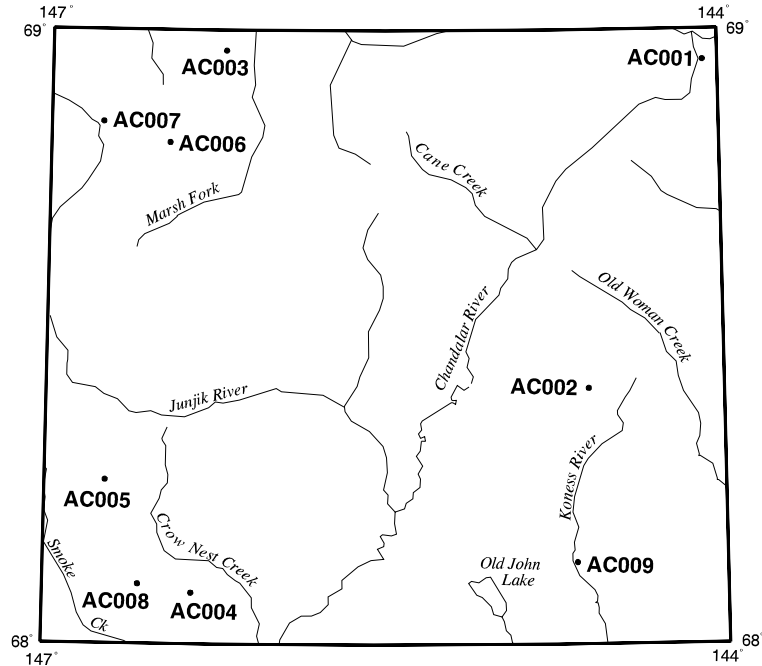


U.S. Department of the Interior - U.S. Geological Survey

Arctic quadrangle

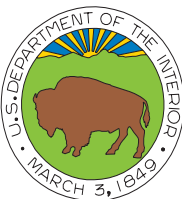
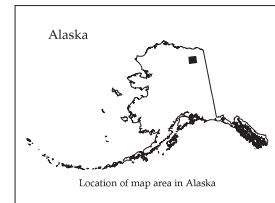
Descriptions of the mineral occurrences shown on the accompanying figure follow. See U.S. Geological Survey (1996) for a description of the information content of each field in the records. The data presented here are maintained as part of a statewide database on mines, prospects and mineral occurrences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



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

This and related reports are accessible through the USGS World Wide Web site <http://www-mrs-ak.wr.usgs.gov/ardf>. Comments or information regarding corrections or missing data, or requests for digital retrievals should be directed to:

F.H. Wilson
 U.S. Geological Survey
 4200 University Dr.
 Anchorage, AK 99508-4667
 Voice: (907) 786-7448
 e-mail: fwilson@usgs.gov



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



Site name(s): Chandalar River Headwaters**Site Type:** Occurrence**ARDF no.:** AC001**Latitude:** 68.95**Quadrangle:** AC D-1**Longitude:** 144.07**Location description and accuracy:**

Location plotted is locality 46 of Brosge and Reiser (1976, sheet 4) and cited on by Cobb and others (1981, p. A4); in headwater area of Chandalar River; within 3 miles (4.8 km).

Commodities:**Main:** Cu**Other:****Ore minerals:** Malachite, azurite**Gangue minerals:****Geologic description:**

Malachite and azurite in Devonian sandstone.

Alteration:**Age of mineralization:****Deposit model:**

Lode; disseminated, Cu in sandstone

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):**Production Status:** No**Site Status:** Inactive**Workings/exploration:****Production notes:****Reserves:**

Additional comments:

References:

Brosge and Reiser (1976); Grybeck (1977); Barker (1978); Cobb and others (1981)

Primary reference: Brosge and Reiser (1976)

Reporter(s): M.T. Powers; D.F. Huber

Last report date: 6/30/92

Site name(s): Koness River Headwaters**Site Type:** Occurrence**ARDF no.:** AC002**Latitude:** 68.42**Quadrangle:** AC B-1**Longitude:** 144.6**Location description and accuracy:**

Location plotted is locality 30 of Barker (1978, p. 14) and cited by Cobb and others (1981, p. A4); in headwater area of Koness River; within one mile (1.6 km).

Commodities:**Main:** Cu**Other:** Co, Mn, Zn**Ore minerals:** Malachite**Gangue minerals:** Pyrite**Geologic description:**

Malachite and pyrite in green shale associated with red hematitic shales.

Alteration:**Age of mineralization:****Deposit model:**

Lode; disseminated, Cu in shale.

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):**Production Status:** No**Site Status:** Inactive**Workings/exploration:**

Stream sediment samples from area contain more than 1% Mn (Cobb and others, 1981, p. A4).

Production notes:

Reserves:

Additional comments:

See MAS/MILS Sequence # 0020240002, USBM (1995)

References:

Cobb and others (1981); Barker (1978); USBM (1995).

Primary reference: Cobb and others (1981)

Reporter(s): M.T. Powers; D.F. Huber

Last report date: 6/30/92

Site name(s): Unnamed

Site Type: Occurrence

ARDF no.: AC003

Latitude: 68.97

Quadrangle: AC D-4

Longitude: 146.22

Location description and accuracy:

Location plotted is locality 16 of Barker (1978, p. 14) and cited by Cobb and others (1981, p. A5); on Marsh Fork of Canning River; within one mile (1.6 km).

Commodities:

Main: Cu

Other:

Ore minerals: Malachite, chalcopyrite

Gangue minerals: Pyrite

Geologic description:

Malachite, disseminated pyrite, and chalcopyrite in gray chert and silicic siltstone.

Alteration:

Age of mineralization:

Deposit model:

Lode, disseminated Cu in sedimentary rocks.

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

Production Status: No

Site Status: Inactive

Workings/exploration:

Production notes:

Reserves:

Additional comments:

References:

Cobb and others (1981); Barker (1981)

Primary reference: Cobb and others (1981)

Reporter(s): M.T. Powers; D.F. Huber

Last report date: 6/30/92

Site name(s): Unnamed

Site Type: Occurrence

ARDF no.: AC004

Latitude: 68.08

Quadrangle: AC A-4

Longitude: 146.35

Location description and accuracy:

Location plotted is locality 9 of Barker (1978, p. 14) and cited by Cobb and others (1981, p. A4); between Smoke Creek and Crow Nest Creek, tributaries of Chandalar River; within one mile (1.6 km).

Commodities:

Main: Cu

Other:

Ore minerals: Chalcopyrite, bornite, malachite

Gangue minerals: Siderite, limonite

Geologic description:

Siderite, limonite, chalcocite, and traces of bornite and malachite in fine to medium-grained andesitic tuff.

Alteration:

Age of mineralization:

Deposit model:

Lode; disseminated, Cu in volcanic tuff.

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

Production Status: No

Site Status: Inactive

Workings/exploration:

Production notes:

Reserves:

Additional comments:

References:

Cobb and others (1981); Barker (1978)

Primary reference: Barker (1978)

Reporter(s): M.T. Powers; D. F. Huber

Last report date: 6/30/92

Site name(s): Unnamed

Site Type: Occurrence

ARDF no.: AC005

Latitude: 68.27

Quadrangle: AC B-5

Longitude: 146.73

Location description and accuracy:

Location plotted is locality 12 of Barker (1978, p. 14) and cited by Cobb and others (1981, p. A4); headwaters of Crow Nest Creek; within one mile (1.6 km).

Commodities:

Main: Cu

Other:

Ore minerals: Malachite

Gangue minerals:

Geologic description:

Malachite along cleavages in upper Devonian green shale associated with red hematitic shales.

Alteration:

Age of mineralization:

Deposit model:

Lode; disseminated, Cu in shale

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

Production Status: No

Site Status: Inactive

Workings/exploration:

A sample of green shale contained 4200 ppm Cu (Cobb and others, 1981, p. A4; Barker, 1978, p. 20, loc. 12).

Production notes:

Reserves:

Additional comments:

References:

Cobb and others (1981); Barker (1978)

Primary reference: Barker (1978)

Reporter(s): M.T. Powers; D.F. Huber

Last report date: 6/30/92

Site name(s): Porcupine Lake**Site Type:** Occurrence**ARDF no.:** AC006**Latitude:** 68.82**Quadrangle:** AC D-5**Longitude:** 146.47**Location description and accuracy:**

Location plotted is locality 14 of Barker (1978, p. 14) and cited by Cobb and others (1981, p. A4); north side of Porcupine Lake, in headwaters area of Marsh Fork of Canning River; within one mile (1.6 km).

Commodities:**Main:** F**Other:****Ore minerals:** Fluorite**Gangue minerals:****Geologic description:**

Fluorite cobbles and small boulders; generally purple. Host rock is carbonaceous, argillaceous chert.

Alteration:**Age of mineralization:****Deposit model:****Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):****Production Status:** No**Site Status:** Inactive**Workings/exploration:**

Two samples contain 21% and 34% CaF₂, and one contained a trace of Pb (Barker, 1978, p. 20, loc. 14).

Production notes:

Reserves:

Additional comments:

References:

Cobb and others (1981); Barker (1978)

Primary reference: Cobb and others (1981)

Reporter(s): J.M. Schmidt

Last report date: 10/14/92

Site name(s): Ivishak River**Site Type:** Occurrence**ARDF no.:** AC007**Latitude:** 68.85**Quadrangle:** AC D-5**Longitude:** 146.77**Location description and accuracy:**

Location plotted is locality 15 of Barker (1978, p. 14) and cited by Cobb and others (1981, p. A4); near headwaters of Ivishak River; within one mile (1.6 km).

Commodities:**Main:** F**Other:****Ore minerals:** Fluorite**Gangue minerals:** Pyrite**Geologic description:**

Fluorite and pyrite occur as veinlets and fracture fillings in siliceous sedimentary rocks.

Alteration:**Age of mineralization:****Deposit model:**

Lode; fluorite veinlets

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):**Production Status:** No**Site Status:** Inactive**Workings/exploration:****Production notes:****Reserves:**

Additional comments:

References:

Cobb and others (1981); Barker (1978)

Primary reference: Cobb and others (1981)

Reporter(s): J.M. Schmidt

Last report date: 10/14/92

Site name(s): Unnamed

Site Type: Occurrence

ARDF no.: AC008

Latitude: 68.1

Quadrangle: AC A-5

Longitude: 146.58

Location description and accuracy:

Location plotted is locality 13 of Barker (1978, p. 14); west of Crow Nest Creek, tributary of Chandalar River; within one mile (1.6 km).

Commodities:

Main: Cu

Other:

Ore minerals:

Gangue minerals:

Geologic description:

Calcite veins in Skajit limestone

Alteration:

Age of mineralization:

Deposit model:

Lode; Cu in carbonate

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

Production Status: No

Site Status: Inactive

Workings/exploration:

Sample of calcite vein contains 9.2% Cu

Production notes:

Reserves:

Additional comments:

References:

Barker (1978)

Primary reference: Barker (1978)

Reporter(s): J.M. Schmidt

Last report date: 10/14/92

Site name(s): Unknown

Site Type: Occurrence

ARDF no.: AC009

Latitude: 68.13

Quadrangle: AC A-2

Longitude: 144.66

Location description and accuracy:

Lower Koness River area; within one mile (1.6 km)

Commodities:

Main: Co

Other:

Ore minerals:

Gangue minerals:

Geologic description:

Not available

Alteration:

Age of mineralization:

Deposit model:

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

Production Status: No

Site Status: Inactive

Workings/exploration:

Production notes:

Reserves:

Additional comments:

References:

USBM (1995), MAS/MILS Sequence # 0020240001

Primary reference: USBM (1995)

Reporter(s): J.H. Dover

Last report date: 2/12/88

References

- Barker, J.C., 1978, Mineral Investigations of certain lands in the eastern Brooks Range: a summary report: US Bureau of Mines Open File No. 63-78
- Barker, J.C., 1981, Mineral investigations of certain lands in the eastern Brooks Range, 1978: US Bureau of Mines Open File No. 37-81, 288 p.
- Bliss, J.D., ed., 1992 Developments in mineral deposit modeling: US Geological Survey Bulletin 2004, 168 p.
- Brosge, W.P., and Reiser, H.N., 1976, Preliminary geologic and mineral resource maps (excluding petroleum), Arctic National Wildlife Range, Alaska: US Geological Survey Open-File Report 76-539
- Cobb, E.H., Mayfield, C.F., and Brosge, W.P., 1981, Summaries of data on and lists of references to metallic and selected non-metallic mineral occurrences in eleven quadrangles in northern Alaska--summaries of data to January 1, 1981: US Geological Survey Open-File Report 81-767A, 25 p.
- Cobb, E.H., Mayfield, C.F., and Brosge, W.P., 1981, Summaries of data on and lists of references to metallic and selected non-metallic mineral occurrences in eleven quadrangles in northern Alaska--summaries of data to January 1, 1981: US Geological Survey Open-File Report 81-767B, 15 p.
- Cox, D.P., and Singer, D.A., eds., 1986, Mineral deposit models: US Geological Survey Bulletin 1992, 379 p.
- Grybeck, D., 1977, Known mineral deposits of the Brooks Range, Alaska: US Geological Survey Open-File Report 77-166C, p. 41.
- US Bureau of Mines, 1995, Spatial data extracted from the Minerals Availability System/Mineral Industry Location System (MAS/MILS): US Bureau of Mines Special Publication 12-95 (CD-ROM)
- US Geological Survey, 1996, Descriptions of the fields used to report brief descriptions of mines, prospects, and mineral occurrences in Alaska and Hawaii: US Geological Survey Bulletin Open-File Report 96-79, 5 p.