm Au. Five grab samples from the 125-ft.-long adit contained 0.3% to 4.3% Cu, 1.43% to 14% Zn, <0.03 ppm to 5.25 ppm Au, 25 to 26 ppm Ag, 80 ppm to 0.13% Pb, and 14 ppm to 740 ppm Co. A grab sample from the crosscut contained 1.6% Cu, 3.1% Zn, 2.8 ppm Au and 10 ppm Ag. A 262-pound bulk sample from the ore bunkers contained 8.65% Cu, 9.6% Zn, 0.072 oz. Au/ton, 0.62 oz. Ag/ton, and 0.04% Co.

Production notes:
29,346 pounds of copper was produced, mainly in 1917.

Reserves:
Moffit and Fellows (1950) report that geophysical prospecting suggests that the mines in this area (CV028 and CV029) contain additional undiscovered mineral resources.

Additional comments:
Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Moffit and Fellows, 1950; Jansons and others, 1984; Nelson and others, 1985; Crowe and

others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Fidalgo Mining Co. (Blackney Prospect)

Site type: Mine

ARDF no.: CV030

Latitude: 60.7951 **Quadrangle:** CV D-7

Longitude: 146.2947

Location description and accuracy:

This mine is at an elevation of about 500 feet on the south side of Port Fidalgo, about 1.5 miles northwest of the head of Matthews Bay. It is in the SE1/4 sec. 28, T. 12 S., R. 6 W., of the Copper River Meridian. The location is accurate to within 500 ft. This mine is shown as site #21 in Cobb (1972: MF-392) and C-63 in Jansons and others (1984).

Commodities:

Main: Cu

Other: Ag, Au

Ore minerals: Chalcopyrite, pyrite, pyrrhotite

Gangue minerals:

Geologic description:

Most of the ore mined from this deposit was from two lens-shaped bodies of massive sulfides. The ore bodies were localized in a shear zone in interbedded volcanic and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985; Moffit and Fellows, 1950). Sulfide minerals include chalcopyrite, pyrite, and pyrrhotite. Underground study by Jansons and others (1984) reported three main shear zones up to 30 feet wide and traceable for 4000 feet parallel to bedding.

Most of the mining activity took place in 1913. The average copper grade was 13%. The mine continued to be active until 1920 (Moffit and Fellows, 1950). Workings included four adits having the following lengths: 1200 ft., 735 ft., 350 ft., and 175 ft. The following assays are reported by Jansons and others (1984). Four chip samples from the 735-foot-long adit contained from 175 ppm to 0.23% Cu; nine chip samples across the main shear zone in the 1200-foot-long adit contained 0.12% to 1.25% copper; fifteen chip samples from the rest of the adit contained 9 ppm to 0.29% Cu; and three chip samples from the 175-foot-long adit contained 300 ppm to 0.73% Cu; three chip samples from the 350-foot-long adit contained 0.17% to 0.73% Cu. Grab samples from the dump contained 1% to 6.3% Cu. Industry evaluation of the property was undertaken in 1986 (B. Ellis, personal commun., 2000).

Alteration:

Age of mineralization:
Tertiary based on the age of the host rocks.

Deposit model:
Besshi massive sulfide (Cox and Singer, 1986; model 24b)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24b

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:
Most of the mining activity took place in 1913. The average copper grade was 13%. The mine continued to be active until 1920 (Moffit and Fellows, 1950). Workings included four adits having the following lengths: 1200 ft., 735 ft., 350 ft., and 175 ft. The following assays are reported by Jansons and others (1984). Four chip samples from the 735-foot-long adit contained from 175 ppm to 0.23% Cu; nine chip samples across the main shear zone in the 1200-foot-long adit contained 0.12% to 1.25% copper; fifteen chip samples from the rest of the adit contained 9 ppm to 0.29% Cu; and three chip samples from the 175-foot-long adit contained 300 ppm to 0.73% Cu; three chip samples from the 350-foot-long adit contained 0.17% to 0.73% Cu. Grab samples from the dump contained 1% to 6.3% Cu. Industry evaluation of the property was undertaken in 1986 (B. Ellis, personal commun., 2000).

Production notes:
360,376 lbs. Cu and 12 oz Ag were recovered from 2,747 tons ore, which also contained as much as 0.05 oz. Au/ton.

Reserves:
Inferred **Reserves:** 45,500 tons @ 0.3% Cu (Jansons and others, 1984).

Additional comments:
Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Cobb, 1972 (MF-392); Moffit and Fellows, 1950; Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Red Head #1

Site type: Prospect

ARDF no.: CV031

Latitude: 60.68 **Quadrangle:** CV C-7

Longitude: 146.46

Location description and accuracy:

This beach placer site represents about two miles of the shore of outer Port Gravina between Red Head and Hell's Hole. The map site is about at the mid-point of the beach placer. It is in the E1/2 sec. 4, T. 13 S., R. 8 W., of the Copper River Meridian. The site is accurately located to within 2000 ft. This location as site P-18 in Jansons and others (1984).

Commodities:

Main: Au

Other: Fe, Ti

Ore minerals: Garnet, ilmenite, magnetite

Gangue minerals: Beach sand

Geologic description:

This prospect consists of heavy minerals, including gold, in wave-formed beach placer deposits. Zones of heavy-mineral concentration in the sand can reach three feet thick. One such one-foot-thick zone overlying pebbles of felsic intrusive rock, greenstone, graywacke and slate was sampled and contained over 10% garnet (Jansons and others, 1984). Two 0.1 cubic-yard samples of the beach sand contained <0.03 ppm to 0.0002 oz. Au/ton.

Alteration:

Age of mineralization:

Holocene.

Deposit model:

Beach placer (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:

Surface workings. Heavy-mineral concentration zones contained over 10% garnet. Two 0.1 cubic-yard samples of the beach sand contained <0.03 ppm to 0.0002 oz. Au/ton (Jansons and others, 1984).

Production notes:

Not more than 500 oz. Au produced (Cobb, 1979: OF 79-973).

Reserves:

Additional comments:

Site is in the Chugach National Forest.

References:

Cobb, 1979 (OFR 79-973); Jansons and others, 1984.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (Dick Creek drainage)

Site type: Occurrences

ARDF no.: CV032

Latitude: 60.35 **Quadrangle:** CV B-1

Longitude: 144.31

Location description and accuracy:

This site represents several occurrences in an approximately 15-sq.-mi area in the Dick Creek drainage. The roughly circular area is bounded on the south by Bering Lake and on the north, west, and east by the drainage divides of the tributaries of Dick Creek. The map site is about at the center of the area in the SW1/4, sec. 35, T. 17 S., R. 6 E., of the Copper River Meridian.

Commodities:

Main: Zn

Other: Ag, Ba, Cu, Fe, Mo, Pb

Ore minerals: Barite, pyrite, sphalerite

Gangue minerals:

Geologic description:

These occurrences consist of anomalous metal values in stream sediment from concretionary sandstone of the Tertiary Tokun Formation (Winkler and Plafker, 1991). Stream sediment concentrate samples contain >2% Zn (Goldfarb and others, 1992).

Alteration:

Age of mineralization:

Tertiary, based on probable source of samples.

Deposit model:

Possibly sedimentary-exhalative Pb-Zn (Cox and Singer, 1986; model 31a)

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

31a ?

Production Status: None

Site Status: Inactive

Workings/exploration:

None. Investigations of similar geochemical anomalies to the south on Kayak Island (Pickthorn and others,1985) failed to find any outcrops containing mineral deposits (Goldfarb and others, 1992).

Stream sediment concentrate samples contain >2% Zn (Goldfarb and others, 1992).

Production notes:

Reserves:

Additional comments:

This and other geologically similar areas in the Cordova quadrangle warrant further investigation (Nelson and others, 1994). Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Pickthorn and others, 1985; Winkler and Plafker, 1991; Goldfarb and others, 1992; Nelson and others, 1994.

Primary reference: Goldfarb and others, 1992

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (tributary to Port Fidalgo)

Site type: Occurrence

ARDF no.: CV033

Latitude: 60.9 **Quadrangle:** CV D-6

Longitude: 146.13

Location description and accuracy:

This placer occurrence is about 3.5-4 miles long. It is along the main unnamed river flowing into the head of Port Fidalgo, and extends upstream from a point about one mile from Port Fidalgo. The map site is at about the midpoint of the placer, in the SW1/4 sec. 27, T. 11 S., R. 5 W., of the Copper River Meridian. The site location is accurate to within 2000 ft. The occurrence is shown as site P-19 in Jansons and others (1984).

Commodities:

Main: Au

Other:

Ore minerals: Native gold

Gangue minerals:

Geologic description:

This occurrence consists of small amounts of placer gold in alluvial gravels derived from slate and graywacke country rocks of the Valdez Group (Nelson and others, 1985).

Alteration:

Age of mineralization:

Holocene.

Deposit model:

Placer gold (Cox and SInger, 1986; model 39a)

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

39a

Production Status: None

Site Status: Inactive

Workings/exploration:

Site was sampled as part of a U.S. Bureau of Mines and U.S.G.S. mineral resource assessment of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984). Six 0.1-cubic-yard samples assayed 0.0003 to 0.002 oz. Au/cubic yard (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

References:

Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Dead Creek (prospect)

Site type: Prospect

ARDF no.: CV034

Latitude: 60.9 **Quadrangle:** CV D-6

Longitude: 145.95

Location description and accuracy:

The Dead Creek prospect is at an elevation of about 3400 feet above the north forks of Dead Creek. It is in the S1/2 sec. 21, T. 11 S., R. 4 W., of the Copper River Meridian. The site is accurately located to within 2000 ft. This prospect is shown as site C-56 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other: Ag

Ore minerals: Azurite, chalcopyrite, malachite, sphalerite

Gangue minerals: Quartz

Geologic description:

The Dead Creek prospect is in Upper Cretaceous Valdez Group metasedimentary rocks (Nelson and others, 1985). The deposit consists of a 60-foot-wide shear zone containing a 10-foot-wide gossan that carries sulfide-bearing quartz veinlets (Jansons and others, 1984). Ore minerals include azurite, chalcopyrite, malachite, and sphalerite.

Jansons and others (1984) report a 60-foot-long adit and one open pit. A chip sample contained: 91 ppm Cu, 0.8 ppm Ag, 140 ppm Zn; one grab sample contained: 8.9% Cu, 2.7 oz Ag/ton, and 0.31% Zn.

Alteration:

Oxidation of iron and copper minerals.

Age of mineralization:

Deposit model:

Possibly polymetallic veins (Cox and Singer, 1986; model 22c)

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

22c ?

Production Status: None

Site Status: Inactive

Workings/exploration:

Jansons and others (1984) report a 60-foot-long adit and one open pit. A chip sample contained: 91 ppm Cu, 0.8 ppm Ag, 140 ppm Zn; one grab sample contained: 8.9% Cu, 2.7 oz Ag/ton, and 0.31% Zn.

Production notes:

Reserves:

Additional comments:

Site examined as part of a U.S. Bureau of Mines and U.S.G.S. mineral resource evaluation of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984).

References:

Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Dead Creek (placer)

Site type: Occurrence

ARDF no.: CV035

Latitude: 60.87 **Quadrangle:** CV D-6

Longitude: 145.96

Location description and accuracy:

The Dead Creek alluvial placer extends upstream for about 3.5 miles from a point about 1.5 miles above its confluence with the Gravina River. The map site is at the midpoint of the placer, in the NW1/4 sec. 33, T. 11 S., R. 4 W., of the Copper River Meridian. This site is shown as location P-17 in Jansons and others (1984).

Commodities:

Main: Au

Other:

Ore minerals:

Gangue minerals:

Geologic description:

Alluvial deposits along Dead Creek contain clasts of slate, graywacke, phyllite, greenstone, and andalusite schist derived from the underlying Upper Cretaceous Valdez Group (Nelson and others, 1984; Jansons and others, 1984).

Five 0.1-cubic-yard samples contained 0.28 ppm to 0.0007 oz Au/cubic yard and 1% garnet in the concentrate (Jansons and others, 1984).

Alteration:

Age of mineralization:

Holocene.

Deposit model:

Stream placer (Cox and SInger, 1986; model 39a)

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

39a

Production Status: None

Site Status: Inactive

Workings/exploration:

Five 0.1-cubic-yard samples contained 0.28 ppm to 0.0007 oz Au/cubic yard and 1% garnet in the concentrate (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Site examined as part of a U.S. Bureau of Mines and U.S.G.S. mineral resource evaluation of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984). Site is the Chugach National Forest.

References:

Jansons and others, 1984; Nelson and others, 1984.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (head of Dead Creek)

Site type: Occurrence

ARDF no.: CV036

Latitude: 60.91 **Quadrangle:** CV D-5

Longitude: 145.87

Location description and accuracy:

This occurrence is at an elevation of about 2400 feet at the northeastern head of Dead Creek, near the toe of an unnamed glacier. It is in the W1/2 sec. 13, T. 11 S., R. 4 W., of the Copper River Meridian. The accuracy of the location is within 2000 ft. This occurrence is shown as site C-57 in Jansons and other (1984).

Commodities:

Main: Cu, Zn

Other:

Ore minerals: Malachite, pyrite, sphalerite

Gangue minerals:

Geologic description:

The country rocks at this occurrence are slate and graywacke of the Upper Cretaceous Valdez Group (Nelson and others, 1985). Jansons and others (1984) describe a 4-foot-wide shear zone in the slate and graywacke that contins a foot-wide zone of pyrite, spalerite, and malachite. One chip sample contained 41 ppm Zn, and 7 ppm Cu, and a grab sample contained 1.23% Zn and 0.17% Cu.

Alteration:

Minor oxidation of copper minerals.

Age of mineralization:

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Site examined as part of a U.S. Bureau of Mines and U.S.G.S. mineral evaluation of the Chugach National Forest.

One chip sample contained 41 ppm Zn, and 7 ppm Cu, and a grab sample contained 1.23% Zn and 0.17% Cu (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

References:

Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (west of Wortmanns Glacier)

Site type: Occurrence

ARDF no.: CV037

Latitude: 60.99 **Quadrangle:** CV D-5

Longitude: 145.84

Location description and accuracy:

This site is at an elevation of about 3000 feet, approximately 3.5 miles west of Wortmanns Glacier and 2.2 miles west-northwest of peak 6082. It is in the NE1/4 sec. 24, T. 10 S., R. 4 W., of the Copper River Meridian. The location of the site is accurate to within 2000 ft. This occurrence is shown as site C-58 in Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals: Chalcopyrite

Gangue minerals: Quartz

Geologic description:

The country rocks at this occurrence are metavolcanic rocks (greenstone) and metasedimentary rocks of the Upper Cretaceous Valdez Group. These rocks are part of a 65-mile-long belt of volcanic rocks having potential for volcanogenic massive sulfide deposits, extending to the Copper River (Nelson and others, 1984; 1985). The occurrence is marked by a seven -foot-wide, red-stained zone of slate in contact with greenstone. It consists of chalcopyrite in quartz veins and as disseminations in the greenstone. Four chip samples contained 120 ppm to 1.3% Cu (Jansons and others, 1984).

Alteration:

Oxidation.

Age of mineralization:

Late Cretaceous or younger.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

Site was sampled as part of a U.S. Bureau of Mines and U.S.G.S. mineral resource assessment of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984).

Production notes:

Reserves:

Additional comments:

Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

References:

Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (east tributary of Wortmanns Glacier)

Site type: Occurrence

ARDF no.: CV038

Latitude: 60.95 **Quadrangle:** CV D-5

Longitude: 145.65

Location description and accuracy:

This occurrence is at an elevation of 4000 feet above an east tributary to Wortmanns Glacier and 1.4 miles due south of peak 6145. It is in the NW1/4 sec. 6, T. 11 S., R. 2 W., of the Copper River Meridian. The location of the site is accurate to within 2000 ft. The occurrence is shown as site C-97 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other: Ag

Ore minerals: Chalcopyrite, pyrite, sphalerite

Gangue minerals:

Geologic description:

The country rocks at this occurrence are metavolcanic rocks (greenstone) and metasedimentary rocks of the Upper Cretaceous Valdez Group. These rocks are part of a 65-mile-long belt of volcanic rocks having potential for volcanogenic massive sulfide deposits, extending to the Copper River (Nelson and others, 1984; 1985). The ore minerals at this site presumably are chaclopyrite, pyrite, and sphalerite, but their mode of occurrence has not been made public. One grab sample contained 1.0% Zn, 0.1 to 0.5% Cu, and 0.5 ppm to 3 ppm Ag (Jansons and others, 1984).

Alteration:

Age of mineralization:

Late Cretaceous based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

Site was sampled as part of a U.S. Bureau of Mines and U.S.G.S. mineral resource assessment of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984).

One grab sample contained 1.0% Zn, 0.1 to 0.5% Cu, and 0.5 ppm to 3 ppm Ag (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

References:

Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Whalen and Nelson

Site type: Prospect

ARDF no.: CV039

Latitude: 60.81 **Quadrangle:** CV D-6

Longitude: 146.146

Location description and accuracy:
This prospect is at an elevation of about 900 feet about 1.5 miles east-southeast of the head of Whalen Bay. It is in the SE1/4 sec. 20, T. 12 S., R. 5 W., of the Copper River Meridian. The location is accurate within 1000 ft. This prospect is site C-59 in Jansons and others (1984) and #22 in Cobb (1972: MF-392).

Commodities:

Main: Cu

Other:

Ore minerals: Chalcopyrite, pyrrhotite

Gangue minerals:

Geologic description:
The country rock at this prospect is graywacke and slate of the Tertiary Orca Group (Nelson and others, 1985). Grant and Higgins (1909) reported a resistant band of nonslaty rock containing irregular stringers and disseminated grains of chalcopyrite and pyrrhotite. The band is up to 12 ft. wide, averages 2-4 feet wide, and is traceable for a 'considerable' distance.

Alteration:

Age of mineralization:
Probably Tertiary based on the age of the host rocks.

Deposit model:
Besshi massive sulfide (?) (Cox and Singer, 1986; model 24b)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24b?

Production Status: None

Site Status: Inactive

Workings/exploration:

One adit and surface stripping reported by Grant and Higgins (1909). Site could not be found in the 1980s (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area.

The prospect is in the Chugach National Forest.

References:

Cobb, 1972 (MF-392); Grant and Higgins, 1909; Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Grant and Higgins, 1909

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (lower part of south fork of Gravina River)

Site type: Occurrence

ARDF no.: CV040

Latitude: 60.82 **Quadrangle:** CV D-6

Longitude: 145.89

Location description and accuracy:
This occurrence is at about 200 ft. elevation on the lower part of the south fork of the Gravina River. It is in the NW1/4 sec. 23, T. 12 S., R. 4 W., of the Copper River Meridian. Accuracy of the location is within 2000 ft. Location corresponds to site C-55 in Jansons and others (1984).

Commodities:

Main: W

Other:

Ore minerals: Chalcopyrite, pyrite, scheelite

Gangue minerals: Quartz

Geologic description:
This site is on a gravel bar in the Gravina River. Float samples from the area include altered and silicified felsic intrusive rocks containing chalcopyrite, pyrite, and scheelite. Analysis of one sample yielded 245 ppm W (Jansons and others, 1984).

Alteration:
Silicification.

Age of mineralization:

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Area examined by the U.S. Bureau of Mines as part of a mineral evaluation of the Chugach National Forest. Analysis of one sample yielded 245 ppm W (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Occurrence is on Chugach National Forest land.

References:

Jansons and others, 1984.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Ellis (Boone and Ibeck #1 and #2)

Site type: Prospects

ARDF no.: CV041

Latitude: 60.67 **Quadrangle:** CV C-6

Longitude: 146.03

Location description and accuracy:

This site represents two prospects in a 2.5-mile-long linear area along the bluff above the northwest shore of Sheep Bay. The map site is at the approximate midpoint between the prospects, in the NW1/4 sec. 11, T. 14 S., R. 5 W., of the Copper River Meridian. This site includes both sites C-52 and C-53 of Jansons and others (1984).

Commodities:

Main: Cu

Other: Ag

Ore minerals: Chalcopyrite

Gangue minerals: Quartz

Geologic description:

The prospect consists of chalcopyrite-bearing quartz veins in the Tertiary Orca Group turbidites along the contact of the Sheep Bay pluton (Jansons and others, 1984; Nelson and others, 1985). The Sheep Bay pluton has been radiometrically dated at about 51 Ma (Winkler and Plafker, 1981). Three analyzed samples from Jansons and others' (1984) location C-52 contained 26-115 ppm Cu. Eleven additional samples from the contact area contained 13 ppm to 0.14% Cu and <0.1 ppm to 8.5 ppm silver.

Alteration:

Contact metamorphism.

Age of mineralization:

The age of mineralization is probably 51 Ma based on the age of the Sheep Bay pluton.

Deposit model:

Copper skarn ?

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Area examined by the U.S. Bureau of Mines as part of a mineral evaluation of the Chugach National Forest. Three analyzed samples from location C-52 contained 26-115 ppm Cu. Eleven additional samples from the contact area contained 13 ppm to 0.14% Cu and <0.1 ppm to 8.5 ppm silver (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Winkler and Plafker, 1981; Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (near mouth of Simpson Creek)

Site type: Occurrence

ARDF no.: CV042

Latitude: 60.693 **Quadrangle:** CV C-5

Longitude: 145.839

Location description and accuracy:

This occurrence is at an elevation of about 100 feet at the head of Simpson Bay near the mouth of Simpson Creek. It is in the SE1/4 sec. 36, T. 13 S., R. 4 W., of the Copper River Meridian. The location is accurate to within 1000 ft. This location is site C-51 in Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other:

Ore minerals: Chalcopyrite, pyrite, pyrrhotite, sphalerite

Gangue minerals:

Geologic description:

This occurrence consists of sulfide-bearing stream-sediment float samples of slate. Sulfide minerals are chalcopyrite, pyrite, pyrrhotite, and sphalerite (Jansons and others, 1984). Analyses of two grab samples contained 140 ppm and 1.6% Zn, and 35 ppm and 0.16% Cu.

Alteration:

Age of mineralization:

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Area examined by the U.S. Bureau of Mines as part of a mineral evaluation of the Chugach National Forest. Analyses of two grab samples contained 140 ppm and 1.6% Zn, and 35 ppm and 0.16% Cu (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Occurrence is on Chugach Regional Corporation land.

References:

Jansons and others, 1984.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Wilson Point

Site type: Prospect

ARDF no.: CV043

Latitude: 60.66 **Quadrangle:** CV C-5

Longitude: 145.67

Location description and accuracy:

This occurrence is on the north shore of Nelson Bay, about 1000 feet northeast of VABM Bluff. It is in the W1/2 sec. 13, T. 14 S., R. 3 W., of the Copper River Meridian. Site location accurate to within 0.5 mile. Site corresponds to loc. 24 in Cobb (1972: MF-392). It also corresponds to loc. C-28 in Jansons and others (1984), but their plotted position of the site is in error.

Commodities:

Main: Ag, Au

Other:

Ore minerals:

Gangue minerals: Quartz

Geologic description:

The Wilson Point prospect is in graywacke and slate of the Tertiary Orca Group (Nelson and others, 1985). Schrader (1900) reported numerous quartz stringers having assay values of 1.25 oz. Au/ton and 3 oz. Ag/ton. Jansons and others (1984) report a four-foot-wide, 20-foot-long quartz-cemented graywacke breccia. Analyses of their samples showed <0.03 ppm to 0.05 ppm Au and <0.1 ppm Ag. However, their site location does not agree with that of earlier reports.

Alteration:

Age of mineralization:

Tertiary based on the age of the mineralizing event (Goldfarb and others, 1992).

Deposit model:

Chugach-type low-sulfide Au-quartz veins (Bliss, 1992; Goldfarb and others, 1986)

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Minor surface sampling (Schrader, 1900). Analyses of recent samples showed <0.03 ppm to 0.05 ppm Au and <0.1 ppm Ag (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Schrader, 1900; Cobb, 1972 (MF-392); Cobb, 1979 (OFR 79-973); Jansons and others, 1984; Goldfarb and others, 1986; Goldfarb and others, 1992; Bliss, 1992.

Primary reference: Cobb, 1979 (OF 79-973)

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Hawkins Island #1

Site type: Occurrence

ARDF no.: CV044

Latitude: 60.555 **Quadrangle:** CV C-5

Longitude: 145.829

Location description and accuracy:

This occurrence is at an elevation of about 200 feet on the east side of Mud Bay on Hawkins Island. It is in the W1/2 Sec. 19, T. 15 S., R. 3 W., of the Copper River Meridian. Accuracy of the location is to within 1000 ft. Location corresponds to site C-45 in Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals: Pyrite

Gangue minerals:

Geologic description:

This occurrence consists of pyrite in slate and graywacke of the Tertiary Orca Group. The slate contains up to 15% pyrite. A single grab sample collected in 1980 contained 36 ppm Cu (Jansons and others, 1984).

Alteration:

Age of mineralization:

Probably Tertiary based on the age of the host rocks (Nelson and others, 1985).

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

The slate contains up to 15% pyrite. A single grab sample collected in 1980 contained 36 ppm Cu (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Flynn and Scott

Site type: Prospect

ARDF no.: CV045

Latitude: 60.516 **Quadrangle:** CV C-6

Longitude: 146.101

Location description and accuracy:
This prospect is located at about the midpoint of the south shore of Canoe Passage on Hawkins Island. Site is located in the NE1/4 sec. 4, T 16 S., R 5 W., of the Copper River Meridian and is accurate to within 600 ft. Shown as site C-48 by Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals: Pyrrhotite

Gangue minerals:

Geologic description:
This prospect consists of pyrrhotite disseminated in greenstone interbedded in volcanic and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). Four samples collected in the early 1980s contained 25-475 ppm Cu (Jansons and others, 1984).

Alteration:

Age of mineralization:
Tertiary based on the age of the Orca Group volcanic rocks (Nelson and others, 1985).

Deposit model:
Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: None

Site Status: Inactive

Workings/exploration:

Jansons and others (1984) report a 30 ft. open cut. Four samples collected in the early 1980s contained 25-475 ppm Cu.

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Kelley and MacCormac

Site type: Prospect

ARDF no.: CV046

Latitude: 60.511 **Quadrangle:** CV C-6

Longitude: 146.091

Location description and accuracy:
This prospect is near the mouth of Canyon Creek on the south shore of Canoe Passage on Hawkins Island. The map site is in the W1/2 sec. 3, T 16 S., R 5 W., of the Copper River Meridian. The location is accurate to within 600 ft. Shown as site C-49 by Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals:

Gangue minerals:

Geologic description:
This prospect reportedly is in a 3-foot-wide shear zone in slate of the Tertiary Orca Group (Jansons and others, 1984). Volcanic rocks crop out near the prospect (Nelson and others, 1985). Examination of the area by the U.S. Bureau of Mines in the early 1980s showed no obvious signs of mineralization. Three samples contained 24-140 ppm Cu (Jansons and others, 1984).

Alteration:

Age of mineralization:
Tertiary based on the age of the Orca Group (Nelson and others, 1985).

Deposit model:
Possibly Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a ?

Production Status: None

Site Status: Inactive

Workings/exploration:

Jansons and others (1984) reported a 15 ft. open cut. Three samples contained 24-140 ppm Cu.

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Cordova Copper Co.; Fleming Spit

Site type: Prospect

ARDF no.: CV047

Latitude: 60.567 **Quadrangle:** CV C-5

Longitude: 145.7232

Location description and accuracy:

This prospect is at the 500 ft. elevation in Fleming Creek about 2 miles north-northeast of the city of Cordova. It is in the E1/2 sec. 15, T. 15 S., R. 3 W., of the Copper River Meridian. Location is accurate to within 500 ft.

This site is shown as location C-34 by Jansons and others (1984) and loc. 23 by Cobb (1972: MF-392; 1979: OF 79-973).

Commodities:

Main: Cu

Other: Au

Ore minerals: Bornite, chalcocite, chalcopyrite, cuprite, malachite, native copper, gold

Gangue minerals: Calcite, chlorite, epidote, quartz

Geologic description:

This prospect consists of base-and precious-metal deposits in Tertary Orca Group volcanic and sedimentary rocks (Nelson and others, 1985). The volcanic rocks in the prospect area are reported to be amygdaloidal basalts (Grant, 1910). The deposits comprise impregnations and replacements of sulfides, oxides, and native metals in country rock, scattered veins of quartz or sulfides, and irregular masses of sulfide.

Alteration:

Surface alteration & extensive oxidation at depth (Grant, 1910).

Age of mineralization:

Tertiary based on the age of the host rocks (Nelson and others, 1985).

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a). See also Crowe and others (1992).

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

24a

Production Status: No

Site Status: Inactive

Workings/exploration:

12 adits examined in 1980 (Jansons and other, 1984). The main activity took place in 1905-1909 and 1917 (Cobb, 1979: OF 79-973).

Production notes:

Reserves:

Inferred reserves of 17,600 tons @ 0.64% Cu are reported by Jansons and others (1984).

Additional comments:

No production, although a sample of native copper from this site was displayed in 1909 at the Alaska-Yukon Exposition (Grant, 1910).

Prospect site could not be located in 1986 during industry exploration (B. Ellis, personal commun., 2000). Site is on State of Alaska land.

References:

Grant, 1910; Cobb, 1972 (MF-392); Cobb, 1979 (OFR 79-973); Jansons and others, 1984; Nelson and others, 1985; Crowe and others, 1992.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Snyder Falls Creek

Site type: Occurrence

ARDF no.: CV048

Latitude: 60.644 **Quadrangle:** CV C-5

Longitude: 145.581

Location description and accuracy:
Site is at an elevation of about 2000 feet near the head of Snyder Falls Creek. It is in the NE1/4 sec. 21, T. 14 S., R. 2 W., of the Copper River Meridian. Location of site is accurate to within 1000 ft. Location is the same as site C-24 of Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals: Chalcopyrite, pyrite, pyrrhotite

Gangue minerals: Quartz

Geologic description:
This occurrence consists of small veinlets of chalcopyrite and of disseminated pyrite and pyrrhotite in greenstone 'pods' in sedimentary rocks of the Orca Group (Jansons and others, 1984; Nelson and others, 1985). These pods probably represent localized mafic flows or structurally disrupted flows. Ten grab samples analyzed from the area contained from 29 ppm to 3.35% Cu (Jansons, 1984).

Alteration:

Age of mineralization:
Probably Tertiary based on the age of the host rocks.

Deposit model:
Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: None

Site Status: Inactive

Workings/exploration:

Site was visited as part of a regional mineral assessment of the Chugach National Forest (Nelson and others, 1984; 1985; Jansons and others, 1984).

Ten grab samples analyzed from the area contained from 29 ppm to 3.35% Cu (Jansons, 1984).

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Head-Of-The-Bay (Cordova - Tacoma Copper Co.)

Site type: Prospect

ARDF no.: CV049

Latitude: 60.663 **Quadrangle:** CV C-5

Longitude: 145.551

Location description and accuracy:

This prospect is at an elevation of about 1500 feet near the head of Wesley Falls Creek. It is in the SE1/4 sec. 10, T 14 S., R. 2 W., of the Copper River Meridian. Location is accurate to within 1000 ft. Location corresponds to site C-21 of Jansons and others (1984).

Commodities:

Main: Cu

Other: Ag, Zn

Ore minerals: Chalcopyrite, pyrrhotite

Gangue minerals:

Geologic description:

This prospect consists of chalcopyrite and pyrrhotite in fracture zones and as disseminations in the wallrocks in interbedded graywacke, slate, and volcanic rocks of the Tertiary Orca Group (Nelson and others, 1985). Four shear zones 1 to 5 feet wide cut the volcanic rocks.

Alteration:

Age of mineralization:

Probably Tertiary based on age of host rock (Nelson and others, 1985).

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

One adit observed in 1980 (Jansons and others, 1984) and reported by Grant and Higgins (1910). Two adits noted during industry exploration activity in 1986. The two adits are approximately 1/4 mile apart (B. Ellis, personal commun., 2000). Sampling and analyses during the 1980s by the U.S. Bureau of Mines (Jansons and others, 1984) resulted in the following values: Six chip samples contained 650 ppm to 4.05% Cu, 3.5 to 310 ppm Zn, and <0.1 to 1.8 ppm Ag. Two grab samples contained 4.6% and 5.2% Cu, 360 ppm and 0.15% Zn, and 8.8 ppm and 11 ppm Ag.

Production notes:

Reserves:

Inferred reserves of 800 tons @ 0.6% Cu (Jansons and others, 1984).

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Grant and Higgins, 1910; Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Celadonia Group

Site type: Prospect

ARDF no.: CV050

Latitude: 60.656 **Quadrangle:** CV C-5

Longitude: 145.513

Location description and accuracy:
This prospect is at an elevation of about 2400 feet about 2 miles east of Snyder Mountain. It is in the W1/2 sec. 13, T. 14 S., R. 2 W., of the Copper River Meridian. Location of site accurate to within 1000 ft. This prospect corresponds to location C-20 of Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals: Bornite, malachite

Gangue minerals:

Geologic description:
This prospect is hosted in interbedded volcanic and sedimentary rocks of the Tertiary Orca Group (Nelson and others, 1985). The deposit consists of three shear zones in volcanic rock that contain bornite and malachite (Jansons and others, 1984).

Alteration:
Oxidation of copper sulfide.

Age of mineralization:
Tertiary based on the age of the host rock.

Deposit model:
Possibly Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a ?

Production Status: None

Site Status: Inactive

Workings/exploration:
Three open cuts reported (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:
Site is in the Chugach National Forest.

References:
Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (east edge of Woodworth Glacier)

Site type: Occurrence

ARDF no.: CV051

Latitude: 60.94 **Quadrangle:** CV D-4

Longitude: 145.42

Location description and accuracy:

This occurrence is at an elevation of 2600 feet at the east edge of Woodworth Glacier. It is in the NW1/4 sec. 4, T. 11 S., R. 1 W., of the Copper River Meridian. The location of the site is accurate to within 2000 ft. The occurrence is shown as site C-13 in Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals: Chalcopyrite

Gangue minerals: Quartz

Geologic description:

The country rocks at this occurrence are metavolcanic rocks (greenstone) and metasedimentary rocks of the Upper Cretaceous Valdez Group. These rocks are part of a 65-mile-long belt of volcanic rocks having potential for volcanogenic massive sulfide deposits, extending to the Copper River (Nelson and others, 1984; 1985). The occurrence consists of small amounts of chalcopyrite in quartz veinlets in two shear zones in the greenstone. The shear zones are 1 to 4 feet wide. Three grab samples contained 0.12% to 1.02% Cu (Jansons and others, 1984).

Alteration:

Age of mineralization:

Late Cretaceous based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a

Production Status: None

Site Status: Inactive

Workings/exploration:

Site was sampled as part of a U.S. Bureau of Mines and U.S.G.S. mineral resource assessment of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984).

Three grab samples contained 0.12% to 1.02% Cu (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Crowe and others (1992; 1993) and Sainsbury (1993) discuss the genesis of the volcanogenic massive sulfide deposits in this area. Occurrence is on State of Alaska land.

References:

Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985; Crowe and others, 1992; Crowe and others, 1993; Sainsbury, 1993.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (northwest of Scott Glacier)

Site type: Occurrence

ARDF no.: CV052

Latitude: 60.675 **Quadrangle:** CV C-4

Longitude: 145.288

Location description and accuracy:

This occurrence is at an elevation of about 1800 feet at the northwest edge of Scott Glacier. It is in the center of sec. 7, T. 14 S., R. 1 E., of the Copper River Meridian. Accuracy of the location is within 1000 ft. This site is location C-15 of Jansons and others (1984).

Commodities:

Main: Zn

Other:

Ore minerals: Chalcopyrite, pyrite, pyrrhotite, sphalerite

Gangue minerals:

Geologic description:

This occurrence consists of talus blocks of slate and greenstone at the base of iron-stained outcrop. The slate contains chalcopyrite, pyrite, and sphalerite. The greenstone contains chalcopyrite and pyrrhotite (Jansons and others, 1984). Host rocks mapped as part of the Tertiary Orca Group (Nelson and others, 1985). Three grab samples contained from 210 ppm to 0.77% Zn.

Alteration:

Age of mineralization:

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:
Three grab samples contained from 210 ppm to 0.77% Zn.

Production notes:

Reserves:

Additional comments:
Site is in the Chugach National Forest.

References:
Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Ibach; The Sure Thing 1906

Site type: Prospect

ARDF no.: CV053

Latitude: 60.657 **Quadrangle:** CV C-4

Longitude: 145.386

Location description and accuracy:

This prospect is at an elevation of about 2100 feet on the east wall of Ibeck Creek approximately 2.5 miles north of the toe of Scott Glacier. It is in the N1/2 sec. 15, T. 14 S., R. 1 W., of the Copper River Meridian. Location accurate to within 1000 ft. Location corresponds to site C-17 in Jansons and others (1984).

Commodities:

Main: Ag, Cu, Pb, Zn

Other:

Ore minerals: Chalcopyrite, pyrite, pyrrhotite, sphalerite

Gangue minerals:

Geologic description:

This prospect is hosted in a unit of the Tertiary Orca Group consisting mostly of tabular or lenticular bodies of mafic volcanic rocks, including pillowed or massive flows, breccia and dikes (Nelson and others, 1985). Grant and Higgins (1910) reported a vein 12-20 feet wide and two miles long in the area. Jansons and others (1984) reported a 14-foot-wide shear zone in volcanic rock containing small lenses of pyrite, pyrrhotite, chalcopyrite, and sphalerite. U.S. Bureau of Mines sampling and analysis (Jansons and others, 1984) in the area yielded the following results from five chip samples: 4 ppm to 3.4% Cu, 40 ppm to 1.95% Zn, 10 ppm to 0.26% Pb, and 3.6 to 11 ppm Ag. Four grab samples contained 0.52 to 5.5% Cu, 215 ppm to 2.4% Zn, 30 ppm to 0.28% Pb, and 0.4 ppm to 14 ppm Ag.

Alteration:

Surface oxidation.

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a

Production Status: None

Site Status: Inactive

Workings/exploration:
Workings consist of an 80-foot-long adit. U.S. Bureau of Mines sampling and analysis (Jansons and others, 1984) in the area yielded the following results from five chip samples: 4 ppm to 3.4% Cu, 40 ppm to 1.95% Zn, 10 ppm to 0.26% Pb, and 3.6 to 11 ppm Ag. Four grab samples contained 0.52 to 5.5% Cu, 215 ppm to 2.4% Zn, 30 ppm to 0.28% Pb, and 0.4 ppm to 14 ppm Ag.

Production notes:

Reserves:
Inferred reserves are estimated at 3,800 tons @ 2.8% Cu, 2.2% Zn, and 10 ppm Ag (Garret, 1971).

Additional comments:
Ibeck Creek is (mis)named for Joe (?) Ibach, an early prospector in the area. Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Grant and Higgins, 1910; Garret, 1971; Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (west of lower Ibeck Creek)

Site type: Occurrence

ARDF no.: CV054

Latitude: 60.63 **Quadrangle:** CV C-4

Longitude: 145.437

Location description and accuracy:

This occurrence is at an elevation of about 2200 feet about a mile west of lower Ibeck Creek and 1/4 mile north of peak 2522. It is in the NE1/4 sec. 29, T. 14 S., R. 1 W., of the Copper River Meridian. Location accurate to within 1000 ft. Location corresponds to site C-18 in Jansons and others (1984).

Commodities:

Main: Zn

Other:

Ore minerals: Pyrite

Gangue minerals:

Geologic description:

The occurrence is hosted in a unit of the Tertiary Orca Group consisting mostly of tabular or lenticular bodies of mafic volcanic rocks, including pillowed or massive flows, breccia and dikes (Nelson and others, 1985). Rocks in the area are iron-stained and contain disseminated pyrite. One grab sample contained 0.25% Zn (Jansons and others, 1984).

Alteration:

Oxidation of sulfides.

Age of mineralization:

Probably Tertiary based on the age of the host rocks.

Deposit model:

Possibly Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

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

24a ?

Production Status: None

Site Status: Inactive

Workings/exploration:

Site examined during U.S. Bureau of Mines mineral evaluation of the Chugach National Forest (Jansons and others, 1984).

One grab sample contained 0.25% Zn (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (southwest of lower Scott Glacier)

Site type: Occurrence

ARDF no.: CV055

Latitude: 60.62 **Quadrangle:** CV C-4

Longitude: 145.319

Location description and accuracy:

This occurrence is at an elevation of about 1000 feet approximately 0.5 mile southeast of lower Scott Glacier. It is in the SE1/4 sec. 25, T. 14 S., R. 1 W., of the Copper River Meridian. Site accurate to within 1000 ft. Site is location C-16 of Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other: Ag

Ore minerals: Bornite, chalcopyrite, pyrrhotite, sphalerite

Gangue minerals:

Geologic description:

This occurrence consists of a 1000 ft. x 200 ft. outcrop area containing several shear zones up to several feet wide in slate and graywacke of the Tertiary Orca Group (Nelson and others, 1985). Sulfides, including bornite, chalcopyrite, pyrrhotite, and sphalerite, occur as lenses and disseminations both in the country rocks and in the shear zones (Jansons and others, 1984). Samples collected and analyzed by the U.S. Bureau of Mines showed the following results. Seven chip samples contained 39 ppm to 2.3% Cu, 68 ppm to 5.9% Zn, and <0.1 ppm to 29 ppm Ag. Seven grab samples contained 36 ppm to 14.8% Cu, 58 ppm to 8.7% Zn, and 0.1 ppm to 8 oz. Ag/ton.

Alteration:

Age of mineralization:

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Samples collected and analyzed by the U.S. Bureau of Mines showed the following results. Seven chip samples contained 39 ppm to 2.3% Cu, 68 ppm to 5.9% Zn, and <0.1 ppm to 29 ppm Ag. Seven grab samples contained 36 ppm to 14.8% Cu, 58 ppm to 8.7% Zn, and 0.1 ppm to 8 oz. Ag/ton (Jansons and others, 1984).

Production notes:

Reserves:

Inferred reserves of 19,300 tons @ 1.06% Cu, 2.06% Zn, and 13.6 ppm Ag (Jansons and others, 1984).

Additional comments:

Occurrence is in the Chugach National Forest.

References:

Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (north of lower Childs Glacier)

Site type: Occurrence

ARDF no.: CV056

Latitude: 60.685 **Quadrangle:** CV C-3

Longitude: 144.837

Location description and accuracy:

This occurrence is at an elevation of about 1200 feet at the north edge of lower Childs Glacier, about one mile south of Mt. O'Neel. It is in SE1/4 sec. 3, T. 14 S., R. 3 E., of the Copper River Meridian. Site is accurately located to within 1000 ft. This location as site C-10 of Jansons and others (1984).

Commodities:

Main: Cu, Zn

Other:

Ore minerals: Chalcopyrite, pyrite

Gangue minerals:

Geologic description:

This occurrence consists of pyrite and chalcopyrite disseminated in interbedded slate and greenstone of the Upper Cretaceous Valdez Group (Nelson and others, 1985). Four grab samples collected and analyzed by the U.S. Bureau of Mines contained 34 ppm to 0.64% Cu, and 110 ppm to 0.17% Zn (Jansons and others, 1984). This site is at the eastern end of a 65-mile-long belt of similar rocks that to the west host massive sulfide deposits (Nelson and others, 1984; 1985; Crowe and others, 1992).

Alteration:

Age of mineralization:

Late Cretaceous based on the age of the host rocks.

Deposit model:

Besshi massive sulfide (Cox and Singer, 1986; model 24b)

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

24b

Production Status: None

Site Status: Inactive

Workings/exploration:

Site examined during U.S. Bureau of Mines and U.S.G.S. mineral resource assessment of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984).

Four grab samples collected and analyzed by the U.S. Bureau of Mines contained 34 ppm to 0.64% Cu, and 110 ppm to 0.17% Zn (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985; Crowe and others, 1992.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (north wall Grinnell Glacier)

Site type: Occurrence

ARDF no.: CV057

Latitude: 60.727 **Quadrangle:** CV C-3

Longitude: 144.781

Location description and accuracy:

This occurrence is at an elevation of about 2200 feet on the north wall of Grinnell Glacier. It is in SE1/4 sec. 24, T. 13 S., R. 3 E., of the Copper River Meridian. Site is accurately located to within 1000 ft. This location is site C-11 of Jansons and others (1984).

Commodities:

Main: Cu

Other: Zn

Ore minerals: Arsenopyrite, chalcopyrite, malachite, pyrite, pyrrhotite, sphalerite

Gangue minerals: Quartz, sericite

Geologic description:

This occurrence consists of sulfide-bearing shear zones 2 to 10 feet wide in slate and greenstone of the Upper Cretaceous Valdez Group (Nelson and others, 1985). Ore minerals include arsenopyrite, chalcopyrite, malachite, pyrite, and pyrrhotite. Four chip samples collected and analyzed by the U.S. Bureau of Mines contained 255 ppm to 0.13% Cu; nine grab samples contained 13 ppm to 0.19% Cu (Jansons and others, 1984). This site is at the eastern end of a 65-mile-long belt of similar rocks that to the west host massive sulfide deposits (Nelson and others, 1984; 1985; Crowe and others, 1992).

A massive-sulfide boulder found on the south side of Grinnel Glacier contained 30% pyrite, 3% chalcopyrite, 1% sphalerite in a quartz-sericite gangue (Kodosky and Teller, 1989). Assays of selected samples ranged from 1100 ppm to 1.8% Cu.

Alteration:

Local alteration of copper minerals.

Age of mineralization:

Late Cretaceous based on the age of the host rocks.

Deposit model:

Besshi massive sulfide (Cox and Singer, 1986; model 24b)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24b

Production Status: None

Site Status: Inactive

Workings/exploration:
Site examined during U.S. Bureau of Mines and U.S.G.S. mineral resource assessment of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984). Site also examined in 1988 by Kodosky and Teller (1989) for the Chugach Alaska Corporation. Their evaluation indicated some potential for copper mineralization.

Four chip samples collected and analyzed by the U.S. Bureau of Mines contained 255 ppm to 0.13% Cu; nine grab samples contained 13 ppm to 0.19% Cu (Jansons and others, 1984). A massive-sulfide boulder found on the south side of Grinnel Glacier contained 30% pyrite, 3% chalcopyrite, 1% sphalerite in a quartz-sericite gangue. Assays of selected samples ranged from 1100 ppm to 1.8% Cu.

Production notes:

Reserves:

Additional comments:
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985; Kodosky and Teller, 1989; Crowe and others, 1992.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (north wall of Shiels Glacier)

Site type: Occurrence

ARDF no.: CV058

Latitude: 60.88 **Quadrangle:** CV D-3

Longitude: 144.76

Location description and accuracy:

This occurrence site is at an elevation of 2700 feet on the north wall of Shiels Glacier. It is in the SE1/4 sec. 30, T. 11 S., R. 4 E., of the Copper River Meridian. The location of the site is accurate to within 2000 ft. The occurrence is shown as site C-12 in Jansons and others (1984).

Commodities:

Main: Pb, Zn

Other: Ag, Au

Ore minerals: Galena, pyrite, pyrrhotite, sphalerite

Gangue minerals:

Geologic description:

The country rocks at this occurrence are metavolcanic rocks (greenstone) and metasedimentary rocks of the Upper Cretaceous Valdez Group. These rocks are part of a 65-mile-long belt of volcanic rocks having potential for volcanogenic massive sulfide deposits, extending to the Copper River (Nelson and others, 1984; 1985). The metavolcanic rocks contain disseminations and lenses of pyrite and pyrrhotite, and disseminations of galena and sphalerite. Two grab samples from talus contained 0.03 ppm and 5.0 ppm Au, 34 ppm and 0.92% Zn, 47 ppm and 0.20% Pb, and 5.4 ppm and 11.2 ppm Ag (Jansons and others, 1984). Pan-concentrate samples from the area contained 1000 ppm Au, 1000 ppm Ag, 1% As, and 3000 ppm Pb (Goldfarb and others, 1984). Kodosky and Teller (1989) report that the average gold value for pan-concentrate samples in this drainage is 5791 ppb. The average assays of two rock samples are 858 ppb and 1348 ppb Au, and 1750 ppm and 1038 ppm Pb.

Alteration:

Age of mineralization:

Late Cretaceous based on the age of the host rocks.

Deposit model:
Cyprus massive sulfide (Cox and Singer, 1986; model 24a) and/or Chugach-type low-sulfide gold-quartz veins (Bliss, 1992; model 36a.1)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24a and/or 36a.1

Production Status: None

Site Status: Inactive

Workings/exploration:
Site was sampled as part of a U.S. Bureau of Mines and U.S.G.S. mineral resource assessment of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984). Site was also examined by private industry in 1988 (Kodosky and Teller,1989). Kodosky and Teller (1989) concluded that the drainage area had a very high probability of containing a gold-bearing quartz system. Their average gold value for pan-concentrate samples in this drainage is 5791 ppb. The average assays of two rock samples are 858 ppb and 1348 ppb Au, and 1750 ppm and 1038 ppm Pb.

Production notes:

Reserves:

Additional comments:
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Goldfarb and others, 1984; Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985; Kodosky and Teller, 1989.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (below McCune/Heney Glaciers)

Site type: Occurrences

ARDF no.: CV059

Latitude: 60.92 **Quadrangle:** CV D-3

Longitude: 144.75

Location description and accuracy:

This site includes a placer occurrence and a lode occurrence. The placer occurrence includes the drainage below McCune Glacier and the southern outwash area of Heney Glacier. The placer covers an area of about 3 square miles. The map site is at about the midpoint of the placer, in the NE1/4 sec. 18, T. 11 S., R. 4 E., of the Copper River Meridian; the location is accurate to within 2000 ft. This site corresponds to loc. P-5 in Jansons and others (1984), which presumably represents both the placer and the lode occurrences.

Commodities:

Main: Au, Pb

Other:

Ore minerals: Galena, pyrrhotite

Gangue minerals: Quartz

Geologic description:

The placer occurrence consists of small amounts of gold in alluvial and colluvial gravels derived from underlying metasedimentary rocks of the Upper Cretaceous Valdez Group (Nelson and others, 1985), and from the dunes near the terminus of Heney Glacier (Kodosky and Teller, 1989). A 0.1- cubic-yard sample assayed 0.0006 oz. Au/cubic yard (Jansons and others, 1984). In addition to the placer occurrence, Jansons and others (1984) describe a shear zone in Valdez Group metasedimentary and metavolcanic rocks in this area that contains galena and pyrrhotite. Analysis of a sample from the shear zone contained 0.14% Pb.

Alteration:

Age of mineralization:

Placer Au is Holocene. Sulfide mineralization is Late Cretaceous or younger, based on the age of the host rocks.

Deposit model:

Placer Au (Cox and Singer, 1986; model 39a) and Cyprus massive sulfide (Cox and Singer, 1986; model 24a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
39a and 24a

Production Status: None

Site Status: Inactive

Workings/exploration:
Site was sampled as part of a U.S. Bureau of Mines and U.S.G.S. mineral resource assessment of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984). The area near the terminus of Heney Glacier was examined by industry in 1988 for placer gold (Kodosky and Teller, 1989).

Production notes:

Reserves:

Additional comments:
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985; Kodosky and Teller, 1989.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (tributary to Copper River)

Site type: Occurrence

ARDF no.: CV060

Latitude: 60.89 **Quadrangle:** CV D-2

Longitude: 144.71

Location description and accuracy:

This placer occurrence is along a creek between Shiels Glacier and the Copper River. The placer extends 1.5 miles upstream from the Copper River. The map site is at the mid-point of the placer, in the S1/2 sec. 21, T. 11 S., R. 4 E., of the Copper River Meridian. The location of the site is accurate to within 2000 ft. The occurrence is shown as site P-4 in Jansons and others (1984).

Commodities:

Main: Au

Other:

Ore minerals:

Gangue minerals:

Geologic description:

This occurrence consists of small amounts of placer gold in alluvial and colluvial gravels derived from underlying metasedimentary rocks of the Upper Cretaceous Valdez Group (Nelson and others, 1985). A 0.1-cubic-yard sample contained 0.0009 oz. Au/cubic yard (Jansons and others, 1984).

Alteration:

Age of mineralization:

Holocene.

Deposit model:

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

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

39a

Production Status: None

Site Status: Inactive

Workings/exploration:

Site was sampled as part of a U.S. Bureau of Mines and U.S.G.S. mineral resource assessment of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984).

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (below Shiels Glacier)

Site type: Occurrence

ARDF no.: CV061

Latitude: 60.88 **Quadrangle:** CV D-2

Longitude: 144.69

Location description and accuracy:
This placer is in the main drainage from Shiels Glacier. The map site is at the midpoint of the placer, which extends for about 2 miles upstream from Nels Miller Slough. It is in the SE1/4 sec. 28, T. 11 S., R. 4 E., of the Copper River Meridian. The location of the site is accurate to within 2000 ft. The occurrence is shown as site P-3 in Jansons and others (1984).

Commodities:

Main: Au

Other:

Ore minerals:

Gangue minerals:

Geologic description:
This occurrence consists of small amounts of placer gold in alluvial and colluvial gravels derived from underlying metasedimentary rocks of the Upper Cretaceous Valdez Group (Nelson and others, 1985). A 0.1-cubic-yard sample assayed 0.0007 oz. Au/cubic yard (Jansons and others, 1984).

Alteration:

Age of mineralization:
Holocene.

Deposit model:
Placer Au (Cox and Singer, 1986; model 39a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
39a

Production Status: None

Site Status: Inactive

Workings/exploration:

Exploration by industry in 1988 concluded that recent deglaciation and the steep gradient along Shiels Creek preclude the existence of a significant gold placer deposit (Kodosky and Teller, 1989).

Production notes:

Reserves:

Additional comments:

Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:

Jansons and others, 1984; Nelson and others, 1984; Kodosky and Teller, 1989.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Standard Mines

Site type: Prospect

ARDF no.: CV062

Latitude: 60.95 **Quadrangle:** CV D-2

Longitude: 144.38

Location description and accuracy:
This prospect is at an elevation of about 4500 ft. on a ridge 1.7 miles south of VABM Eagle. It is in the NE1/4 sec. 5, T. 11 S., R. 6 E., of the Copper River Meridian. The location of the site is accurate to within 2000 ft. This prospect is shown as #30 in Cobb (1972: MF-392).

Commodities:

Main: Au, Pb

Other:

Ore minerals: Chalcopyrite, galena, pyrite

Gangue minerals: Quartz

Geologic description:
The country rock at this prospect is schist of the Upper Cretaceous Valdez Group (Moffit, 1914). The deposit consists of a quartz vein about one foot thick containing chalcopyrite, galena, and pyrite. Assays indicate 2.9 oz. Au/ton or higher (Moffit, 1914).

Alteration:

Age of mineralization:
Late Cretaceous or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Moffit (1914) reports a shallow vertical shaft at the prospect.

Production notes:

Reserves:

Additional comments:
Located on lands within Wrangell-St. Elias National Park.

References:
Moffit, 1914; Cobb, 1972 (MF-392).

Primary reference: Moffit, 1914

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (Bremner River aboveThreemile Canyon)

Site type: Prospect

ARDF no.: CV063

Latitude: 61 **Quadrangle:** CV D-1

Longitude: 144.15

Location description and accuracy:
This mile-long placer prospect is along the Bremner River just upstream from Threemile Canyon. The map site is at the midpoint of the placer, in SW1/4 sec. 15, T. 10 S., R. 7 E., of the Copper River Meridian. The location of the site is accurate to within 2000 ft. The prospect is shown as #31 in Cobb (1972: MF-392).

Commodities:

Main: Au

Other:

Ore minerals:

Gangue minerals:

Geologic description:
This prospect consists of small amounts of placer gold in alluvium derived from Upper Cretaceous Valdez Group metamorphic rocks (Winkler and Plafker (1981). According to Moffit (1914), high benches of glacial outwash behind a ridge of shale formerly dammed the river and formed a lake, producing a site of gold deposition. The gold is too fine and too sparse to have interested prospectors.

Alteration:

Age of mineralization:
Holocene.

Deposit model:
Placer Au (Cox and SInger, 1986; model 39a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
39a

Production Status: Undetermined.

Site Status: Inactive

Workings/exploration:
Unknown.

Production notes:

Reserves:

Additional comments:
Located on lands within Wrangell-St. Elias National Park.

References:
Moffit, 1914; Cobb, 1972 (MF 392); Winkler and Plafker, 1981.

Primary reference: Moffit, 1914

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (north bank of upper Sheep Creek)

Site type: Occurrence

ARDF no.: CV064

Latitude: 60.567 **Quadrangle:** CV C-2

Longitude: 144.725

Location description and accuracy:
This occurrence is at an elevation of about 300 feet on the north bank of upper Sheep Creek. It is in the SE1/4 sec. 17, T. 15 S., R. 4 E., of the Copper River Meridian. Location of the site is accurate to within 1000 ft. Site is location C-4 in Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals: Chalcopyrite, malachite

Gangue minerals:

Geologic description:
Site is described as an outcrop of Tertiary Orca Group slate (Nelson and others, 1985) stained with malachite. One 6-inch-wide shear zone contains chalcopyrite. Analysis of one grab sample indicated 0.51% Cu (Jansons and others, 1984).

Alteration:

Age of mineralization:

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:
Site examined during U.S. Bureau of Mines and U.S.G.S. mineral resource assessment

of the Chugach National Forest (Jansons and others, 1984; Nelson and others, 1984). Analysis of one grab sample indicated 0.51% Cu (Jansons and others, 1984).

Production notes:

Reserves:

Additional comments:
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Jansons and others, 1984; Nelson and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (south-central Hinchinbrook Island)

Site type: Occurrence

ARDF no.: CV065

Latitude: 60.352 **Quadrangle:** CV B-7

Longitude: 146.425

Location description and accuracy:
This site is located on Hinchinbrook Island and occupies an area of approximately 0.25 sq. mi. in the center of sec. 34, T. 17 S., R. 7 W., of the Copper River Meridian. The center of the area is at approximately the 1500 ft elevation. Location is accurate to within 600 ft. Shown as site C-98 in Jansons and others (1984).

Commodities:

Main: Mn

Other: Ba, Fe, Zn

Ore minerals: Barite, bementite, birressite, rancieite, todorokite

Gangue minerals:

Geologic description:
This occurrence consists of a 30 x 90 ft. outcrop area of manganese-bearing nodules and encrustations in an interbedded sequence of sedimentary and volcanic rocks of the Tertiary Orca Group (Nelson and others, 1985). The occurrence is interpreted as a sedimentary manganese deposit developed on the sea floor (Goodfellow and others, 1984). Selected samples contained 29-35% Mn, 14% Fe, 6700 ppm Ba, 3400 ppm Zn (Goodfellow and others, 1984).

Alteration:

Age of mineralization:
Probably Tertiary based on the age of the host rocks.

Deposit model:
Volcanogenic Mn (Cox and Singer, 1986; model 24c)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
24c

Production Status: None

Site Status: Inactive

Workings/exploration:

Site discovered during regional geologic mapping (Nelson and others, 1985). Minor interest by industry during exploration activity in mid-1980s.

Selected samples contained 29-35% Mn, 14% Fe, 6700 ppm Ba, 3400 ppm Zn (Goodfellow and others, 1984).

Production notes:

Reserves:

Additional comments:

Location is within the Chugach National Forest.

References:

Goodfellow and others, 1984; Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Goodfellow and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Tansey 2

Site type: Prospect

ARDF no.: CV066

Latitude: 60.464 **Quadrangle:** CV B-6

Longitude: 145.944

Location description and accuracy:
The prospect is at an elevation of less than 100 feet at the southwest tip of the Heney Range peninsula. It is in the SW1/4 sec. 21, T. 16 S., R. 4 W., of the Copper River Meridian. Site is SE of VABM Camp and is accurately located to within 1000 ft. Shown as site C-43 by Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals:

Gangue minerals: Quartz

Geologic description:
This prospect reportedly consists of quartz veinlets in Orca Group slate (Jansons and others, 1984). One grab sample collected in the early 1980s contained 42 ppm Cu.

Alteration:

Age of mineralization:
Probably Tertiary based on the age of the host rock (Nelson and others, 1985).

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:
Open cut reported by Jansons and others (1984). However, site could not be found dur-

ing exploration by private industry in 1986 (Bill Ellis, personal commun., Jan. 2000). One grab sample collected in the early 1980s contained 42 ppm Cu.

Production notes:

Reserves:

Additional comments:
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (near Hartney Bay)

Site type: Occurrence

ARDF no.: CV067

Latitude: 60.49 **Quadrangle:** CV B-6

Longitude: 145.9

Location description and accuracy:
This site is at an elevation of about 100 feet, approximately 1/4 mile south of Big Point in Hartney Bay. It is in the SE1/4 sec. 10, T. 16 S., R. 4 W., of the Copper River Meridian and is accurately located to within 2000 ft. Shown as site C-40 by Jansons and others (1984).

Commodities:

Main: Cu

Other:

Ore minerals: Pyrite, pyrrhotite

Gangue minerals:

Geologic description:
This occurrence consists of disseminated pyrite and pyrrhotite hosted in Orca Group volcanic rocks (Jansons and others, 1984).

Alteration:

Age of mineralization:
Probably Tertiary based on the age of the Orca Group volcanic rocks (Nelson and others, 1985).

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Unknown. This site could not be found in 1980 or 1986 (Jansons and others, 1984; B. Ellis, personal commun., 2000).

Production notes:

Reserves:

Additional comments:
Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Jansons and others, 1984; Nelson and others, 1985.

Primary reference: Jansons and others, 1984

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed [on Pete Dahl (Copper Sands) Island]

Site type: Occurrence

ARDF no.: CV068

Latitude: 60.35 **Quadrangle:** CV B-5

Longitude: 145.54

Location description and accuracy:
This site is located on a barrier island in the Copper River delta. Older maps refer to this island as Pete Dahl Island (Reimnitz and Plafker, 1976); current maps name this island Copper Sands. The map site is in the SW1/4 sec. 35, T. 17 S., R. 2 W., of the Copper River Meridian. Accuracy of the location is within 1 mile.

Commodities:

Main: Au

Other: Cr, Fe, Mn, Ni, Ti, V, Zr

Ore minerals: Native gold

Gangue minerals: Beach sand

Geologic description:
This occurrence consists of widespread beach and flood plain black sand deposits containing heavy minerals. Input of sands is from the Copper River where the supply of material is high. Reimnitz and Plafker (1976) report that the sands extend offshore to depths up to 50 m. They also report that the beaches of the Copper River delta contain as much gold and other heavy minerals as beaches that have been mined elsewhere along this coast. One analysis from a 5-cm-thick surface layer from the west end of the island contained 0.25 ppm Au (Reimnitz and Plafker, 1976).

Alteration:

Age of mineralization:
Recent beach sands.

Deposit model:
Placer gold (Cox and Singer, 1986; model 39a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
39a

Production Status: None

Site Status: Inactive

Workings/exploration:

One analysis from a 5-cm-thick surface layer from the west end of the island contained 0.25 ppm Au (Reimnitz and Plafker, 1976).

Production notes:

Reserves:

Additional comments:

Islands in the Copper River delta change shape considerably due to storms and sedimentation supply. The islands are in the Chugach National Forest.

References:

Reimnitz and Plafker, 1976.

Primary reference: Reimnitz and Plafker, 1976

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): McKinley Lake mine, Rilley Group, Lucky Strike prospect, Bear Creek prospect (McKinley Lake gold camp)

Site type: Mine and prospects

ARDF no.: CV069

Latitude: 60.4807 **Quadrangle:** CV B-4

Longitude: 145.193

Location description and accuracy:

This location includes the McKinley Lake mine, the Rilley Group prospect , the Lucky Strike prospect , and the Bear Creek prospect. The map site is the center of an approximately 0.75 square mile area north of McKinley Lake that contains these mines and prospects. It is in S1/2 sec. 15, T. 16 S., R. 1 E., of the Copper River Meridian. Accuracy of location is within 400 ft. The site corresponds to localities C-6 to C-9 in Jansons and others (1984), and locality 29 in Cobb (1972: MF-392).

Commodities:

Main: Au

Other: Ag, As, Sb

Ore minerals: Native gold, pyrite, stibnite

Gangue minerals: Quartz

Geologic description:

The deposits at this site consist of reportedly auriferous quartz veins in Tertary Orca Group sedimentary rocks adjacent to the 51.6 Ma McKinley Lake pluton (Winkler and Plafker, 1981). Schrader and Spencer (1901) report that the veins both parallel and crosscut the bedding in the host rock. They also report large amounts of visible gold in the quartz. Haney and Jansons (1987) report three major quartz veins and quartz stockworks from a few inches up to 40 ft. thick. They note that the veins are parallel to bedding in the host rock. Minerals noted by them include pyrite, stibnite, and gold. Analyses of samples from two adits at McKinley Lake contained 0.005 to 0.107 oz. Au/ton and 0.2 oz. Ag/ton. Samples from the mill site contained 25-50 ppm Au and 2.6 ppm Ag (Jansons and others, 1984). Goldfarb and others (1992) report anomalous values of Ag, As, and Au in concentrate samples from streams draining the nearby granite stock. They consider the granite to be the heat source for the mineralizing event.

Alteration:

Age of mineralization:

Tertiary (51 Ma) based on the age of the mineralizing event (Goldfarb and others, 1992).

Deposit model:

Chugach-type low sulfide Au-quartz veins (Bliss, 1992; Goldfarb and others, 1986)

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

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:

Five adits ranging from 18-569 ft.; one shaft and numerous open cuts. Ball mill on site.

Analyses of samples from two adits at McKinley Lake contained 0.005 to 0.107 oz. Au/ton and 0.2 oz. Ag/ton. Samples from the mill site contained 25-50 ppm Au and 2.6 ppm Ag (Jansons and others, 1984). Goldfarb and others (1992) report anomalous values of Ag, As, and Au in concentrate samples from streams draining the nearby granite stock.

Production notes:

16 oz. Au and 9 oz. Ag apparently produced in the early 1900s (Schrader and Spencer, 1901).

Reserves:

Additional comments:

Site is in Chugach National Forest.

References:

Schrader and Spencer, 1901; Cobb, 1972 (MF-392); Winkler and Plafker, 1981; Jansons and others, 1984; Goldfarb and others, 1986; Goldfarb and others, 1992; Haney and Jansons, 1987; Bliss, 1992.

Primary reference: Haney and Jansons, 1987

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

Site name(s): Unnamed (Don Miller Hills area)

Site type: Occurrences

ARDF no.: CV070

Latitude: 60.24 **Quadrangle:** CV A-1

Longitude: 144.33

Location description and accuracy:

This site represents several occurrences in an approximately 30 square mile area in the Don Miller Hills. The roughly arcuate area is bounded on the east by the Bering River, on the west by the Katalla River, on the north by Bering Lake, and on the south by Redwood and Burls Creeks. The map site is about at the center of this area, on Peak 2067 in the pass between Rope Creek and Split Creek drainages. It is in the N1/2 sec. 10, T 19 S, R 6 E, of the Copper River Meridian.

Commodities:

Main: Zn

Other: Ag, Ba, Cu, Fe, Mo, Pb

Ore minerals: Barite, pyrite, sphalerite

Gangue minerals:

Geologic description:

These occurrences consist of anomalous metal values in geochemical samples from drainages in the area. The metals are thought to come from organic-rich shales in continental clastic rocks of Eocene to Miocene age (Goldfarb and others, 1992), intercalated with marine mafic volcanic rocks in the Poule Creek Formation (Winkler and Plafker, 1991). Heavy mineral concentrates contain abundant barite, pyrite, and sphalerite. Analyses of concentrates yielded values of up to 5000 ppm Ba, >2% Zn, and 10%-30% Fe. Anomalous values of Ag, Cu, Mo, and Pb were also detected (Goldfarb and others, 1992).

Alteration:

Age of mineralization:

The occurrences are considered to be Eocene to Miocene based on the age of the host rocks.

Deposit model:

Possibly sedimentary-exhalative Pb-Zn (Cox and Singer, 1986; model 31a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
31a ?

Production Status: None

Site Status: Inactive

Workings/exploration:
None, however, investigations of similar geochemical anomalies to the south on Kayak Island (Pickthorn and others, 1985) failed to find any outcrops containing minerals that could be the source of the anomalous metal values in the geochemical samples (Goldfarb and others, 1992).

Heavy mineral concentrates contain abundant barite, pyrite, and sphalerite. Analyses of concentrates yielded values of up to 5000 ppm Ba, >2% Zn, and 10%-30% Fe. Anomalous values of Ag, Cu, Mo, and Pb were also detected (Goldfarb and others, 1992).

Production notes:

Reserves:

Additional comments:
This and other geologically similar areas in the Cordova quadrangle warrant further investigation (Nelson and others, 1994). Chugach Alaska Corporation, Anchorage, Alaska has control of these lands.

References:
Pickthorn and others, 1985; Winkler and Plafker, 1991; Goldfarb and others, 1992; Nelson and others, 1994.

Primary reference: Goldfarb and others, 1992

Reporter(s): S.W. Nelson, Anchorage, AK

Last report date: 6/10/2000

References

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