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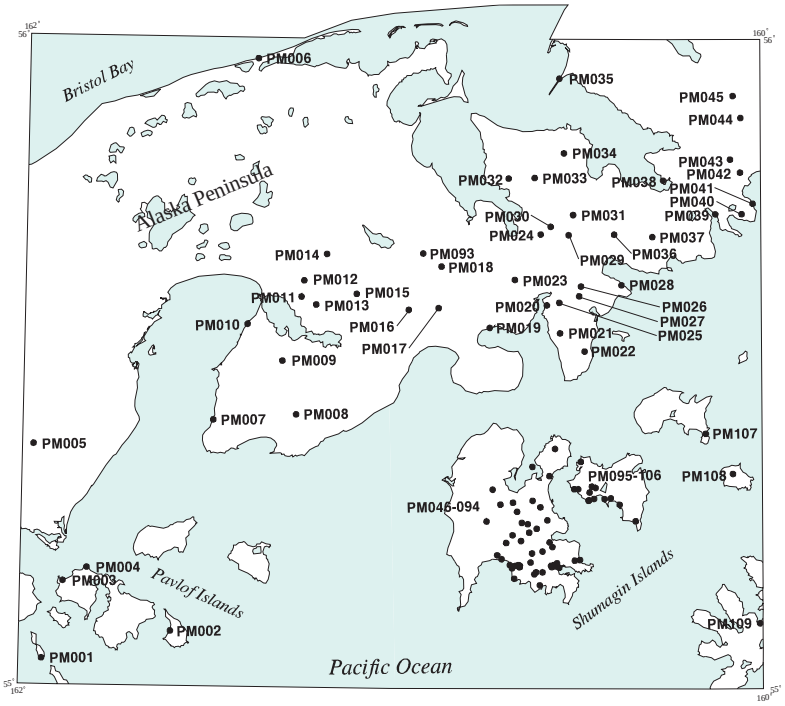
Alaska Resource Data File

Port Moller 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 Port Moller 1:250,000-scale quadrangle, Alaska

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

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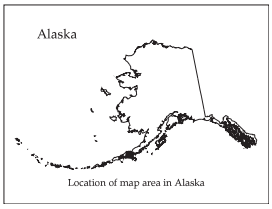

OPEN-FILE REPORT 02-47

Site name(s): Unnamed (south end of Inner IIiasik Island)

Site type: Occurrence

ARDF no.: PM001

Latitude: 55.040 **Quadrangle:** PM A-6

Longitude: 161.937

Location description and accuracy:
This site is located on the south end of Inner IIiasik Island (Christie, 1974, color anomaly 68). The location is accurate.

Commodities:

Main:

Other:

Ore minerals: Pyrite

Gangue minerals:

Geologic description:
This site is a large color anomaly that extends approximately 5,000 feet north-south and 1,000 to 2,000 feet east-west. The map site is at the south end of the anomaly. The anomaly marks altered, pyrite-bearing, diorite, volcanic, and epiclastic rocks (Christie, 1974) mapped as Miocene volcanic rocks (Wilson and others, 1995). The anomaly is cut off to the east by the sea; some of the system is probably under water.

Alteration:
The host rocks contain epidote, chlorite, and clay.

Age of mineralization:
Miocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

The Aleut-Quintana-Duval joint venture briefly examined the site in 1974 (Christie, 1974).

Production notes:

Reserves:

Additional comments:

This site is located on land selected by the Aleut Corporation.

References:

Christie, 1974; Wilson and others, 1995.

Primary reference: Christie, 1974

Reporter(s): S.H. Pilcher

Last report date: 2/10/01

Site name(s): PMRGX-4

Site type: Occurrence

ARDF no.: PM002

Latitude: 55.085 **Quadrangle:** PM A-5

Longitude: 161.593

Location description and accuracy:

This occurrence is located just south of a perennial stream outlet on the west shore of Poperechnoi Island (Christie, 1974, color anomaly 69; Wilson and others, 1988, locality 53). It is referred to as PMRGX-4 in Wilson and others (1988). The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au, Cu

Other:

Ore minerals: Pyrite

Gangue minerals:

Geologic description:

This site represents a spotty color anomaly 1 mile in diameter (Christie, 1974, color anomaly 69), developed around granodiorite that intrudes upper Miocene volcanic and epiclastic rocks (Wilson and others, 1995). Christie's examination was brief, and he examined only the edge of the anomaly. He reported probable propylititc alteration, and collected two silt samples, one of which contained 0.02 ppm gold. Mapping in the mid-1980's by the U.S. Geological Survey elsewhere in this general area revealed a hypabyssal andesite intrusion into mineralized sandstone of the Oligocene to Miocene Belkofski Formation (Wilson and others, 1988). Samples of mineralized rock were anomalous in copper and silver.

Alteration:

Christie (1974) reported epidote and chlorite, indicating probable propylitic alteration.

Age of mineralization:

Miocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Christie (1974) collected two silt samples, one of which contained 0.02 ppm gold. Rock samples AJm733-734 collected elsewhere in the general area by the U.S. Geological Survey in the mid-1980s (samples 84AJm733-734) were reported to be anomalous in copper and silver (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is on land selected by the Aleut Corporation.

References:

Christie, 1974; Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/20/01

Site name(s): Unnamed (west Dolgoi Island)

Site type: Occurrence

ARDF no.: PM003

Latitude: 55.160 **Quadrangle:** PM A-6

Longitude: 161.884

Location description and accuracy:

This occurrence is at an elevation of about 100 feet on western Dolgoi Island, 0.6 mile southeast of Bluff Point (Christie, 1974, color anomaly 67). The location is accurate to within 1,200 feet.

Commodities:

Main: Au?, Cu?

Other:

Ore minerals: Pyrite

Gangue minerals:

Geologic description:

This small, weak, color anomaly is elongate east-west (Christie, 1974). It occurs in pyritic volcanic and epiclastic rocks mapped as Oligocene? to Miocene? Belkofski Formation (Wilson and others, 1995). The main commodities herein are speculated to be gold and copper.

Alteration:

Age of mineralization:

Tertiary.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

The Aleut-Quintana-Duval joint venture briefly examined this occurrence in 1974 (Christie, 1974).

Production notes:

Reserves:

Additional comments:

This occurrence is located on land selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

Christie, 1974; Wilson and others, 1995.

Primary reference: Christie, 1974

Reporter(s): S.H. Pilcher

Last report date: 2/10/01

Site name(s): PMRGX-5

Site type: Occurrence

ARDF no.: PM004

Latitude: 55.181 **Quadrangle:** PM A-6

Longitude: 161.820

Location description and accuracy:

This occurrence, located on the northern tip of Dolgoi Island, represents a 6,000- by 3,000-foot color anomaly (Christie, 1974, anomaly 66; Wilson and others, 1988, locality 54). The map site is 1,500 feet north of hill 950, near the center of the anomaly. The site is referred to as PMRGX-5 by Wilson and others (1988).

Commodities:

Main: Ag, Au, Cu

Other: Mo, Pb, Zn

Ore minerals: Chalcopyrite, pyrite

Gangue minerals:

Geologic description:

Christie (1974) described a 6,000- by 3,000-foot color anomaly, elongate east-west and truncated at the coast on the north. Rocks in the area of the anomaly consist of altered granodiorite and diorite porphyry that intrude volcaniclastic rocks of the Oligocene to Miocene Belkofski Formation (Wilson and others, 1988). Abundant sulfides, including chalcopyrite and pyrite, are present, especially near the contact with the diorite porphyry. Moderate fracturing is widespread. Alteration minerals include chlorite, epidote, and fine-grained sericite.

Christie collected three soil or silt samples containing as much as 0.04 ppm gold, 2.3 ppm silver, 151 ppm zinc, 575 ppm copper and 11 ppm molybdenum. Samples collected by the U.S. Geological Survey were anomalous in copper, lead, and zinc (Wilson and others, 1988).

Alteration:

Christie (1974) noted the presence of epidote, chlorite, and fine-grained sericite.

Age of mineralization:

Oligocene or younger.

Deposit model:
Porphyry Cu, Porphyry Cu-Mo, Porphyry Cu-Au (Cox and Singer, 1986; models 17, 21a, 20c)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
17, 21a, 20c

Production Status: No

Site Status: Inactive

Workings/exploration:
During his brief reconnaissance, Christie (1974) collected three silt or soil samples that contained as much as 0.04 ppm gold, 2.3 ppm silver, 151 ppm zinc, 575 ppm copper, and 11 ppm molybdenum. Rock samples 84AAi79 and 84AJm715, collected by the U.S. Geological Survey in the mid-1980s, were anomalous in copper, lead, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:
This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Christie, 1974; Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/20/01

Site name(s): Unnamed (south side of Mt. Hague)

Site type: Occurrence

ARDF no.: PM005

Latitude: 55.37 **Quadrangle:** PM B-6

Longitude: 161.97

Location description and accuracy:

This approximately located occurrence is on the Alaska Peninsula on the southwest side of Mount Hague (Kennedy and Waldron, 1955). Kennedy and Waldron's map, however shows it on the southeast side. Mount Hague is west of Pavlof Bay (Wilson and others, 1988, locality 25). The location is accurate to within 2 miles.

Commodities:

Main: S

Other:

Ore minerals: Native sulfur

Gangue minerals:

Geologic description:

Kennedy and Waldron (1955) described six large and many small fumaroles in a gully on the southwest side of Mount Hague between elevations of 3,200 and 3,800 feet. At that time, the fumaroles had built cones 3 to 4 feet high around each vent and had formed extensive deposits of pure sulfur in the gully. Large blocks of sulfur also had fallen to the glacier below. Fumes prevented a close approach to the cones.

Alteration:

Age of mineralization:

Quaternary.

Deposit model:

Fumarolic sulphur

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

Production Status: No

Site Status: Inactive

Workings/exploration:

Production notes:

Reserves:

Additional comments:
The site is located on land selected by the Aleut Corporation.

References:
Kennedy and Waldron, 1955; Wilson and others, 1988.

Primary reference: Kennedy and Waldron, 1955

Reporter(s): S.H. Pilcher

Last report date: 1/9/01

Site name(s): Nelson Lagoon

Site type: Occurrence

ARDF no.: PM006

Latitude: 55.968 **Quadrangle:** PM D-5

Longitude: 161.375

Location description and accuracy:

This site represents approximately 20 miles of sampled beach placer deposits on the Alaska Peninsula along the coast of Bristol Bay.

Sampling extended northeast from sec. 22, T. 49 S., R. 80 W., of the Seward Meridian on Port Moller D-5 quadrangle to Lagoon Point on Port Moller D-4 quadrangle (Cobb, 1972 [MF 433], locality 7; Cobb, 1973 [B 1374], locality 2; MacKevett and Holloway, 1977, locality 7; Wilson and others, 1988, locality 7). This site is plotted near the midpoint of the sampled section of beach, on the boundary of secs. 5 and 6, T. 49 S., R. 78 W., of the Seward Meridian.

Commodities:

Main: Fe, Ti

Other:

Ore minerals: Ilmenite, magnetite

Gangue minerals:

Geologic description:

This occurrence consists of beach placer deposits of ilmenite and titaniferous magnetite in a long spit covered by sand dunes up to 40 feet above water table. Fourteen drill and seven shovel samples were dug along this 20-mile section of beach (Berryhill, 1963). In the magnetic fraction, iron content ranged from 4.9 to 309.7 pounds per cubic yard and the titanium oxide content ranged from 1.2 to 70.2 pounds per cubic yard. In the non-magnetic fraction, titanium oxide content ranged from 0.8 to 8.5 pounds per cubic yard.

Alteration:

Age of mineralization:

Quaternary.

Deposit model:

Shoreline placer Ti (Cox and Singer, 1986; model 39c)

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Production notes:

Reserves:

Additional comments:
This site is on land partly owned by the state and partly on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Berryhill, 1963; Cobb, 1972 (MF 433); Cobb, 1973 (B 1374); MacKevett and Holloway, 1977; Wilson and others, 1988.

Primary reference: Berryhill, 1963

Reporter(s): S.H. Pilcher

Last report date: 1/2/01

Site name(s): PMRGX-12

Site type: Occurrence

ARDF no.: PM007

Latitude: 55.411 **Quadrangle:** PM B-5

Longitude: 161.485

Location description and accuracy:

This site is located on the Alaska Peninsula near the east shore of Pavlof Bay approximately 3.5 miles north of Cape Tolstoi. It is referred to as PMRGX-12 in Wilson and others (1988, locality 61). The location is accurate to within 1,200 feet.

Commodities:

Main: Cu, Zn

Other: Ba

Ore minerals:

Gangue minerals:

Geologic description:

The country rocks at this site are part of the Paleocene to Eocene Tolstoi Formation (Wilson and others, 1995). One barite-bearing rock sample collected during U.S. Geological Survey studies in the mid-1980's was reported to be anomalous in copper and zinc (Wilson and others, 1988).

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:

Rock sample 84ADt279 collected during U.S. Geological Survey studies in the mid-

1980s was reported to be anomalous in copper and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:
The site is located on land selected by the Aleut Corporation.

References:
Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/23/01

Site name(s): PMRGX-11

Site type: Occurrence

ARDF no.: PM008

Latitude: 55.4205 **Quadrangle:** PM B-4

Longitude: 161.2611

Location description and accuracy:

This occurrence is located on the Alaska Peninsula approximately 3 miles north of Bobrovia Mountain. The map site is at an elevation of 1,650 feet, in the NW1/4 of sec. 17, T. 55 S., R. 78 W., Seward Meridian. It is referred to as PMRGX-11 Wilson and others (1988, locality 60). The location is accurate to within 500 feet.

Commodities:

Main: Sb

Other:

Ore minerals:

Gangue minerals:

Geologic description:

The country rocks at this site consist of Tertiary andesitc flows and volcanic breccias, and sandstone and shale. The sedimentary rocks may belong to the Paleocene to Eocene Tolstoi Formation. The volcanic rocks are part of an undivided Tertiary sequence (Wilson and others, 1995). Rock samples collected by the U.S. Geological Survey in the mid-1980's were reported to be anomalous in antimony (Wilson and others, 1988).

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:

Rock samples 84AJm739-743 and 84AWr74-77 collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in antimony (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is in the Alaska Peninsula National Wildlife Refuge.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/23/01

Site name(s): PMRGX-27

Site type: Occurrence

ARDF no.: PM009

Latitude: 55.503 **Quadrangle:** PM C-4

Longitude: 161.300

Location description and accuracy:

The map site of this occurrence is between Ness Creek and Humpy Creek at an elevation of about 850 feet. The site is in the SE1/4 of sec. 13, T. 54 S., R. 79 W., Seward Meridian. It is referred to as PMRGX-27 by Wilson and others (1988, locality 75). The location is accurate to within 1,200 feet.

Commodities:

Main: Cu, Zn

Other: Sb

Ore minerals:

Gangue minerals:

Geologic description:

Two samples of a basalt(?) dike intruding Upper Cretaceous Hoodoo Formation were collected at this site by the U.S. Geological Survey in the mid-1980s (Wilson and others, 1988; 1995). They were reported to be anomalous in antimony, copper, and zinc.

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:

Rock samples 84AWs240-241, collected by the U.S. Geological Survey in the mid-

1980s, were reported to be anomalous in antimony, copper, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:
The site is located within the Alaska Peninsula National Wildlife Refuge.

References:
Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/25/01

Site name(s): PMRGX-30

Site type: Occurrence

ARDF no.: PM010

Latitude: 55.559 **Quadrangle:** PM C-5

Longitude: 161.396

Location description and accuracy:

This site is on the east shore of Pavlof Bay approximately 2.75 miles south of the entrance to Canoe Bay. It is referred to as PMRGX-30 in Wilson and others (1988, locality 78). The location is accurate to within 1,200 feet.

Commodities:

Main: Au, Cu, Pb

Other:

Ore minerals:

Gangue minerals:

Geologic description:

At this site a porphyritic basalt sill intrudes sedimentary rock of the Paleocene to Eocene Tolstoi Formation (Wilson and others, 1995). A sample collected by the U.S. Geological Survey in the mid- 1980s was reported to be anomalous in gold, copper, and lead (Wilson and others, 1988).

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:

Rock sample 83AWs134, collected by the U.S. Geological Survey in the mid-1980s,

was reported to be anomalous in gold, copper, and lead (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:
The site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/25/01

Site name(s): Unnamed (northeast of Canoe Bay)

Site type: Prospect

ARDF no.: PM011

Latitude: 55.602 **Quadrangle:** PM C-4

Longitude: 161.250

Location description and accuracy:

This prospect is located on the Alaska Peninsula approximately 1.5 miles northeast of the shore of Canoe Bay and 2.5 miles southwest of Knutson Lake (Nokleberg and others, 1987, locality AP2; Wilson and others, 1988, locality 49). The map site is at an elevation of 1,100 feet, in the SE1/4 of sec. 8, T. 53 S., R. 78 W., of the Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Gold, pyrite

Gangue minerals:

Geologic description:

This prospect is localized in a domical intrusive complex of Pliocene or Quaternary age that cuts sedimentary rocks of the Upper Cretaceous Hoodoo Formation (Wilson and others, 1995). The complex contains two rhyolites that are in part intrusive and in part extrusive, a rhyodacite quartz porphyry, several tuff units, and narrow dikes of quartz-sericite-pyrite-feldspar porphyry.

Soil samples have defined potentially mineralized areas, but visible gold in rock samples or mineralized quartz veins have not been found. The soils contained as much as 5.2 ppm gold and 8.4 ppm mercury. On the basis of the soil geochemical surveys, Trujillo and others (1982) infer two types of mineralization: a pervasive type occurring in the older rhyolite in areas of argillization and silicification; and an east-west-trending linear type 900 to 3,600 feet in length and cutting several rock types. The older rhyolite also displays a radial pattern of soil anomalies interpreted to be related to tensional cracks that served as conduits for mineralizing fluids. Channel samples of sericitized lithic tuff contained as much as 3.45 ppm gold, 6.5 ppm silver, 258 ppm copper, 23 ppm lead, 675 ppm zinc, 212 ppm arsenic, and 0.941 ppm mercury. Grab samples of the older rhyolite contained as much as 0.90 ppm gold, 0.8 ppm silver, 44 ppm copper, 87 ppm lead, 120 ppm zinc, 231 ppm arsenic, and 0.29 ppm mercury (Trujillo and others, 1982).

Freeport Exploration Company in 1984 identified two areas of anomalous soils. One contained 0.5 ppm gold over an area 400 by 1,200 feet. Trenching revealed a fault marked by only minor gold values. A second area of soils contained 0.3 ppm gold in an area 100 by 800 feet (Freeport Exploration Company, 1985).

A possible source of some of the gold soil anomalies may be gold-bearing volcanic ash from Mount Dana.

Alteration:

Freeport Exploration Company (1985) identified phyllic, propylitic, and argillic alteration phases within the intrusive complex. The phyllic phase, thought to be the oldest, consists of moderate to strong sericitization, quartz overgrowths, and disseminated pyrite. Propylitic alteration cross-cuts and overprints the phyllic phase. Argillic alteration is restricted to faults and fractures and cross-cuts the other phases. Trujillo and others (1982) reported the argillic alteration to be widespread, intense, and pervasive.

Age of mineralization:

Pliocene or younger.

Deposit model:

Hot-spring Au-Ag? (Cox and Singer, 1986; model 25a)

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

25a

Production Status: No

Site Status: Inactive

Workings/exploration:

Resource Associates of Alaska mapped the prospect, conducted VLF-EM surveys, and collected 1,350 rock and soil samples during the period 1979 to 1983. In 1984 Freeport Exploration Company collected 600 soil and rock samples, dug five backhoe trenches for a total of 700 feet, and hand-dug several hundred feet of trenches. Channel samples of a tuff unit contained as much as 3.45 ppm gold and 6.5 ppm silver. Grab samples of the older rhyolite returned values of as much as 0.90 ppm gold and 0.8 ppm silver. The U.S. Geological Survey collected several samples at this site in the mid-1980s.

Production notes:

Reserves:

Additional comments:

This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Butherus and others, 1979; Anderson and others, 1980; Trujillo and others, 1982; Freeport Exploration Company, 1985; Angeloni and others, 1985; Nokleberg and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Trujillo and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/20/01

Site name(s): Unnamed (west of Knutson Lake)

Site type: Occurrence

ARDF no.: PM012

Latitude: 55.627 **Quadrangle:** PM C-4

Longitude: 161.243

Location description and accuracy:

The map site of this occurrence is at an elevation of 1,600 feet, approximately 1 mile west of Knutson Lake (Wilson and others, 1988, locality 88). The location is accurate to within 2,500 feet.

Commodities:

Main: Ag, Au, Pb

Other: As, Zn

Ore minerals: Galena, gold

Gangue minerals: Travertine

Geologic description:

At this site a travertine deposit approximately 300 feet across and 40 feet thick has formed from seeps in fractures cutting sandstone and shale, either of the the Upper Cretaceous Hoodoo Formation (Trujillo and others, 1982) or the Lower Cretaceous Staniukovich Formation (Wilson and others, 1995). The travertine has a high arsenic content and traces of silver and gold. A pan sample taken from a stream draining the travertine contained visible galena and assayed 2.63 ppm gold, 17.5 ppm silver, and 2,003 ppm lead. Gossan from unmineralized fractures in sandstone slightly uphill from the travertine contained as much as 0.8 ppm gold, 4.3 ppm silver, 295 ppm lead, 366 ppm zinc, and 1.25 percent arsenic (Trujillo and others, 1982).

Alteration:

Age of mineralization:

Cretaceous or younger.

Deposit model:

Hot-spring Au-Ag (Cox and Singer, 1986; model 25a)

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

25a

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1982 Resource Associates of Alaska examined and sampled the site (Trujillo and others, 1982). A pan concentrate sample assayed 2.63 ppm gold, 17.5 ppm silver, and 2,003 ppm lead. Gossan from unmineralized fractures contained as much as 0.8 ppm gold, 4.3 ppm silver, 295 ppm lead, 366 ppm zinc, and 1.25 percent arsenic.

Production notes:

Reserves:

Additional comments:

This site is located on state land.

References:

Trujillo and others, 1982; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Trujillo and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/28/01

Site name(s): Unnamed (on Cabin Creek)

Site type: Occurrence

ARDF no.: PM013

Latitude: 55.59 **Quadrangle:** PM C-4

Longitude: 161.21

Location description and accuracy:

This site represents 6 sample sites around Mount Dana. Four of the sites are about 3.5 miles south of Mount Dana, one is about 1.5 miles northeast of the mountains and one is 2.5 miles southwest of it (Ellis and Apel, 1989). The map site is at an elevation of about 650 feet on Cabin Creek, in the W1/2 of sec. 15, T. 53 S., R. 78 W., of the Seward Meridian.

Commodities:

Main: Au

Other:

Ore minerals: Gold

Gangue minerals:

Geologic description:

This occurrence consists of samples, collected at six sites, of volcanic ash erupted from Mount Dana. Battle Mountain Exploration Company determined that this ash is gold-bearing (Ellis and Apel, 1989). Gold content averaged 3 milligrams per cubic yard, with a high of 8.5 milligrams.

Alteration:

Age of mineralization:

Quaternary.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Battle Mountain Exploration Company collected and concentrated 27 samples of ash from Mount Dana. These averaged 3 milligrams gold per cubic yard, with a high of 8.5 milligrams (Ellis and Apel, 1989).

Production notes:

Reserves:

Additional comments:

References:

Ellis and Apel, 1989.

Primary reference: Ellis and Apel, 1989

Reporter(s): S.H. Pilcher

Last report date: 2/4/01

Site name(s): PMRGX-29

Site type: Occurrence

ARDF no.: PM014

Latitude: 55.668 **Quadrangle:** PM C-4

Longitude: 161.182

Location description and accuracy:

The map site of this occurrence is at an elevation of 1,000 feet in the headwaters of Peterson Creek, approximately 2.15 miles north-northeast of Mount Dana. It is referred to as PMRGX-29 by Wilson and others (1988, locality 77). The location is accurate to within 2,500 feet.

Commodities:

Main: Cu

Other: As

Ore minerals:

Gangue minerals:

Geologic description:

This occurrence is in Quaternary pyroclastic and debris flow deposits (Wilson and others, 1995). The rocks include shale, lithic tuff, and pumice lapilli tuff. Two samples collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in arsenic and copper (Wilson and others, 1988).

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:

Rock samples 84AYb666-667, collected by the U.S. Geological Survey in the mid-1980s, were reported to be anomalous in arsenic and copper (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:
This site is in the Alaska Peninsula National Wildlife Refuge.

References:
Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/25/01

Site name(s): Four Bear; PMRGX-28

Site type: Prospect

ARDF no.: PM015

Latitude: 55.607 **Quadrangle:** PM C-4

Longitude: 161.100

Location description and accuracy:

The Four Bear prospect is located on the Alaska Peninsula approximately 5 miles southeast of Mount Dana. The map site is at an elevation of about 2,250 feet, near the center of sec. 8, T. 53 S., R. 77 W., Seward Meridian. It is referred to as PMRGX-28 in Wilson and others (1988, locality 76). The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au, Cu, Pb, Zn

Other: As, Hg

Ore minerals: Pyrite, sphalerite

Gangue minerals: Calcite, opal, quartz, tourmaline

Geologic description:

At the Four Bear prospect, siltstone, shale, sandstone, and conglomerate of the Upper Cretaceous Hoodoo Formation are cut by intrusive rocks that include diorite and rhyolite-rhyodacite quartz porphyry (Wilson and others, 1995). The diorite exhibits propylitic, argillic, and sericitic alteration. The younger rhyolite-rhyodacite quartz porphyry forms the central part of the prospect area. It contains as much as 20 percent disseminated pyrite and is pervasively sericitized. Locally, it is silicified and contains small stockworks of thin pyrite veins. Quartz and quartz-calcite veins 0.25 to 2 inches wide occur in widely scattered shears (Freeport Exploration Company, 1985). Pebble and breccia dikes occur in the intrusives and in the surrounding sedimentary rock. Opal and sphalerite occur in the dikes. Tourmaline is present in a breccia pipe. The sedimentary rocks are intensely hornfelsed and iron stained up to 1,000 feet from the intrusive rocks.

Resource Associates of Alaska outlined a gold soil anomaly area of approximately 1,000 by 2,000 feet and an arsenic soil anomaly area of 3,000 by 3,500 feet (Trujillo and others, 1983). Their soil samples contained as much as 0.21 ppm gold, and their rock samples contained as much as 0.08 ppm gold, 5.5 ppm silver, 273 ppm copper, 450 ppm lead, 544 ppm zinc, 595 ppm arsenic, and 0.08 ppm mercury. Freeport Exploration Company collected six rock samples that had anomalous gold values. The tourmaline-bearing breccia contained 0.11 ppm gold and 1.4 ppm silver.

Alteration:
Alteration ranges from propylitic to argillic to sericitic, along with local silicification.

Age of mineralization:
Tertiary.

Deposit model:
Porphyry Cu, Porphyry Cu-Au (Cox and Singer, 1986; models 17, 20c)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
17, 20c

Production Status: None

Site Status: Inactive

Workings/exploration:
In 1983, Resource Associates of Alaska mapped the prospect and collected 87 rock and soil samples. The highest metal values in their rock samples were as much as 0.08 ppm gold, 5.5 ppm silver, 273 ppm copper, 450 ppm lead, 544 ppm zinc, 595 ppm arsenic, and 0.08 ppm mercury. In 1984, Freeport Exploration Company mapped the prospect and took 41 rock and 106 soil samples. Six samples contained anomalous gold values.

Production notes:

Reserves:

Additional comments:
The site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Trujillo and others, 1983; Freeport Exploration Company, 1985; Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Freeport Exploration Company, 1985

Reporter(s): S.H. Pilcher

Last report date: 1/25/01

Site name(s): PMRGX-24

Site type: Occurrence

ARDF no.: PM016

Latitude: 55.583 **Quadrangle:** PM C-3

Longitude: 160.958

Location description and accuracy:

The map site of this occurrence is west of Beaver River at an elevation of 400 feet, in the NW1/4 of sec. 20, T. 53 S., R. 76 W., Seward Meridian. It is referred to as PMRGX-24 by Wilson and others (1988, locality 72). The location is accurate to within 1,200 feet.

Commodities:

Main: Pb, Zn

Other: Ba

Ore minerals:

Gangue minerals:

Geologic description:

This occurrence is on the axis of an anticline composed of shale and rusty siltstone of the Upper Cretaceous Hoodoo Formation (Wilson and others, 1995). The strata are intruded by numerous small dikes. One sample collected by the U.S. Geological Survey in the mid-1980s was reported to be anomalous in barium, lead, and zinc (Wilson and Others, 1988).

Alteration:

Iron-staining.

Age of mineralization:

Deposit model:

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

Production Status:

Site Status: Inactive

Workings/exploration:

Rock sample 83ADt102 collected by the U.S. Geological Survey in the mid-1980s was reported to be anomalous in barium, lead, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is located on land selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/24/01

Site name(s): PMRGX-25

Site type: Occurrence

ARDF no.: PM017

Latitude: 55.586 **Quadrangle:** PM C-3

Longitude: 160.877

Location description and accuracy:

The map site of this occurrence is at an elevation of 1,800 feet, about 2.0 miles east of Beaver River and 3.1 miles north of Beaver Bay. It is referred to as PMRGX-25 by Wilson and others (1988, locality 73). The location is accurate to within 2,500 feet.

Commodities:

Main: Cu, Zn

Other: As, Ba

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:

At this site a dark shale member of the Upper Cretaceous Hoodoo Formation is cut by quartz veinlets and by an andesite sill containing disseminated pyrite (Wilson and others, 1988; 1995). The occurrence is on the periphery of a diorite(?) plug or sill that crops out to the east. Four samples collected by the U.S. Geological Survey in the mid-1980's were reported to be anomalous in arsenic, barium, copper, and zinc (Wilson and others, 1988).

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:

Rock samples 85AYB719-720 and 85AWS303 and 305, collected by the U.S. Geological Survey in the mid-1980s, were reported to be anomalous in arsenic, barium, copper, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is on land selected by the Aleut Corporation.

References:

Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/25/01

Site name(s): PMRGX-26

Site type: Occurrence

ARDF no.: PM018

Latitude: 55.65 **Quadrangle:** PM C-3

Longitude: 160.87

Location description and accuracy:

The map site of this occurrence is at an elevation of 2,100 feet, approximately 6 miles east-northeast of Hoodoo Mountain. It is in the NE1/4 of sec. 28, T. 52 S., R. 75 W., Seward Meridian. It is referred to as PMRGX-26 by Wilson and others (1988, locality 74). The location is accurate to within 4,000 feet.

Commodities:

Main: Pb, Zn

Other:

Ore minerals:

Gangue minerals:

Geologic description:

Three samples of a shale member of the Upper Cretaceous Hoodoo Formation were collected at this site by the U.S. Geological Survey in the mid-1980's. The samples were reported to be anomalous in lead and zinc (Wilson and others, 1988; 1995).

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:

Rock samples 85AAi96, 85ACe215, and 85ADt329 collected by the U.S. Geological

Survey in the mid-1980s, were reported to be anomalous in lead and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:
This site is located within the Alaska Peninsula National Wildlife Refuge.

References:
Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/25/01

Site name(s): PMRGX-22 (Lefthand Bay)

Site type: Occurrence

ARDF no.: PM019

Latitude: 55.556 **Quadrangle:** PM C-3

Longitude: 160.738

Location description and accuracy:

This site is located on the Alaska Peninsula on the north shore of upper Lefthand Bay. It is at the boundary of secs. 26 and 27, T. 53 S., R. 75 W., of the Seward Meridian. It is referred to as PMRGX-22 by Wilson and others (1988, locality 71). The location is accurate to within 1,200 feet.

Commodities:

Main: Pb

Other: As, Ba

Ore minerals:

Gangue minerals:

Geologic description:

This occurrence consists of iron-stained sandstone, siltstone, and thin-bedded tuff of the Eocene to Oligocene Stepovak Formation (Wilson and others, 1988, 1995). Two samples collected by the U.S. Geological Survey in the mid-1980's were reported to be anomalous in arsenic, barium, and lead (Wilson and others, 1988).

Alteration:

Iron-staining.

Age of mineralization:

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Rock samples 83APK48-49 collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in arsenic, barium, and lead (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/24/01

Site name(s): Unnamed (east of Albatross Anchorage)

Site type: Occurrence

ARDF no.: PM020

Latitude: 55.591 **Quadrangle:** PM C-2

Longitude: 160.583

Location description and accuracy:

The map site of this occurrence is located on the Alaska Peninsula near the east shore of Albatross Anchorage at the head of Balboa Bay (Berg and Cobb,1967, locality 5; Cobb, 1972 [MF 433], locality 2; MacKevett and Holloway, 1977, locality 2; Wilson and others, 1988, locality 2). The site is at an elevation of about 250 feet, in the W1/2 of sec. 14, T. 51 S., R. 74 W., of the Seward Meridian. The location is accurate to within 2,500 feet.

Commodities:

Main: Cu

Other: Pb, Zn

Ore minerals: Chalcopyrite, galena, pyrite, sphalerite

Gangue minerals:

Geologic description:

At this occurrence chalcopyrite, galena, pyrite, and sphalerite occur in a shear zone (Atwood, 1909) cutting Miocene andesite (Wilson and others, 1995). Atwood mentions several prospects and one short adit, all abandoned at the time of his visit.

Alteration:

Age of mineralization:

Miocene or younger.

Deposit model:

Polymetallic vein (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:

A short adit was driven on this occurrence but was abandoned by 1909.

Production notes:

Reserves:

Additional comments:

This site is located on land selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

Atwood, 1909; Atwood, 1911; Brooks, 1921; Wedow and others, 1952; Berg and Cobb, 1967; Cobb, 1972 (MF 433); Cobb, 1980 (OF 80-909); MacKevett and Holloway, 1977; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Atwood, 1909

Reporter(s): S.H. Pilcher

Last report date: 12/23/00

Site name(s): PMRGX-17

Site type: Occurrence

ARDF no.: PM021

Latitude: 55.548 **Quadrangle:** PM C-2

Longitude: 160.547

Location description and accuracy:

This occurrence is located on the Alaska Peninsula about 1 mile east of Balboa Bay. The map site is at an elevation of about 1,000 feet, at the center of sec. 36, T. 53 S., R. 74 W., Seward Meridian (Christie, 1974, color anomaly 77; Wilson and others, 1988, locality 66). The site is referred to as PMRGX-17 in Wilson and others (1988). The location is accurate to within 1,200 feet.

Commodities:

Main: Au, Pb, Zn

Other: As, Ba

Ore minerals: Pyrite

Gangue minerals:

Geologic description:

This occurrence is a 3,000- by 5,000-foot color anomaly (Christie, 1974). The country rocks in the area of the anomaly are volcanic breccias and agglomerates underlain by arkosic and argillaceous sedimentary rock. The volcanic rock, mapped as Miocene (Wilson and others, 1995), is interpreted by Christie to be a vent complex containing sulfides that may be related to fumarolic activity. The rocks exhibit argillic alteration. A silt sample collected by an Aleut-Quintana-Duval joint venture in 1974 contained 0.34 ppm gold. Three samples collected by the U.S. Geological Survey in the mid-1980's were reported to be anomalous in arsenic, barium, gold, lead, and zinc (Wilson and others, 1988).

Alteration:

The volcanic rocks here exhibit argillic alteration.

Age of mineralization:

Miocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

An Aleut-Quintana-Duval joint venture briefly mapped and took silt samples in this area in 1974. One sample contained 0.34 ppm gold. Samples 83AYb554, and 557-558 collected during U.S. Geological Survey studies in the mid-1980s were reported to be anomalous in arsenic, barium, lead, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is located on land selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

Christie, 1974; Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Christie, 1974

Reporter(s): S.H. Pilcher

Last report date: 1/24/01

Site name(s): Unnamed (north of Lumber Bay)

Site type: Occurrence

ARDF no.: PM022

Latitude: 55.52 **Quadrangle:** PM C-2

Longitude: 160.48

Location description and accuracy:

This approximately located occurrence is north of Lumber Bay on the Alaska Peninsula, between Balboa Bay and Unga Strait (MacKevett and Holloway, 1977, locality 19; Wilson and others, 1988, locality 19). The map site is at an elevation of about 550 feet, in the NW1/4 of sec. 3, T. 54 S., R. 73 W., of the Seward Meridian. The location is accurate to within 1 mile.

Commodities:

Main: Au?

Other:

Ore minerals: Pyrite

Gangue minerals:

Geologic description:

This occurrence is in late Miocene volcanic rocks (Wilson and others, 1995). It is described as an altered zone in Tertiary rocks (Christie, 1974; MacKevett and Holloway, 1977). The alteration is argillic, possibly of fumarolic origin. The main commodity herein is speculated to be gold, based on its association with altered zones elsewhere in Tertiary volcanic rocks.

Alteration:

The alteration is argillic, possibly fumarolic in nature.

Age of mineralization:

Miocene or younger.

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:
This occurrence is located on land selected by the Aleut Corporation.

References:
Christie, 1974; MacKevett and Holloway, 1977; Wilson and others, 1988.

Primary reference: Christie, 1974

Reporter(s): S.H. Pilcher

Last report date: 1/6/01

Site name(s): Pyramid

Site type: Prospect

ARDF no.: PM023

Latitude: 55.63 **Quadrangle:** PM C-3

Longitude: 160.67

Location description and accuracy:

This prospect is located on the Alaska Peninsula on the southeast flank of Pyramid Mountain approximately 4 miles northwest of Balboa Bay (Christie, 1974, color anomaly 90; MacKevett and Holloway, 1977, locality 6; Nokleberg and others, 1987, locality AP6; Wilson and others, 1988, locality 6; Young and others, 1997, locality 36). The map site is at an elevation of about 1,200 feet, in the S1/2 of sec. 35, T. 52 S., R. 74 W., of the Seward Meridian. The location is accurate.

Commodities:

Main: Cu, Mo

Other: Ag, Au, Pb, Sb, Zn

Ore minerals: Chalcocite, chalcopyrite, covellite, molybdenite, pyrite

Gangue minerals: Quartz

Geologic description:

The Pyramid copper-molybdenum deposit is associated with a quartz diorite pluton that cuts Paleocene to Eocene sedimentary rock of the Tolstoy Formation (Wilson and others, 1995). The stock has been dated at 6 million years (Wilson and others, 1996).

The prospect is a classic copper-molybdenum deposit having a potassic core surrounded by a phyllic zone and an outer propylitic zone. The central potassic core contains secondary biotite after mafic minerals and 2 to 10 percent magnetite as fracture fillings and disseminated clots and grains. The core, entirely in the intrusive, is roughly 800 by 1,700 feet. It is essentially barren, with total sulfide content less than 0.25 percent and copper and molybdenum values in the 0.00X percent range (Christie, 1975). The phyllic zone is characterized by sericite, quartz, and andalusite in a zone surrounding the potassic core. It occurs mostly in the intrusive rocks and measures 700 to 2,500 feet in width. The propylitic zone is characterized by chlorite, magnetite, epidote, and calcite.

The highest total sulfide content (5 to 10 percent) occurs in the inner part of the propylitic zone and outer part of the quartz-sericite zone. Pyrite:chalcopyrite ratios are 50:1 or greater and are associated with copper grades of 0.15 percent or less (Christie, 1975).

Toward the inner part of the phyllic zone pyrite:chalcopyrite ratios decrease and copper

grades increase to 0.3 to 0.4 percent; molybdenum grades are 0.03 to 0.04 percent. In this copper-rich part of the system the sulfides occur as disseminations and thin fracture fillings.

The deposit has been oxidized to depths of 0 to 450 feet and exhibits a blanket of secondary copper enrichment as much as 300 feet thick. The enriched zone contains chalcocite and covellite, as well as some chalcopyrite. The best grades of copper, as much as 0.8 percent, occur in the upper 100 feet of the blanket. The thickest enrichment zones are not necessarily associated with the thickest zones of oxidation. Lead, antimony, and zinc are also reported in some assays.

The Quintana-Duval-Aleut Joint Venture mapped, sampled, and drilled this deposit in 1974 and 1975. They diamond-drilled 19 holes for a total of 5,565 feet. As a result of this work they outlined an estimated resource of 126,000,000 tons of ore grading 0.403 percent copper and 0.025 percent molybdenum. Potential exists for another 49 million tons of chalcocite-enriched ore (Christie, 1975).

Alteration:

The alteration consists of a barren, potassically-altered core zone, an intermediate zone characterized by pervasive quartz and sericite, and a propylitic outer zone.

Age of mineralization:

Six million years or younger.

Deposit model:

Porphyry Cu, Porphyry Cu-Mo (Cox and Singer, 1986; models 17, 21a)

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

17, 21a

Production Status: None

Site Status: Inactive

Workings/exploration:

Quintana-Duval mapped, sampled, and diamond-drilled 19 holes totalling 5,565 feet in 1974-1975. The U.S. Geological Survey sampled the deposit in the 1980s.

Production notes:

Reserves:

The resource is estimated at 126 million tons of ore averaging 0.403 percent copper and 0.025 percent molybdenum. There is potential for an additional 49 million tons of chalcocite-enriched ore.

Additional comments:

This prospect is on land selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

Wolfhard, 1974; Wolfhard, 1976; Armstrong and others, 1976; Christie, 1974; Christie, 1975; MacKevett and Holloway, 1977; Hollister, 1978; Butherus and others, 1979; Eakins and others, 1983; Freeport Exploration Company, 1985; Angeloni and others, 1985; Nokleberg and others, 1987; Bundtzen and others, 1987; Wilson and others, 1988; Wilson and others, 1995; Wilson and others, 1996; Young and others, 1997.

Primary reference: Christie, 1975

Reporter(s): S.H. Pilcher

Last report date: 1/3/01

Site name(s): Unnamed (southwest of Portage Valley)

Site type: Occurrence

ARDF no.: PM024

Latitude: 55.7 **Quadrangle:** PM C-2

Longitude: 160.6

Location description and accuracy:
This occurrence is located on the Alaska Peninsula southwest of upper portage Valley (MacKevett and Holloway, 1977, locality 22; Wilson and others, 1988, locality 22). The map site is at an elevation of 1,000 feet, in the NE1/4 of sec. 30, T. 52 S., R. 73 W., of the Seward Meridian. The location is accurate to within 4 miles.

Commodities:

Main:

Other:

Ore minerals:

Gangue minerals:

Geologic description:
This site was described by MacKevett and Holloway (1977) as altered zones probably related to Tertiary granitic rocks.

Alteration:

Age of mineralization:
Tertiary.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Production notes:

Reserves:

Additional comments:
This site is located on land selected by the Aleut Corporation.

References:
MacKevett and Holloway, 1977; Wilson and others, 1988.

Primary reference: MacKevett and Holloway, 1977

Reporter(s): S.H. Pilcher

Last report date: 1/8/01

Site name(s): PMRGX-18

Site type: Occurrence

ARDF no.: PM025

Latitude: 55.595 **Quadrangle:** PM C-2

Longitude: 160.549

Location description and accuracy:

This site is located on the Alaska Peninsula approximately 1.5 miles east of Albatross Anchorage, at the head of Balboa Bay (Christie, 1974, part of color anomaly 76; Wilson and others, 1988, locality 67). It is midway between hilltops 1380 and 1280. The site is referred to as PMRGX-18 by Wilson and others (1988). The location is accurate to within 2,500 feet.

Commodities:

Main: Pb, Zn

Other: As, Ba, Cu, Sn

Ore minerals:

Gangue minerals:

Geologic description:

The country rocks at this site are altered sandstone and volcanic rocks cut by andesite dikes and sills (Wilson and others, 1988). The volcanic rocks are mapped as Miocene (Wilson and others, 1995). Five samples collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in arsenic, barium, copper, lead, tin, and zinc (Wilson and others, 1988).

Alteration:

Age of mineralization:

Miocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Rock samples 85ADt344-348 collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in arsenic, barium, copper, lead, tin, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is located on land selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

Wilson and others, 1987; Christie, 1974; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/24/01

Site name(s): Unnamed (between Balboa Bay and Dorenoi Bay)

Site type: Prospect

ARDF no.: PM026

Latitude: 55.62 **Quadrangle:** PM C-2

Longitude: 160.49

Location description and accuracy:

This site is located on the Alaska Peninsula and represents an area of over 24 square miles between Balboa and Dorenoi Bays (Christie, 1974, color anomaly 76; MacKevett and Holloway, 1977, locality 21; Wilson and others, 1988, locality 21). The site location is plotted near the center of the area, in the SE1/4 of sec. 5, T. 53 S., R. 73 W., of the Seward Meridian.

Commodities:

Main: Ag, Au, Cu, Pb, Zn

Other: As, Hg, Mo, Sb

Ore minerals: Arsenopyrite, chalcopyrite, galena, gold, magnetite, molybdenite, pyrite, sphalerite, tetrahedrite?

Gangue minerals: Barite, calcite, quartz

Geologic description:

This site represents a 24-square-mile color anomaly (Christie. 1974, number 76) that contains numerous areas of mineralization. The anomaly occurs in rocks mapped as Miocene volcanics (Wilson and others, 1995) which here include andesite to dacite tuff, breccia, agglomerate, tuffaceous sedimentary rocks, some flow rocks, and minor sandstone and shale. These have been intruded by diorite stocks and rhyolite dikes. The anomaly is caused by the oxidation of as much as 5 percent pyrite disseminated in propylitically altered andesite.

An Aleut-Quintana-Duval joint venture in 1975 mapped, sampled, conducted a magnetic survey, and drilled two holes on a narrow zone of copper-molybdenum mineralization in fine-grained diorite containing as much as 0.25 percent copper (Christie, 1976). The diorite contains chalcopyrite, magnetite, pyrite, and quartz in fractures. It exhibits pervasive propylitic alteration. The mineralized zone trends southeast beneath a large covered area in which the holes were drilled. These drill holes intersected as much as 183 feet of oxidized capping and bottomed in weakly mineralized diorite containing 5 to 10 percent pyrite and as much as 0.015 percent copper.

Resource Associates of Alaska explored the color anomaly for precious metals in 1979,

1980, and 1983. They mapped, sampled, and hand trenched and discovered many discontinuous, narrow zones of silicification and brecciation that appear to be associated with regional faults (Anderson and others, 1980). They also noted areas of strongly developed stockwork veining. Some of the altered zones contain narrow quartz-barite or quartz-carbonate veins with metal values of as much as 4.45 ppm gold, 500 ppm silver, 23,975 ppm copper, 30,000 ppm lead, and 14,700 ppm zinc. Mercury and antimony are also present (Trujillo and others, 1983).

During this period of exploration three other areas of silica-flooded rock were discovered in a variety of host rocks and structural settings. These occurrences are subhorizontal bodies as much as 200 feet thick and 2,000 feet long. Some contain iron oxides and pyrite as disseminatioins and as fracture fillings. Silica replacement of the hostrocks ranges from partial to total. Zones of intense argillization tend to partially surround the silicified zones, especially at their base (Trujillo and others, 1983). Base metal sulfides occur in the silicified rocks in voids, in quartz veins, and in gouge and breccia zones. Gold values are generally low; a few of the quartz veins contain as much as 0.28 ppm gold and 1.3 ppm silver.

Alteration:

All volcanic units exhibit pervasive propylitization. Silicification is present along mineralized shears and in zones of fracturing and brecciation. Argillization is associated with silica-flooded areas.

Age of mineralization:

Miocene or younger.

Deposit model:

Epithermal gold veins, Porphyry Cu, Porphyry Cu-Mo, Polymetallic veins (Cox and Singer, 1986; models 17, 21a, 22c)

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

17, 21a, 22c

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1975 an Aleut-Quintana-Duval joint venture sampled, mapped, made magnetic surveys, and drilled two core holes for a total of 1,503 feet. Resource Associates of Alaska explored the area in 1979, 1980, and 1983. They did detailed mapping, collected some 2,000 samples for assay, and hand dug trenches. Freeport Exploration Company briefly mapped and sampled the area in 1984. The U.S. Geological Survey sampled the prospect in the mid-1980's.

Production notes:

Reserves:

Additional comments:

This prospect is located on land selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

Christie, 1974; Christie, 1976; MacKevett and Holloway, 1977; Butherus and others, 1979; Anderson and others, 1980; Trujillo and others, 1982; Trujillo and others, 1983; Freeport Exploration Company, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Anderson and others, 1980

Reporter(s): S.H. Pilcher

Last report date: 1/8/01

Site name(s): PMRGX-20

Site type: Occurrence

ARDF no.: PM027

Latitude: 55.605 **Quadrangle:** PM C-2

Longitude: 160.495

Location description and accuracy:

The map site of this occurrence is at an elevation of about 1,250 feet, on a ridge approximately 3.5 miles east of the head of Albatross Anchorage. The site is 0.15 mile southeast of the center of sec. 8, T. 53 S., R. 73 W., Seward Meridian (Christie, 1974, part of color anomaly 76; Wilson and others, 1988, locality 69). The site is referred to as PMRGX-20 by Wilson and others (1988). The location is accurate to within 1,200 feet.

Commodities:

Main: Cu, Pb, Zn

Other:

Ore minerals:

Gangue minerals:

Geologic description:

At this site altered andesitic dikes intrude altered Miocene volcanic and sedimentary rocks (Wilson and others, 1995). Three samples collected by the U.S. Geological Survey in the mid-1980's were reported to be anomalous in copper, lead, and zinc (Wilson and others, 1988).

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:

Rock samples 85AYb739-740 and 85AJm805 collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in copper, lead, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is located on land selected by the Aleut Corporation.

References:

Wilson and others, 1987; Christie, 1974; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/24/01

Site name(s): Unnamed (near Renshaw Point)

Site type: Occurrence

ARDF no.: PM028

Latitude: 55.622 **Quadrangle:** PM C-2

Longitude: 160.380

Location description and accuracy:

This occurrence is at an elevation of about 500 feet on the southwest side of Dorenoi Bay, about 1.25 miles northwest of Renshaw Point (Christie, 1974, color anomaly 74; MacKevett and Holloway, 1977, locality 20; Wilson and others, 1988, locality 20). The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: Cu, Pb, Zn

Ore minerals: Arsenopyrite, galena, gold, pyrite, sphalerite

Gangue minerals: Barite, calcite, quartz

Geologic description:

The area of this occurrence has been mapped by Wilson and others (1995) as Miocene volcanics. According to Butherus and others (1979), the area contains steeply northeast-dipping latite, andesite or basalt flows, and flow breccias overlying sandstone, shale, and conglomerate.

The site is marked by a 10,000- by 5,000-foot color anomaly (Christie, 1974, number 74). Christie describes the deposit as quartz-calcite veins containing minor arsenopyrite, pyrite, sphalerite, and galena. The veins cut the volcanic rocks and strike nearly south. The veins become more numerous towards Renshaw Point and in one 100- by 200-foot area form a pyritic stockwork.

Anderson and others (1980) describe the veins as being as much as 2 feet thick and occurring near prominent shear zones. They also note a 12- to 15-foot thick latite dike that crops out over a distance of 1,000 feet and contains disseminated sphalerite and galena. In many areas the rocks exhibit moderate to strong carbonate alteration, the largest area of which is in andesite or latite and is 100 feet wide and 4,000 feet long.

Rock samples collected by Resource Associates of Alaska (Anderson and others,1980) from various veins and shear zones assayed as much as 11.5 percent copper, 1.47 percent lead, 11 percent zinc, 0.84 ounce of gold per ton, and 209 ounces of silver per ton. The latite dike with disseminated sulfides assayed as much as 0.39 ounce of gold per ton and

2 percent zinc.

Alteration:

Moderate to strong carbonate alteration is present in most of the volcanic units. This may be a form of propylitic alteration.

Age of mineralization:

Miocene or younger.

Deposit model:

Epithermal gold veins, 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:

Christie (1974) reconnaissance-mapped the area and collected eight silt or soil samples. All had detectable gold. Assays ranged from up to 0.03 ppm gold, 4.9 ppm silver, 200 ppm zinc, and low copper and molybdenum values. Rock samples collected by the U.S. Geological Survey studies in the mid-1980's (samples 83ADt 95 and 96) contained as much as 7 ppm silver. Five vein and shear samples collected by Resource Associates of Alaska in 1980 assayed as much as 11.5 percent copper, 1.47 percent lead, 11 percent zinc, 0.84 ounce of gold per ton, and 209 ounces of silver per ton.

Production notes:

Reserves:

Additional comments:

This site is located on land selected by the Aleut Corporation.

References:

Christie, 1974; MacKevett and Holloway, 1977; Butherus and others, 1979; Anderson and others, 1980; Freeport Exploration Company, 1985; Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Anderson and others, 1980

Reporter(s): S.H. Pilcher

Last report date: 1/6/01

Site name(s): PMRGX-19

Site type: Occurrence

ARDF no.: PM029

Latitude: 55.699 **Quadrangle:** PM C-2

Longitude: 160.524

Location description and accuracy:
The map site of this occurrence is at an elevation of about 750 feet, near the middle fork of the headwaters of Lawrence Creek. This site is referred to as PMRGX-19 in Wilson and others (1988, locality 68). The location is accurate to within 2,500 feet.

Commodities:

Main: Ag, Cu

Other:

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:
This occurrence consists of numerous quartz-pyrite veins in coarse-grained granodiorite (Wilson and others, 1988). One sample collected by the U.S. Geological Survey in the mid-1980's was reported to be anomalous in copper and silver (Wilson and others, 1988).

Alteration:

Age of mineralization:

Deposit model:
Porphyry Cu (Cox and Singer, 1986; model 17)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
17

Production Status: None

Site Status: Inactive

Workings/exploration:

Rock sample 86AWs358, collected by the U.S. Geological Survey in the mid-1980s was reported to be anomalous in copper and silver (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:
The site is located within the Alaska Peninsula Natural Wildlife Refuge.

References:
Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/24/01

Site name(s): PMRGX-22

Site type: Occurrence

ARDF no.: PM030

Latitude: 55.712 **Quadrangle:** PM C-2

Longitude: 160.573

Location description and accuracy:

The map site of this occurrence is at an elevation of about 1,200 feet on the northeast side of the ridge between Lawrence Creek and Grass Valley. It is in the NE1/4 of sec. 4, T. 52 S., R. 73 W. Seward Meridian. It is referred to as PMRGX-22 by Wilson and others (1988, locality 70). The location is accurate to within 1200 feet.

Commodities:

Main: Cu, Zn

Other:

Ore minerals:

Gangue minerals:

Geologic description:

This occurrence represents a group of four samples collected on the periphery of an altered silcic (silicified?) pluton intruding the Paleocene to Eocene Tolstoi Formation (Wilson and others, 1988; 1995). The northernmost of the four samples was from a basalt (?) plug or sill. The samples were collected by the U.S. Geological Survey in the mid-1980's and were reported to be anomalous in copper and zinc (Wilson and others, 1988).

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:

Rock samples 84ACe194-197, collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in copper and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is located near the boundary between state land and the Alaska Peninsula National Wildlife Refuge.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/24/01

Site name(s): PMRGX-21 (Mud Bay)

Site type: Prospect

ARDF no.: PM031

Latitude: 55.7301 **Quadrangle:** PM C-2

Longitude: 160.5117

Location description and accuracy:

This prospect is located on the Alaska Peninsula approximately 4 miles southwest of the head of Mud Bay on Port Moller and about 5.5 miles east of the head of Herendeen Bay. The map site is at an elevation of 1,550 feet, 0.2 mile southwest of the top of hill 1750, in the SE1/4 of sec. 26, T. 51 S., R. 73 W., of the Seward Meridian. It is referred to as PMRGX-21(Mud Bay) in Wilson and others (1988, locality 86). The location is accurate to within 500 feet.

Commodities:

Main: Ag, Cu, Pb, Zn

Other: As, Bi, Cd, Sb

Ore minerals: Chalcopyrite, argentiferous galena, gold, pyrite, sphalerite, tetrahedrite

Gangue minerals: Calcite, quartz

Geologic description:

This prospect was first staked by Resource Associates of Alaska in 1980. They outlined a mineralized system 3.5 miles long by as much as 1 mile wide that trends east-west. The system is hosted by sedimentary rocks of the Eocene to Oligocene Stepovak Formation (Wilson and others, 1995). The rocks are cut by dikes and sills varying from andesite to rhyodacite (Trujillo and others, 1982).

The mineralized system is intensely silicified and is marked by widespread pyrite that occurs as fracture fillings and as disseminations. A carbonate-chlorite alteration halo as wide as 800 feet surrounds the silicified zone, which is characterized by irregular quartz-sericite masses and apparently randomly distributed quartz veins. The silicified zone also contains local zones of argillic alteration, especially adjacent to dikes and sills and to quartz-sulfide veins.

The best mineralization found by Trujillo and others (1982) was along the northern edge of the silicified zone, where there are sulfide-bearing quartz veins a few inches to as much as 2 to 3 feet wide. These veins are mostly in the silicified zone and are as much as 300 feet long. They contain massive galena, coarse-grained sphalerite, blebs, and stringers of chalcopyrite, and rare tetrahedrite. A 13.8-foot channel sample assayed 15.4 ounces of

silver per ton, 0.46 percent copper, 5.73 percent lead, and 4.37 percent zinc. Selected samples of 1- to 3-foot-wide veins assayed 0.01 to 0.098 ounce of gold per ton, 23.7 to 160 ounces of silver per ton, 0.2 to 0.4 percent copper, 2.9 to 5.2 percent lead, and 0.8 to 12.3 percent zinc (Trujillo and others, 1982).

Other types of mineralization in the silicified zone include stockworks of galena-calcite veins as much as 1 inch thick, and pyrite disseminated in fractured rocks. The latter type contains only pyrite but assayed as much as 1.54 ounces of silver per ton. Disseminated sulfides in the carbonate-chlorite alteration zone also carry silver.

Soil geochemistry indicates mercury enrichment in the carbonate-chlorite zone adjacent to the silicified zone. Gold anomalies occur sporadically and are most common in the area of mercury enrichment. Some base metal anomalies are related to dikes or dike swarms in the silicified zone.

In 1984 Freeport Exploration Drilling Company geologists outlined an apparent eastward extension of the deposit. It was their opinion, however, that the rocks were hornfelsed rather than silicified. They were discouraged by this fact and by what they described as weak geochemisty and alteration and the consistently narrow veins.

Alteration:

Alteration at this prospect includes silicification, argillization, sericitization, and carbonate-chlorite replacement.

Age of mineralization:

Eocene or younger.

Deposit model:

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:

Resource Associates of Alaska explored this prospect from 1980 to 1982. During that time they mapped and hand trenched the prospect, collected 222 rock and 423 soil samples, and conducted VLF-EM and magnetic surveys. Selected samples of 1- to 3-foot wide veins assayed 0.01 to 0.098 ounce of gold per ton, 23.7 to 160 ounces of silver per ton, 0.2 to 0.4 percent copper, 2.9 to 5.2 percent lead, and 0.85 to 12.3 percent zinc. In 1984 Freeport Exploration Drilling Company did additional mapping and trenching and collected 143 rock and 47 soil samples. Six rock samples collected by the U.S. Geological Survey in the mid-1980s were anomalous in copper, lead, zinc, silver, arsenic, bismuth, and antimony (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is located on state land.

References:

Butherus and others, 1979; Andersen and others, 1980; Trujillo and others, 1982; Freeport Exploration Drilling Company, 1985; Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Trujillo and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/28/01

Site name(s): Unnamed (north of Mine Harbor)

Site type: Occurrence

ARDF no.: PM032

Latitude: 55.786 **Quadrangle:** PM D-3

Longitude: 160.688

Location description and accuracy:

This occurrence is located on the Alaska Peninsula approximately 1 mile north of Mine Harbor on Herendeen Bay (MacKevett and Holloway, 1977, locality 23; Wilson and others, 1988, locality 23). The map site is at an elevation of 1,450 feet, in the NE1/4 of sec. 10, T. 51 S., R. 74 W., of the Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Cu, Zn

Other:

Ore minerals:

Gangue minerals: Calcite

Geologic description:

MacKevett and Holloway (1977) reported altered zones at this occurrence, probably related to Tertiary granitic rocks. No exposures of granite rocks were found in the area during U.S. Geological Survey studies in the mid-1980's (Wilson and others, 1988). Instead, these studies indicated extensive silicification and calcification of siltstone and sandstone of the Cretaceous Staniukovich Formation. A rock sample of olive-green siltstone was reported to be anomalous in copper and zinc (Wilson and others, 1987).

Alteration:

Age of mineralization:

Cretaceous or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

The U.S. Geological Survey mapped and sampled this occurrence in the mid-1980's. Sample 85AJm 765 was reported to be anomalous in copper and zinc (Wilson and others, 1987).

Production notes:

Reserves:

Additional comments:

References:

MacKevett and Holloway, 1977; Wilson and others, 1987; Wilson and others, 1988.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/8/01

Site name(s): PMRGX-36

Site type: Occurrence

ARDF no.: PM033

Latitude: 55.787 **Quadrangle:** PM D-2

Longitude: 160.617

Location description and accuracy:

The map site of this occurrence is at an elevation of 1,000 feet on the west side of Coal Valley. It is 0.1 mile due north of the top of hill 1185, in the N1/2 of sec. 7, T. 51 S., R. 73 W., of the Seward Meridian. This site is referred to as PMRGX-36 in Wilson and others (1988, locality 84). The location is accurate to within 2,500 feet.

Commodities:

Main: Cu, Zn

Other:

Ore minerals:

Gangue minerals:

Geologic description:

At this site calcarenite and siltstone, probably belonging to the Lower Cretaceous Herendeen Formation, are cut by a diorite dike (Wilson and others, 1995). Two samples collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in copper and zinc (Wilson and others, 1988).

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:

Rock samples (86AWs389-390) collected by the U.S. Geological Survey in the mid-1980s, were reported to be anomalous in copper and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:
This site is located on state land.

References:
Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/26/01

Site name(s): PMRGX-35

Site type: Occurrence

ARDF no.: PM034

Latitude: 55.825 **Quadrangle:** PM D-2

Longitude: 160.537

Location description and accuracy:

This occurrence is located on the Alaska Peninsula approximately 2.6 miles west of the west shore of Mud Bay (on Port Moller) and 3.2 miles east of Staniukovich Mountain. The site is 0.25 mile due east of the top of hill 1725. It is referred to as PMRGX-35 in Wilson and others (1988, locality 83). The location is accurate to within 2,500 feet.

Commodities:

Main: Cu, Zn

Other: Sb

Ore minerals:

Gangue minerals:

Geologic description:

The country rocks at this site are basalt(?) flows of the Eocene to Oligocene Meshik Volcanics (Wilson and others, 1995). They are interbedded with volcanic breccia and contain pockets of sedimentary rocks containing abundant fossil oysters. Two samples collected here by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in antimony, copper, and zinc (Wilson and others, 1988).

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:

Rock samples 84ACe174 and 86AWs394, collected by the U.S. Geological Survey in the mid-1980s, were reported to be anomalous in copper, zinc, and antimony (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is located on land selected by the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/26/01

Site name(s): Moller Spit

Site type: Occurrence

ARDF no.: PM035

Latitude: 55.94 **Quadrangle:** PM D-2

Longitude: 160.55

Location description and accuracy:

This site represents approximately 5 miles of sampled beach placer deposits on the Alaska Peninsula on the east coast of Port Moller. The sampling extended northeast from Harbor Point to sec. 33, T. 48 S., R. 72 W., of the Seward Meridian (Cobb, 1972 [MF433], locality 8; Cobb, 1973 [B 1374], locality 3; MacKevett and Holloway, 1977, locality 8; Wilson and others, 1988, locality 8). The sampling extended onto the Chignik A-8 map sheet (see Pilcher, 2000, loc. CG004). The map site is the approximate midpoint of the section of beach sampled, at the west boundary of sec. 15, T. 49 S., R. 73 W., of the Seward Meridian.

Commodities:

Main: Fe, Ti

Other: Au

Ore minerals: Ilmenite, magnetite

Gangue minerals:

Geologic description:

This occurrence consists of beach placer deposits of ilmenite and titaniferous magnetite in a sand spit that is partly moraine. Seven shovel samples were collected over this 5-mile section of beach (Berryhill, 1963). In the magnetic fraction, iron content ranged from 1.1 to 191.4 pounds per cubic yard and the titanium oxide content ranged from 0.3 to 42.4 pounds per cubic yard. In the non-magnetic fraction, titanium oxide ranged to 10.2 pounds per cubic yard (two samples only).

Alteration:

Age of mineralization:

Quaternary.

Deposit model:

Shoreline placer Ti (Cox and Singer, 1986; model 39c)

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Production notes:

Reserves:

Additional comments:
This site is located on land owned by the state.

References:
Berryhill, 1963; Cobb, 1972 (MF 433); Cobb, 1973 (B 1374); MacKevett and Holloway, 1977; Wilson and others, 1988.

Primary reference: Berryhill, 1963

Reporter(s): S.H. Pilcher

Last report date: 1/2/01

Site name(s): Unnamed (north of Dorenoi Bay)

Site type: Occurrence

ARDF no.: PM036

Latitude: 55.7 **Quadrangle:** PM C-2

Longitude: 160.4

Location description and accuracy:

This approximately located occurrence is on the Alaska Peninsula, about 4.2 miles north of upper Dorenoi Bay (Christie, 1974, color anomaly 75; MacKevett and Holloway, 1977, locality 24; Wilson and others, 1988, locality 24). The map site is at an elevation of 1,100 feet, in the SE1/4 of sec. 35, T. 51 S., R. 72 W., of the Seward Meridian. The location is accurate to within 3 miles.

Commodities:

Main: Ag, Au

Other: Cu, Mo, Zn

Ore minerals: Pyrite

Gangue minerals: Calcite

Geologic description:

The area of this site is marked by a 1- by 2-mile color anomaly (Christie, 1974, number 75) in the late Eocene to early Oligocene Stepovak Formation (Wilson and others, 1995). The bedded rocks are intruded by several plutons. Christie described the occurrence as sparse calcite veins and vein breccias containing a trace of pyrite. He collected six silt samples that contained as much as 0.01 ppm gold, 1.8 ppm silver, 70 ppm copper, 102 ppm zinc, and 4 ppm molybdenum.

Alteration:

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:
Christie briefly examined and silt-sampled the site in 1974.

Production notes:

Reserves:

Additional comments:
The site is located on land selected by the Aleut Corporation.

References:
Christie, 1974; MacKevett and Holloway, 1977; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Christie, 1974

Reporter(s): S.H. Pilcher

Last report date: 1/8/01

Site name(s): PMRGX-13

Site type: Occurrence

ARDF no.: PM037

Latitude: 55.696 **Quadrangle:** PM C-1

Longitude: 160.296

Location description and accuracy:

This site is at an elevation of about 600 feet, on the Alaska Peninsula approximately 1.5 miles north of triangulation point Chichagof. It is in the NW1/4 of sec. 8, T. 52 S., R. 71 W., Seward Meridian. It is referred to as PMRGX-13 in Wilson and others (1988, locality 62). The location is accurate to within 1,200 feet.

Commodities:

Main: Pb, Zn

Other: As, Sb

Ore minerals:

Gangue minerals:

Geologic description:

At this site, near the American Bay batholith, sandstone, shale, and mudstone of the Eocene to Oligocene Stepovak Formation are cut by basalt or diabase dikes (Wilson and others, 1995). Five rock samples collected by the U.S. Geological Survey in the mid-1980's were reported to be anomalous in antimony, arsenic, lead, and zinc (Wilson and others, 1988).

Alteration:

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Rock samples 83ACe77-79 and 86ADt376-377, collected by the U.S. Geological Survey in the mid-1980s, were reported to be anomalous in antimony, arsenic, lead, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is located on land selected by the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/23/01

Site name(s): Unnamed (east shore of Port Moller)

Site type: Occurrence

ARDF no.: PM038

Latitude: 55.783 **Quadrangle:** PM D-1

Longitude: 160.266

Location description and accuracy:

The map site of this occurrence is located on the Alaska Peninsula on the east shore of Right Head on Port Moller (Berg and Cobb, 1967, locality 4; Cobb, 1972 [MF 433], locality 1; MacKevett and Holloway, 1977, locality 1; Wilson and others, 1988, locality 1). It is in the NW1/4 of sec. 3, T. 51 S., R. 71 W., of the Seward Meridian. The location is accurate to 1,200 feet.

Commodities:

Main: Au, Cu, Pb

Other:

Ore minerals: Gold?, pyrite

Gangue minerals:

Geologic description:

Rocks at this site consist of undivided Tertiary volcanic strata (Wilson and others, 1995). Atwood (1911) first described this occurrence as a series of basaltic lava flows that are altered to a brillant yellow color. His samples contained no gold. Trujillo and others (1982) mention intrusive plugs or stocks. They describe the rocks as heavily pyritized and they found gold in pan concentrates in six drainages. The rock samples they collected contained no gold. Mapping in the 1980s by the U.S. Geological Survey indicated a series of andesite flows and lahars whose basal units are hydrothermally altered (Wilson and others, 1988). Their rock geochemical samples locally contained anomalous amounts of lead and copper.

Alteration:

The brillant yellow color described by Atwood (1911) is probably due to the weathering of pyrite, producing iron oxides and clay.

Age of mineralization:

Tertiary.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Some staking was carried out here in the early 1900's, but no development work was ever reported. Atwood took some samples in 1911. Resource Associates of Alaska sampled here in 1982, and the U.S. Geological Survey mapped and sampled the area in the mid-1980's.

Production notes:

Reserves:

Additional comments:

This site is located near the boundary between land selected by the Aleut Corporation and State-selected wildlife, park, forest, or other multiple-use areas.

References:

Atwood, 1911; Berg and Cobb, 1967; Cobb, 1972 (MF 443); MacKevett and Holloway, 1977; Trujillo and others, 1982; Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 12/22/00

Site name(s): PMRGX-14

Site type: Occurrence

ARDF no.: PM039

Latitude: 55.731 **Quadrangle:** PM C-1

Longitude: 160.124

Location description and accuracy:

This occurrence is located on the Alaska Peninsula on the east shore of upper American Bay. It is in the SE1/4 of sec. 29, T. 51 S., R. 70 W., of the Seward Meridian. This site is referred to as PMRGX-14 in Wilson and others (1988, locality 63). The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Pb, Zn

Other: As, Cu, Sb, Sn

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:

This occurrence consists of a 3-inch vein of fine-grained, massive sulfides in andesite that intrudes sedimentary units of the Paleocene to Eocene Tolstoi Formation (Wilson and others, 1995). The locality is approximately 2,500 feet southeast of the contact of the American Bay batholith. One rock sample collected by the U.S. Geological Survey in the mid-1980's was reported to be anomalous in antimony, arsenic, copper, lead, silver, tin, and zinc (Wilson and others, 1988).

Alteration:

Age of mineralization:

Tertiary.

Deposit model:

Polymetallic vein (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:

Rock sample 83APk33 collected by the U.S. Geological Survey in the mid-1980s was reported to be anomalous in antimony, arsenic, copper, lead, silver, tin, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is located on land selected by the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/23/01

Site name(s): PMRGX-15

Site type: Occurrence

ARDF no.: PM040

Latitude: 55.731 **Quadrangle:** PM C-1

Longitude: 160.052

Location description and accuracy:

This occurrence is at peak 1870 on the Alaska Peninsula, approximately 2,500 feet north of the north shore of Orzinski Bay. The map site is in the SE1/4 of sec. 26, T. 51 S., R. 70 W., Seward Meridian. It is referred to as PMRGX-15 in Wilson and others (1988, locality 64). The location is accurate to within 1,000 feet.

Commodities:

Main: Sb

Other: As

Ore minerals:

Gangue minerals:

Geologic description:

At this site volcaniclastic sandstone, siltstone, and conglomerate of the Eocene to Oligocene Stepovak Formation (Wilson and others, 1995) are intruded by numerous basalt? dikes or sills (Wilson and others, 1988). The U.S. Geological Survey collected one sample in the mid-1980's. It was reported to be anomalous in antimony and arsenic (Wilson and others, 1988).

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:

Rock sample 83ACe61collected by the U.S. Geological Survey in the mid-1980s was reported to be anomalous in antimony and arsenic (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is on land selected by the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/23/01

Site name(s): PMRGX-16

Site type: Occurrence

ARDF no.: PM041

Latitude: 55.747 **Quadrangle:** PM C-1

Longitude: 160.022

Location description and accuracy:

This site is located on the Alaska Peninsula on the west side of Clark Bay approximately 2 miles north of Waterfall Point. It is referred to as PMRGX-16 by Wilson and others (1988, locality 65). The locality is accurate to within 1,000 feet.

Commodities:

Main: Sb, Zn

Other: As, Ba

Ore minerals:

Gangue minerals:

Geologic description:

Wilson and others (1988) describe this occurrence as a vertical, sericitically altered, zone containing abundant sulfides in volcaniclastic sandstone and siltstone (Wilson and others, 1988). The sedimentary rocks probably are part of the Paleocene to Eocene Tolstoi Formation (Wilson and others, 1995). Amygdaloidal andesite flows are also present in the area. One sample collected by the U.S. Geological Survey in the mid-1980's was reported to be anomalous in antimony, arsenic, barium, and zinc (Wilson and others, 1988).

Alteration:

Sericite alteration is present in an altered zone within sandstone and siltstone.

Age of mineralization:

Tertiary.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Rock sample 83AWs91, collected by the U.S. Geological Survey in the mid-1980s, is reported to be anomalous in antimony, arsenic, barium, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is located on land selected by the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/24/01

Site name(s): PMRGX-31

Site type: Occurrence

ARDF no.: PM042

Latitude: 55.795 **Quadrangle:** PM D-1

Longitude: 160.056

Location description and accuracy:

The map site of this occurrence is at an elevation of 850 feet, on the northeast side of a prominent ridge that extends northwest from the head of Clark Bay. The site is about 0.1 mile northeast of the center of sec. 2, T. 51 S., R. 70 W., of the Seward Meridian. It is referred to as PMRGX-31 by Wilson and others (1988, locality 79). The location is accurate to within 2,500 feet.

Commodities:

Main: Ag, Pb, Zn

Other: As, Cu, Sb

Ore minerals:

Gangue minerals: Quartz

Geologic description:

At this site conglomerate, sandstone, and siltstone of the Paleocene to Eocene Tolstoi Formation are cut by quartz veins and by altered aphanitic dikes or sills (Wilson and others, 1988; 1995). Six samples collected by the U.S. Geological Survey in the mid-1980's were reported to be anomalous in antimony, arsenic, copper, lead, silver, and zinc (Wilson and others, 1988). One mile to the west, a sample of hornfelsed siltstone contained anomalous values in silver.

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:

Rock samples 83AYb532-537 and 83AWs105b (Wilson and others, 1988) were reported to be anomalous in antimony, arsenic, copper, lead, silver, and zinc.

Production notes:

Reserves:

Additional comments:

This site is on land selected by the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/26/01

Site name(s): PMRGX-32

Site type: Occurrence

ARDF no.: PM043

Latitude: 55.815 **Quadrangle:** PM D-1

Longitude: 160.083

Location description and accuracy:

The map site of this occurrence is at an elevation of about 1,800 feet, approximately 3 miles northwest of the head of Clark Bay. The site is 0.4 mile north of the center of sec. 34, T. 50 S., R. 70 W., of the Seward Meridian. It is referred to as PMRGX-32 by Wilson and others (1988, locality 80). The location is accurate to within 2,500 feet.

Commodities:

Main: Au

Other:

Ore minerals:

Gangue minerals:

Geologic description:

At this site sandstone, siltstone, and conglomerate of the Paleocene to Eocene Tolstoi Formation are intruded by andesite sills and basalt(?) dikes(?) (Wilson and others, 1988; 1995). A rock sample collected by the U.S. Geological Survey in the mid-1980's was reported to be anomalous in gold (Wilson and others, 1988).

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:

Rock sample (83AWs107) was reported to be anomalous in gold (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:
This site is on land selected by the Aleut Corporation.

References:
Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/26/01

Site name(s): PMRGX-33

Site type: Occurrence

ARDF no.: PM044

Latitude: 55.879 **Quadrangle:** PM D-1

Longitude: 160.054

Location description and accuracy:

This occurrence is at an elevation of about 2,600 feet, on the Alaska Peninsula approximately 7.5 miles southeast of the southeast end of Bear Lake. The site is in the SE1/4 of sec. 2, T. 50 S., R. 70 W., Seward Meridian. It is referred to as PMRGX-33 by Wilson and others (1988, locality 81). The location is accurate to within 2,500 feet.

Commodities:

Main: Au

Other:

Ore minerals:

Gangue minerals:

Geologic description:

The country rock at this site is a Quaternary andesite flow (Wilson and others, 1995). Outcrops along a ridge to the northwest are strongly iron stained and altered (Wilson and others, 1988). A rock sample collected by the U.S. Geological Survey in the mid-1980s was reported to be anomalous in gold (Wilson and others, 1988).

Alteration:

Iron staining.

Age of mineralization:

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

A rock sample (83AWs108) was reported to be anomalous in gold (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is located on land selected by the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/26/01

Site name(s): PMRGX-34

Site type: Occurrence

ARDF no.: PM045

Latitude: 55.913 **Quadrangle:** PM D-1

Longitude: 160.075

Location description and accuracy:

This occurrence is at an elevation of about 1,500 feet on the Alaska Peninsula approximately 5.5 miles southeast of the southeast end of Bear Lake. The map site is in the NE1/4 of sec. 27, T. 49 S., R. 70 W., Seward Meridian. It is referred to as PMRGX-34 by Wilson and others (1988, locality 82). The location is accurate to within 2,500 feet.

Commodities:

Main: Cu, Pb

Other:

Ore minerals:

Gangue minerals:

Geologic description:

This occurrence consists of a sericitic and argillic altered zone in andesitic volcanic rocks of Quaternary age (Wilson and others, 1995). A sample collected by the U.S. Geological Survey in the mid-1980s was reported to be anomalous in copper and lead (Wilson and others, 1988).

Alteration:

Argillic and sericitic 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:

Rock sample 84AWs203, collected by the U.S. geological Survey in the mid-1980s, was reported to be anomalous in copper and lead (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is located on state land.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/26/01

Site name(s): Unnamed (east of Zachary Bay)

Site type: Occurrence

ARDF no.: PM046

Latitude: 55.37 **Quadrangle:** PM B-2

Longitude: 160.56

Location description and accuracy:

The map site of this approcimately located occurrence is at an elevation of about 450 feet, about midway between North and West Heads, on Unga Island east of Zachary Bay (Christie, 1974, color anomaly 78?; MacKevett and Holloway, 1977, locality 17; Wilson and others, 1988, locality 17). The location is accurate to within 2 miles.

Commodities:

Main: Au?

Other:

Ore minerals: Pyrite, pyrrhotite

Gangue minerals:

Geologic description:

This occurrence is in rocks mapped as Popof volcanic rocks of late Eocene to early Oligocene age (Wilson and others, 1995). It is described as an altered zone in Tertiary volcanic rocks by MacKevett and Holloway (1977). The occurrence may correspond to Christie's (1974) color anomaly 78, which he describes as being 3,000 feet in diameter and consisting of pyrite and minor pyrrhotite in fractured volcanic rocks. Gold is herein speculatively listed as a commondity, based on its occurrence elsewhere in the Popov volcanic rocks.

Alteration:

Christie (1974) describes the alteration as argillic, but provides no details.

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Christie (1974) made a brief examination and collected one silt sample. It did not contain anomalous amounts of any commodities.

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Christie, 1974; MacKevett and Holloway, 1977; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Christie, 1974

Reporter(s): S.H. Pilcher

Last report date: 1/5/01

Site name(s): PMRGX-8

Site type: Occurrence

ARDF no.: PM047

Latitude: 55.3423 **Quadrangle:** PM B-2

Longitude: 160.6209

Location description and accuracy:
This site is located on Round Island in Zachary Bay on northern Unga Island. It is referred to as PMRGX-8 in Wilson and others (1988, locality 57). The locality is accurate to within 500 feet.

Commodities:

Main: Au, Pb

Other:

Ore minerals:

Gangue minerals:

Geologic description:
This occurrence is in tuff mapped as part of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). Two rock samples of silicified andesitic tuff collected by the U.S. Geological Survey in the mid-1980's were reported to be anomalous in gold and lead (Wilson and others, 1988).

Alteration:
Silicification.

Age of mineralization:
Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Rock samples 83AWs 145-146 were reported to be anomalous in gold and lead (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/23/01

Site name(s): Stemwinder

Site type: Occurrence

ARDF no.: PM048

Latitude: 55.328 **Quadrangle:** PM B-2

Longitude: 160.575

Location description and accuracy:

This occurrence is on Unga Island approximately 4,000 feet east of Coal Harbor. The map site is at an elevation of 200 feet, 0.25 mile east-southeast of the top of hill 358, in the SW1/4 of sec. 14, T. 56 S., R. 74 W., Seward Meridian.The location is accurate to within 1,200 feet.

Commodities:

Main: Au

Other: As, Hg

Ore minerals: Gold, pyrite

Gangue minerals: Quartz

Geologic description:

This site consists of a 200-foot long, northwest-trending quartz-pyrite stockwork. The stockwork comprises quartz veins 0.5 to 6 inches thick that contain pyrite laminations and clots. The host rock is argillically altered andesite mapped as Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). Of 19 rock samples, two contained gold (0.04 and 0.22 ppm) and three contained mercury (0.15 to 1.55 ppm). Pan samples contained as much as 1.2 ppm gold (Ellis, 1988).

Alteration:

The host rock exhibits argillic alteration.

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1988 Battle Mountain Exploration Company examined this site and collected 19 rock, 32 soil, and 12 pan samples. Only two rock samples contained anomalous gold values (0.04 and 0.22 ppm).

Production notes:

Reserves:

Additional comments:

This occurrence is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Ellis, 1988; Wilson and others, 1995.

Primary reference: Ellis, 1988

Reporter(s): S.H. Pilcher

Last report date: 2/4/01

Site name(s): Hog

Site type: Prospect

ARDF no.: PM049

Latitude: 55.307 **Quadrangle:** PM B-3

Longitude: 160.728

Location description and accuracy:

This prospect is located on western Unga Island approximately 1.5 miles west of the head of Zachary Bay (MacKevett and Holloway, 1977, locality 16; Wilson and others, 1988, locality 16). The map site is at an elevation of 1,100 feet, 0.25 mile south-southwest of peak 1965. The location is accurate.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Sb, Zn

Ore minerals: Arsenopyrite(?), chalcopyrite, galena, gold, pyrite, sphalerite, tetrahedrite

Gangue minerals: Chalcedony, quartz

Geologic description:

This prospect is in volcanic rocks of the late Oligocene to middle Miocene Unga Formation (Wilson and others, 1995). The rocks include volcanic flows, tuffs, ash-flow tuffs, volcaniclastic rocks, and hornblende porphyry.

Anomalous gold and silver values have been traced in surface samples for more than 2,300 feet (Peterson and others, 1982; 1983). A northwest-trending mineralized breccia zone appears to have controlled high-grade ore shoots where it intersects northeast-trending structures. The host for the gold-silver mineralization is volcanic breccia. The breccia varies from fractured silica- veined rock to a polymictic breccia, that may in part be intrusive. The highest grade mineralization is associated with the polymictic breccia. The mineralization is accompanied by intense silicification and pyritization. Sparse amounts of arsenopyrite(?), chalcopyrite, galena, sphalerite, and tetrahedrite occur locally.

The highest precious metal values were obtained from the discovery outcrop, where samples assayed 4.75 ppm gold and 268 ppm silver (Peterson and others, 1982; 1983). One drill hole intersected 33 feet of breccia containing 1.26 ppm gold and 11.7 ppm silver. This intersect includes 6 feet of breccia containing 2.38 ppm gold and 16.5 ppm silver. Several other holes cut rock having lower grade precious metal values. Surface exposures of other mineralized breccia returned values of as much as 4.69 ppm and 1.47 ppm gold.

Alteration:

Alteration locally is zoned outward from silicic to argillic to propylitic. The silicified zones contain quartz veins, amethystine quartz, chalcedony, massive quartz, and pyrite. Argillic minerals include montmorillonite, illite, and a green chloritic clay containing 1 to 10 percent pyrite (Peterson and others, 1982; 1983).

Age of mineralization:

Oligocene or younger.

Deposit model:

Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1983 Unc Teton Exploration Drilling Company drilled six core holes for a total of 1,350 feet, cut 475 feet of trenches, ran 12,350 feet of VLF-EM surveys, collected more than 400 samples of various types for geochemical analysis, and did 20,000 feet of gridding. The U.S. Geological Survey collected a few samples of this deposit in the mid-1980's. Battle Mountain Exploration Company examined the prospect in 1986.

Production notes:

Reserves:

Additional comments:

This prospect is on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

MacKevett and Holloway, 1977; Peterson and others, 1982; Peterson and others, 1983; Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982; 1983

Reporter(s): S.H. Pilcher

Last report date: 1/4/01

Site name(s): Unnamed (southwest of head of Zachary Bay)

Site type: Occurrence

ARDF no.: PM050

Latitude: 55.284 **Quadrangle:** PM B-3

Longitude: 160.707

Location description and accuracy:

This occurrence is located on Unga Island about 1.5 miles southwest of the head of Zachary Bay (Christie, 1974, color anomaly 83). The map site is at an elevation of about 1,350 feet, 0.4 mile southeast of the top of hill 2283. The locality is accurate to within 2,500 feet.

Commodities:

Main: Cu

Other:

Ore minerals: Chalcopyrite, pyrite

Gangue minerals: Quartz?

Geologic description:

This site represents a color anomaly 1,500 by 6,000 feet (Christie, 1974, number 83), in Tertiary diorite, dacite, and hornfels (Wilson and others, 1995). Coarse clots and disseminations of pyrite occur in the diorite and dacite. Hornfels at a diorite contact contains disseminations and fracture fillings of chalcopyrite and magnetite exposed in a 200- by 200-foot area. Samples of this rock contained up to 0.3 percent copper. Christie (1974) also reported a pyritic stockwork containing 500 ppm copper. One sample of this stockwork assayed 0.06 ppm gold.

Alteration:

Age of mineralization:

Tertiary.

Deposit model:

Porphyry Cu; Porphyry Cu-Au (Cox and Singer; 1986; models 17 and 20c)

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

17, 20c

Production Status: None

Site Status: Inactive

Workings/exploration:

The Aleut-Quintana-Duval joint venture examined and sampled the occurrence in 1974 (Christie, 1974).

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Christie, 1974; Wilson and others, 1995.

Primary reference: Christie, 1974

Reporter(s): S.H. Pilcher

Last report date: 2/5/01

Site name(s): PMRGX-10

Site type: Occurrence

ARDF no.: PM051

Latitude: 55.287 **Quadrangle:** PM B-3

Longitude: 160.673

Location description and accuracy:

This occurrence is located on western Unga Island approximately 1 mile due south of the head of Zachary Bay. The map site is at an elevation of about 1,100 feet, near the center of sec. 31, T. 56 S., R. 74 W., of the Seward Meridian. It is referred to as PMRGX-10 in Wilson and others (1988, locality 59). The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Pb, Zn

Other: As, Sb

Ore minerals: Pyrite

Gangue minerals:

Geologic description:

At this site propylitically altered dacite(?) in the Oligocene to Miocene Unga Formation (Wilson and others, 1995) locally contains disseminated pyrite and posiibly other, undetermined, sulfides. Three rock samples collected here by the U.S. Geological Survey in the 1980s were reported to be anomalous in antimony, arsenic, lead, silver, and zinc (Wilson and others, 1988).

Alteration:

Dacite(?) at this site exhibits propylitic 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:

Rock samples 85AAi107, and 109-11 collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in antimony, arsenic, lead, silver, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is located on land selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/23/01

Site name(s): Irish

Site type: Prospect

ARDF no.: PM052

Latitude: 55.29 **Quadrangle:** PM B-2

Longitude: 160.62

Location description and accuracy:
The Irish prospect is at an elevation of about 1,000 feet, and 0.4 mile northwest of the top of hill 2015, in the NE1/4 of sec. 33, T. 56 S., R. 75 W., Seward Meridian. The location is accurate to within 2,500 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:
The hostrock at this prospect is propylitically altered andesite of the Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). Mineralization occurs in quartz breccia that forms three small, discontinuous zones exposed in a creek bottom (Peterson and others, 1982). The breccia contains as much as 20 percent disseminated pyrite. The zones are three feet wide and have been traced for only 5 feet along strike. Six rock samples contained as much as 0.33 ppm gold, 21 ppm silver, 81 ppm copper, 535 ppm lead, 1,810 ppm zinc, 1,000 ppm or more arsenic, and 1.25 ppm mercury (Peterson and others, 1982).

Alteration:
The hostrock is propylitically altered.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold vein, Polymetallic vein (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:

In 1982 UNC Teton Exploration Drilling Company mapped and sampled this prospect (Peterson and others, 1982). Rock samples contained as much as 0.33 ppm gold, 21 ppm silver, 81 ppm copper, 535 ppm lead, 1,810 ppm zinc, 1,000 ppm or more arsenic, and 1.25 ppm mercury.

Production notes:

Reserves:

Additional comments:

This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Peterson and others, 1982; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 2/1/01

Site name(s): Swan

Site type: Occurrence

ARDF no.: PM053

Latitude: 55.258 **Quadrangle:** PM B-3

Longitude: 160.744

Location description and accuracy:

This occurrence is located on Unga Island approximately 4 miles southwest of the head of Zachary Bay. The map site is at an elevation of about 200 feet, on a creek in the SE1/4 of sec. 12, T. 57 S., R. 76 W., Seward Meridian. The location is accurate to within 2,500 feet.

Commodities:

Main: Au

Other: As

Ore minerals: Gold, pyrite

Gangue minerals: Quartz

Geologic description:

This occurrence consists of a 1100- by 600-foot area containing scattered quartz veins in argillically and locally propylitically altered tuff (Ellis, 1988). The volcanic rock is Tertiary in age (Wilson and others, 1995). Chalcedonic quartz occurs in veins 0.5 to 6 inches wide containing up to 5 percent disseminated pyrite and scattered pyrite boxworks. Rock samples were anomalous in arsenic, but only a trace gold was detected. Pan samples contained as much as 0.36 ppm gold (Ellis, 1988).

Alteration:

The host rocks are weakly to moderately argillized; there are some patches of propylitization.

Age of mineralization:

Tertiary.

Deposit model:

Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Battle Mountain Exploration Company examined the area in 1988 and collected 21 rock samples for analysis. The samples were anomalous in arsenic, but contained only a trace of gold. Pan samples contained as much as 0.36 ppm gold (Ellis, 1988).

Production notes:

Reserves:

Additional comments:

This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Ellis, 1988; Wilson and others, 1995.

Primary reference: Ellis, 1988; Wilson and others, 1995

Reporter(s): S.H. Pilcher

Last report date: 2/4/01

Site name(s): Unnamed (south of Zachary Bay)

Site type: Occurrence

ARDF no.: PM054

Latitude: 55.273 **Quadrangle:** PM B-2

Longitude: 160.662

Location description and accuracy:

This occurrence is located approximately 3.5 miles southeast of the head of Zachary Bay on Unga Island (Wilson and others, 1988, locality 26). The map site is at an elevation of 900 feet, in the SW1/4 of sec. 11, T. 57 S., R. 75 W., of the Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Pb, Zn

Other: Cu

Ore minerals: Chalcopyrite, galena, sphalerite

Gangue minerals:

Geologic description:

At this site, Resource Associates of Alaska in 1981 located a 50-foot-wide zone of brecciated, silicified, pyritic andesite that may be a breccia pipe (Trujillo and others, 1981). The breccia fragments are in-filled by chalcopyrite, sphalerite, and galena over a 35-foot width of the zone. One sample of mineralized rock assayed 1.09 ounces of silver per ton, 2.07 percent zinc, and 0.58 percent lead.

The country rocks are mapped as late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995).

Alteration:

The mineralization is accompanied by strong silicification.

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

One mineralized rock sample collected by Resource Associates of Alaska assayed 1.09 ounces of silver per ton, 2.07 percent zinc, and 0.58 percent lead.

Production notes:

Reserves:

Additional comments:

This occurrence is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Trujillo and others, 1981; Peterson and others, 1983; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Trujillo and others 1981

Reporter(s): S.H. Pilcher

Last report date: 1/9/01

Site name(s): Thormac

Site type: Occurrence

ARDF no.: PM055

Latitude: 55.280 **Quadrangle:** PM B-2

Longitude: 160.599

Location description and accuracy:

The Thormac occurrence is approximately 1.5 miles southwest of Ben Green Bight on Unga Island (Wilson and others, 1988, locality 42). The map site is at an elevation of about 1,150 feet, in the NE1/4 of sec. 1, T. 57 S., R. 75 W., of the Seward Meridian. The location is accurate to within 1,000 feet.

Commodities:

Main: Ag, Au

Other: As, Hg

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:

This occurrence is a quartz vein system with a strike length of 1,100 feet. Individual veins within the system exceed 3 feet in width. The host rock is andesite of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). The system contains abundant gossanous vugs. There is no indication of base metal sulfides, and the gossans probably reflect oxidation of pyrite. Grab samples contained 0.005 to 0.135 ppm gold, 0.2 to 19.0 ppm silver, as much as 800 ppm arsenic, and 5.0 ppm or more mercury (Peterson and others, 1982).

Alteration:

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1982 UNC Teton Exploration Drilling Company explored the occurrence and collected several samples.

Production notes:

Reserves:

Additional comments:

This site is located on land either selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

Peterson and others, 1982; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/15/01

Site name(s): Hardscratch

Site type: Occurrence

ARDF no.: PM056

Latitude: 55.26 **Quadrangle:** PM B-2

Longitude: 160.58

Location description and accuracy:
This approximately located occurrence is about 2 miles west of Hardscratch Point on Popof Strait (MacKevett and Holloway, 1977, locality 15; Wilson and others, 1988, locality 15). The map site is at an elevation of about 550 feet, in the SW1/4 of sec. 7, T. 57 S., R. 75 W., of the Seward Meridian. The location is accurate to within 2 miles.

Commodities:

Main: Cu

Other:

Ore minerals:

Gangue minerals:

Geologic description:
This site is described as altered zones in Tertiary volcanic and intrusive rocks (MacKevett and Holloway, 1977). The rocks in this area are mapped as Popof volcanic rocks of late Eocene to early Oligocene age (Wilson and others, 1995).

Alteration:

Age of mineralization:
Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Production notes:

Reserves:

Additional comments:

This site is located on land selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

MacKevett and Holloway, 1977; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: MacKevett and Holloway, 1977

Reporter(s): S.H. Pilcher

Last report date: 1/4/01

Site name(s): Unnamed (south of Zachary Bay)

Site type: Prospect

ARDF no.: PM057

Latitude: 55.254 **Quadrangle:** PM B-2

Longitude: 160.633

Location description and accuracy:

This prospect is located on Unga Island approximately 2 miles south of Zachary Bay (Christie, 1974, color anomaly 92; Wilson and others, 1988, locality 48). The map site is at an elevation of 700 feet, about 0.4 mile west of the enter of sec. 3, T. 57 S., R. 75 W., Seward Meridian. The location is accurate to within 1,000 feet.

Commodities:

Main: Au, Cu

Other: Mo

Ore minerals: Chalcocite, chalcopyrite, molybdenite, pyrite

Gangue minerals: Quartz

Geologic description:

This prospect is marked by a color anomaly measuring 2,000 by 5,000 feet. The rocks consist of a series of andesitic volcanic rocks and interbedded volcanic sediments intruded by quartz diorite and feldspar porphyry. A diorite plug forms the core of the anomaly. The diorite is only slightly altered and contains 1 percent disseminated pyrite. Andesites in contact with this intrusive carry pyrite and a trace of chalcopyrite. The volcanic rocks belong to the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). A potassium argon date on sericite from the diorite was determined to be 14.6 Ma (Wilson and others, 1994).

Copper-gold mineralization occurs in scattered outcrops in an area (including cover) 4,000 feet in diameter. Chalcopyrite is the only primary copper mineral. The other primary sulfides are pyrite and molybdenite. Chalcocite is generally present in outcrops containing 500 ppm copper or greater. The main showing consists of 150 feet of hornfels containing 0.36 percent copper, 0.004 percent molybdenum, 0.08 ounce of silver per ton, and 0.16 ounce of gold per ton (Christie and Richards, 1974). Peripheral outcrops contain much lower metal values.

Approximately 600 feet northeast of the main showing, an outcrop of quartz-veined and pyritic feldspar porphyry carries as much as 0.76 percent copper and 0.10 ounce of gold per ton. The sulfides at this outcrop have been almost totally leached. An outcrop to the

south carries as much as 1,720 ppm copper (Dircks and Richards, 1976). Three of four holes drilled in 1975 penetrated only short intervals grading 0.1 percent copper. The other hole was drilled through 383 feet grading 0.11 percent copper and 0.28 ppm gold.

Alteration:

Propylitic alteration consisting of various combinations of epidote, chlorite, pyrite, and magnetite is widespread. Quartz-sericite-pyrite, magnetite-plagioclase, and potassic (biotite) assemblages are also present.

Alteration zoning is poorly understood due primarily to lack of outcrop. One zoning sequence of increasing intensity consists of epidote-pyrite to chlorite-pyrite to chlorite-magnetite.

Age of mineralization:

Miocene or younger.

Deposit model:

Porphyry Cu, Porphyry Cu-Au (Cox and Singer, 1986; models 17, 20c)

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

17, 20c

Production Status: None

Site Status: Inactive

Workings/exploration:

This prospect was mapped and sampled by an Aleut-Quintana-Duval joint venture in 1974. They collected more than 150 rock, silt, and soil samples. In 1975 they conducted a magnetometer survey and drilled four holes for a total of 955 feet. They reported channel samples assays of 0.36 percent copper, 0.004 percent molybdenum, 0.016 ounce of gold per ton, and 0.08 ounce of silver per ton over 150 feet. Drill hole Z-1 intersected 383 feet grading 0.11 percent copper and 0.28 ppm gold.

Resource Associates of Alaska relogged, split, and assayed the core in 1981. They were interested primarily in gold values. The results were not encouraging (Trujillo and others, 1981). Battle Mountain Exploration company briefly sampled the area in 1986.

Production notes:

Reserves:

Additional comments:

This prospect is located on land selected by the Aleut Corporation.

References:

Christie, 1974; Christie and Richards, 1974; Christie, 1975; Dircks and Richards, 1976; Trujillo and others, 1981; Wilson and others, 1988; Wilson and others, 1994; Wilson and

others, 1995.

Primary reference: Dircks and Richards, 1976

Reporter(s): S.H. Pilcher

Last report date: 1/18/01

Site name(s): Antonette

Site type: Occurrence

ARDF no.: PM058

Latitude: 55.256 **Quadrangle:** PM B-2

Longitude: 160.649

Location description and accuracy:
The Antonette prospect, on northwestern Unga Island, is at an elevation of about 1,100 feet, in the SW1/4 of sec. 10, T. 57 S., R. 75 W., Seward Meridian. The location is accurate to within 2,500 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Pyrite

Gangue minerals:

Geologic description:
The rocks at this site are a sequence of rhyolitic lavas and ash-flow tuffs that have been brecciated, pyritized, silicified, and argillized (Peterson and others, 1982). They are part of the Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). The exposed alteration is vertically zoned upward from silicification and pyritization to argillization. Four samples contained as much as 0.309 ppm gold, 1.03 ppm silver, 79 ppm copper, 25 ppm lead, 32 ppm zinc, 990 ppm arsenic, and 2.55 ppm mercury (Peterson and others, 1982).

Alteration:
The rocks exhibit silicification, pyritization, and argillization.

Age of mineralization:
Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Four rock samples collected in 1982 by UNC Teton Exploration Drilling Company contained as much as 0.309 ppm gold, 1.03 ppm silver, 79 ppm copper, 25 ppm lead, 32 ppm zinc, 990 ppm arsenic, and 2.55 ppm mercury (Peterson and others, 1982).

Production notes:

Reserves:

Additional comments:

This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Peterson and others, 1982; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/31/01

Site name(s): Junior

Site type: Prospect

ARDF no.: PM059

Latitude: 55.237 **Quadrangle:** PM A-3

Longitude: 160.674

Location description and accuracy:

The Junior prospect is on Unga Island approximately 2.5 miles northeast of Acheredin Bay. The map site is near the top of hill 1055, in the NE1/4 of sec. 21, T. 57 S., R. 75 W., Seward Meridian (Wilson and others, 1988, locality 30). The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: Hg

Ore minerals: Pyrite

Gangue minerals: Calcite, chalcedony, chlorite, jasper, quartz, zeolite

Geologic description:

The Junior prospect is a 4,000- by 200-foot area of quartz-pyrite-chlorite-zeolite veinlets, pyritic chalcedonic quartz veins, and pyrite-quartz stringers, all cutting chloritized andesite of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). Gangue minerals also locally include calcite and jasper. Peterson and others (1982) believed that the prospect is at the intersection of northeast- and northwest-striking faults. In addition to being chloritized, the andesite is marked by local silicification near the veins, especially in areas of high vein density.

Only sporadic occurrences of gold have been noted. The best values were 2.2 ppm gold and 14 ppm silver in a grab sample. In drill core, the highest gold values were 0.03 ppm over 5 feet and 0.02 ppm over 1, 5, and 10 feet (Trujillo and others, 1981). Silver was at least 0.1 ppm over the entire hole (522 feet), with best values at 2.75 ppm in three 3- to 5-foot sections. Mercury ranged from 0.1 to more than 10 ppm and arsenic from 205 to more than 1,000 ppm.

Alteration:

The alteration consists of pervasive chloritization and local silicification.

Age of mineralization:

Eocene or younger.

Deposit model:
Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:
In 1981 Resource Associates of Alaska mapped the prospect, collected 145 rock and 309 soil samples, conducted a magnetic survey, and drilled one hole for a total of 522 feet. Only low precious metal values were detected.

Production notes:

Reserves:

Additional comments:
This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Trujillo and others, 1981; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Trujillo and others, 1981

Reporter(s): S.H. Pilcher

Last report date: 1/11/01

Site name(s): Ochre

Site type: Prospect

ARDF no.: PM060

Latitude: 55.247 **Quadrangle:** PM A-2

Longitude: 160.609

Location description and accuracy:

The map site of the Ochre prospect is at an elevation of 800 feet, in the NW1/4 of sec. 13, T. 57 S., R. 75 W., Seward Meridian, approximately 2 miles northwest of Baralof Bay on Unga Island. The site is 0.35 mile west-northwest of a 655-foot-high hillock. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Pb, Zn

Other: As, Au, Hg, Sb

Ore minerals: Chalcopyrite, galena, pyrite, sphalerite

Gangue minerals: Quartz

Geologic description:

This prospect consists of northeast-striking silicified breccia zones and northwest-striking quartz veins. Chalcopyrite, galena, and sphalerite occur sporadically in the breccia and the veins. The host rock is silicified and argillized pyritic andesite of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995).

The main silicified breccia is 5 to 15 feet in width and strikes N 25 to 65 E. Assays show as much as 18 ppm silver, 450 ppm copper, 3,500 ppm lead, 5,400 ppm zinc, 1,080 ppm arsenic, and 118 ppm mercury (Anderson and others, 1980).

Float samples of the northwest-striking vein system assayed as much as 0.51 ppm gold, 72 ppm silver, 3,100 ppm lead, 6,100 ppm zinc, 285 ppm arsenic, 108 ppm mercury, and 6,200 ppm antimony.

Battle Mountain Exploration Company sampled the site in 1990. None of the samples taken contained significant gold values.

Alteration:

The host rock is variously argillized, silicified, and pyritized.

Age of mineralization:

Eocene or younger.

Deposit model:
Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:
In 1980 Resource Associates of Alaska mapped the prospect, collected 504 soil and 152 rock samples, and conducted VLF-EM and magnetometer surveys (Anderson and others, 1980). Float samples of vein quartz contained as much as 0.51 ppm gold and 72 ppm silver and anomalous amounts of copper, lead, zinc, arsenic, mercury, and antimony.

Battle Mountain Exploration Company sampled the site in 1990. The samples contained no gold values of note.

Production notes:

Reserves:

Additional comments:
This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Anderson and others, 1980; Ellis and Apel, 1990; Wilson and others, 1995.

Primary reference: Anderson and others, 1980

Reporter(s): S.H. Pilcher

Last report date: 2/4/01

Site name(s): Norms Vein

Site type: Prospect

ARDF no.: PM061

Latitude: 55.241 **Quadrangle:** PM A-2

Longitude: 160.629

Location description and accuracy:

This prospect is located on Unga Island approximately 3 miles west of the Squaw Harbor cannery on Baralof Bay (Wilson and others, 1988, locality 43). The map site is at an elevation of about 750 feet, about 0.15 mile southwest of the center of sec. 14, T. 57 S., R. 75 W., of the Seward Meridian. The location is accurate to within 1,000 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Sb, Zn

Ore minerals: Galena, gold, pyrite, sphalerite

Gangue minerals: Barite, quartz

Geologic description:

This prospect is a linear, northeast-striking stockwork of reticulated, gossanous, multistage quartz veins in intensely brecciated and silicified andesite and rhyolite tuffs. The stockwork is 1,800 feet long and as much as 600 feet wide. The host rocks are part of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). Silicification is most intense in a 50- to 100-foot-wide zone on the northwest side of the stockwork. The quartz veins contain pods and lenses of barite and variable amounts of galena, pyrite,and sphalerite (Peterson and others, 1982). In the area east of the stockwork, the country rocks are highly fractured and partly silicified and argillized.

Channel samples contained as much as 2.35 ppm gold, 19.0 ppm silver, 5,700 ppm lead, 1,305 ppm zinc, 346 ppm copper, 5 ppm or more mercury, and 320 ppm arsenic. Grab samples contained as much as 0.585 ppm gold, 21 ppm silver, 4,000 ppm lead, 6,160 ppm zinc, 705 ppm copper, 5 ppm or more mercury, and 1,000 ppm or more arsenic (Peterson and others, 1983). Antimony, tellurium, and thallium are also present. The highest values in drill core were 1.41 ppm gold and 47 ppm silver (Wilson and others, 1988).

Battle Mountain Exploration Company examined and sampled this site in 1990. Thirty-two samples of vein material all contained less than 0.1 ppm gold. Two samples of pyritic and argillically-altered rock from the footwall contained 0.444 and 0.459 ppm gold. Arse-

nic values commonly exceeded 100 ppm and mercury values exceeded 1 ppm (Ellis and Apel, 1990).

Alteration:
The rocks at this prospect exhibit strong silicification and some argillization.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold veins, 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:
Resource Associates of Alaska and UNC Teton Exploration Drilling Company explored on this prospect from 1979 to 1983. They collected 100 rock, 134 core, and 81 channel samples; conducted VLF-EM surveys; cut 380 feet of trenches; and drilled two core holes for a total of 776 feet.

The highest precious metal values are: channel samples, 2.35 ppm gold and 19 ppm silver; grab samples, 0.585 ppm gold and 21 ppm silver; drill core, 1.41 ppm gold and 47 ppm silver.

In 1990 Battle Mountain Exploration Company collected 32 vein samples, all of which contained less than 0.1 ppm gold. Two altered and pyritic wall rock samples contained 0.444 and 0.459 ppm gold.

Production notes:

Reserves:

Additional comments:
This site is on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Peterson and others, 1982; Peterson and others, 1983; Wilson and others, 1988; Ellis and Apel, 1990; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/15/01

Site name(s): Midway

Site type: Occurrence

ARDF no.: PM062

Latitude: 55.225 **Quadrangle:** PM A-3

Longitude: 160.691

Location description and accuracy:

This occurrence is located on Unga Island approximately 2 miles northeast of the head of Acheredin Bay and 4,000 feet north of Acheredin Lake (Wilson and others, 1988, locality 32). The map site is at an elevation of 1,100 feet, near the south end of the boundary between secs. 20 and 21, T. 57 S., R. 75 W., of the Seward Meridian. The location is accurate to within 2,500 feet.

Commodities:

Main: Ag, Au

Other: Hg, Zn

Ore minerals: Pyrite

Gangue minerals: Chalcedony, jasper, zeolite

Geologic description:

This occurrence consists of several knobs of andesite breccia in an area 100 by 1,000 feet. The breccias contain pyrite, chalcedony, jasper, and zeolite. Samples of the breccia contained as much as 0.02 ppm gold, 15 ppm silver, 720 ppm zinc, 510 ppm arsenic, and 5 ppm mercury (Peterson and others, 1982). The andesite is part of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995).

Alteration:

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:

UNC Teton Exploration Drilling Company sampled the occurrence in 1982. Samples contained as much as 0.02 ppm gold, 15 ppm silver, 720 ppm zinc, 510 ppm arsenic, and 5 ppm mercury.

Production notes:

Reserves:

Additional comments:

The site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Peterson and others, 1982; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/12/01

Site name(s): Disney

Site type: Prospect

ARDF no.: PM063

Latitude: 55.228 **Quadrangle:** PM A-2

Longitude: 160.651

Location description and accuracy:

The Disney prospect is located on Unga Island, approximately 1.5 miles northeast of Acheredin Lake and 3 miles west of Baralof Bay (Wilson and others, 1988, locality 35). The map site is at an elevation of 700 feet, about 0.2 mile south-southeast of the center of sec. 22, T. 57 S., R. 75 W., of the Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals:

Gangue minerals: Jasper, quartz

Geologic description:

The Disney prospect consists of a siliceous knob 150 feet in diameter near a strong northeast-trending fault. Quartz and red jasper float are also present. The host rocks are andesite tuffs of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others,1995). The tuffs are argillized, chloritized, and locally silicified. Trenching exposed thin quartz and jasper veins as much as 2 feet thick.

The highest precious metal values obtained in grab samples are 0.20 ppm gold and 18 ppm silver. Channel samples contained as much as 0.015 ppm gold (one sample only), 0.2 ppm silver, 171 ppm lead, 106 ppm zinc, 330 ppm arsenic, and 2.8 ppm mercury (Peterson and others, 1982).

Alteration:

The tuffs exhibit argillization, chloritization, and local silicification.

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1982 UNC Teton Exploration Drilling Company collected 26 grab and 35 channel samples, and dug 3 trenches totalling 175 feet long.

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Peterson and others, 1982; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/13/01

Site name(s): Shumagin; Choumagin

Site type: Prospect

ARDF no.: PM064

Latitude: 55.226 **Quadrangle:** PM A-2

Longitude: 160.574

Location description and accuracy:

This prospect is at an elevation of about 300 feet, approximately 2,500 feet southwest of the head of Baralof Bay (Berg and Cobb, 1967, locality 7; Cobb, 1972 [MF 433], locality 4; MacKevett and Holloway, 1977, locality 4; Nokleberg and others, 1987, locality AP5; Wilson and others, 1988, locality 4). It is in the SE1/4 of sec. 19, T. 57 S., R. 74 W., of the Seward Meridian. This location is accurate.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Te, Zn

Ore minerals: Arsenopyrite, galena, gold, pyrite, sphalerite

Gangue minerals: Calcite, quartz

Geologic description:

The Shumagin gold deposit occurs in the Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). The deposit is in the northeast section of the Aquila-Shumagin fault system, which strikes northeast across Unga Island.

The deposit consists of auriferous, sulfide-bearing quartz-calcite veins in a fault that trends N 60 E and dips 80 to 85 southeast. The veins and fault can be traced approximately 4,000 feet along strike and to a depth of 765 feet. The mineralization is interpreted as a fault-controlled epithermal, volcanic-hosted vein deposit (White and Queen, 1989). The hanging wall is tuff, and the footwall is andesite. Movement on the fault is suggested to be high-angle reverse.

The deposit comprises of four individual veins, two vein systems, and two fault breccia units. Within the fault, the mapped units from oldest to youngest are pyrite-rich cataclasite, clast-supported fault breccia, the Union vein, and matrix-supported quartz breccia (White and Queen, 1989). The total thickness of these units averages approximately 40 feet. Veins that are peripheral to or cut the main vein and fault system include the Lucky Friday and Greenbaum veins, the Vuggy Watercourse vein, and carbonate veins. Gold is most abundant in the Union vein, which generally is considered to be the principal gold deposit.

The Union vein is a composite vein consisting of a 10-foot-wide zone of closely-spaced quartz veins in the hanging wall tuff. Individual veins are sinuous, vuggy, and generally less than 30 inches wide. Native gold occurs, with finely crystalline arsenopyrite, pyrite, galena, and sphalerite. Precious-metal grades range from a trace throughout wide zones to more than 10 ounces of gold and 150 ounces of silver per ton in narrow zones. A strong correlation exists between gold, silver, and tellurium, indicating that some of the precious metals probably occur as tellurides (White and Queen, 1989). Singer (1999) suggests that this is a Sado-type gold deposit.

Atwood (1909) first described the prospect, whose workings at that time consisted of two tunnels 150 feet apart vertically. The lower one was 365 feet in length with a 75-foot crosscut. The upper tunnel was 79 feet in length with a 169-foot crosscut.

During the period 1983 to 1987, Alaska Apollo Gold Mines diamond drilled 23 holes totalling 9,269 feet, drilled 44 percussion holes, and cut 13 trenches through the vein and fault. At that time the deposit was estimated to contain 300,000 tons of ore grading 0.5 ounce of gold per ton. In 1989 Ballatar Exploration core-drilled approximately 6,000 feet into the deposit.

In 1986 Battle Mountain Exploration Company mapped and sampled the deposit and relogged the core. Analysis of the data indicated an ore shoot approximately 400 feet long, 5 to 30 feet thick, and plunging 45 degrees to the northeast in the plane of the fault (Ellis and Apel, 1990). A deep hole drilled by Alaska Apollo Gold Mines into the shoot cut 27 feet of rock containing 0.46 ounce of gold per ton at 600 feet down dip. The deposit was estimated by Battle Mountain Exploration company to contain 352,000 tons of ore grading 0.299 ounce of gold per ton. In 1990 Battle Mountain Exploration Company drilled a 1,022-foot core hole collared on Aleut Corporation land and inclined to hit the deposit at depth. The hole cut 18 feet of rock containing 0.47 ounce of gold per ton at 900 feet.

In 1987 during road building, a 500-foot-long, faulted eastern extension of the Shumagin vein was uncovered, mostly on Aleut Corporation land. Battle Mountain Exploration Company mapped and sampled this section of vein. It was found to be a large, weakly mineralized, south-dipping vein structure, locally as much as 50 feet thick. Metal values obtained were as much as 680 ppb gold, 12.1 ppm silver, 234 ppm arsenic and 2,000 ppb mercury (Ellis and Apel, 1990).

Alteration:

Strong argillic alteration is present as much as 148 feet from the Shumagin deposit. Quartz-sericite-pyrite alteration adjoins the Union vein and the matrix-supported quartz breccia. The presence of adularia is suspected (White and Queen, 1989).

There are indications of a broad aureole of mercury and arsenic as much as 250 feet from the Union vein.

Age of mineralization:

Eocene or younger.

Deposit model:

Sado epithermal gold vein (Cox and Singer, 1986; model 25d)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
25d

Production Status: None

Site Status: Probably inactive

Workings/exploration:
Atwood (1909) described two tunnels with crosscuts at the time of his visit. During the period 1983-1987 Alaska-Apollo Gold Mines diamond drilled 23 holes totalling 9,269 feet. They also drilled 44 percussion holes and cut 13 trenches. In 1989 Ballatar Exploration diamond drilled approximately 6,000 feet into the deposit. From 1986 to 1990 Battle Mountain Exploration Company mapped and sampled the deposit and logged the drill core. They also drilled a 1,022-foot hole into the deposit where it dips south beneath Aleut Corporation land. In 1987 and 1988 the deposit was mapped and sampled in detail by the U.S. Geological Survey and Alaska Apollo Gold Mines.

Production notes:

Reserves:
A resource of 300,000 tons grading 0.5 ounce of gold per ton was estimated from the exploration work done by Alaska Apollo Gold Mines in 1983 to 1987. Battle Mountain Exploration Company evaluated the deposit in 1986 at 352,000 tons grading 0.299 ounce of gold per ton. Queen (1988) estimated a resource of 270,000 tons grading 0.49 ounce of gold and 1.97 ounces of silver per ton.

Additional comments:

References:
Martin, 1905; Atwood, 1909; Atwood, 1911; Webber and others, 1946; Wedow and others, 1952; Berg and Cobb, 1967; Cobb, 1972 (MF 433); Cobb, 1980 (OF 80-909); MacKevett and Holloway, 1977; Angeloni and others, 1985; Nokleberg and others, 1987; Queen, 1988; Wilson and others, 1988; Ellis and Apel, 1989; White and Queen, 1989; Ellis and Apel, 1990; Wilson and others, 1995; White and Queen, 1996; Riehle, 1999; Singer, 1999.

Primary reference: White and Queen, 1989

Reporter(s): S.H. Pilcher

Last report date: 12/30/00

Site name(s): Jyro; Bloomer Peak

Site type: Occurrence

ARDF no.: PM065

Latitude: 55.2189 **Quadrangle:** PM A-2

Longitude: 160.5664

Location description and accuracy:

The map site of this occurrence is at an elevation of 1,100 feet on the northeast spur of Bloomer Peak. The site is 4,000 feet northeast of the top of the peak (Wilson and others, 1988, locality 36). Location is accurate to within 500 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:

Peterson and opthers (1982) described small quartz veins near Bloomer Peak that assayed as much as 3.90 ppm gold. Followup led to the discovery of the Jyro vein system and numerous other quartz veins and silicified zones. The host rock is porphyritic quartz-feldspar tuff of the late Eocene to early Oligocene Popof volcanics (Wilson and others, 1995).

The Jyro vein system crops out on the crest of Bloomer Peak. It stikes N60E and can be followed on the surface for 3,000 feet. It is a vein-quartz breccia averaging 12 feet wide, and forms the core of the mineralized system. It is broken and iron stained and exhibits at least three periods of silicification (Peterson and others, 1982). The tuff hostrock intensely silicified, iron stained and locally argillized as much as 200 feet from the vein system. Some of the altered tuff contains quartz veins and stringers as much as 4 inches thick.

The Jyro vein and enclosing silicified tuff are sporadically enriched in gold. Grab samples contained as much as 0.62 ppm gold and 1.1 ppm silver, and trench samples as much as 0.31 ppm gold. Mean assay values of samples from the trench were 0.041 ppm gold, 0.225 ppm silver, 2.8 ppm molybdenum, 83 ppm arsenic, 0.145 ppm mercury, and 65 ppm Cu+Pb+Zn (Peterson and others, 1982). Small quartz veins elsewhere in the area assayed as much as 6.4 ppm gold.

Battle Mountain Exploration Company mapped and sampled the site in 1990. They de-

termined that the northeast-trending veins and northwest-trending faults are consistently anomalous in gold, with values from 0.5 to 5.0 ppm. Arsenic values ranged from 50 to 900 ppm and mercury values were as much as 2 ppm (Ellis and Apel, 1990).

Alteration:
Alteration includes silicification and minor argillization.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold veins (Cox and Singer, 1986; model 25)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
25

Production Status: None

Site Status: Inactive

Workings/exploration:
In 1982 UNC Teton Exploration Drilling Company mapped the site, cut 300 feet of trenches, collected 47 grab and 60 trench channel samples, and conducted a VLF-EM survey. Grab samples contained as much as 0.62 ppm gold and trench samples as much as 0.31 ppm gold. The U.S. Geological Survey collected a sample of the deposit (82ASH 27) in the mid-1980's. Battle Mountain Exploration Company mapped and sampled it in 1990. Gold values in their samples generally ranged from 0.5 to 5.0 ppm (Ellis and Apel, 1990).

Production notes:

Reserves:

Additional comments:
This site is on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Peterson and others, 1982; Angeloni and others, 1985; Wilson and others, 1988; Ellis and Apel, 1990; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/13/01

Site name(s): Prays; P.V.

Site type: Prospect

ARDF no.: PM066

Latitude: 55.212 **Quadrangle:** PM A-2

Longitude: 160.593

Location description and accuracy:

This prospect is located on Unga Island approximately 1 mile southeast of Red Mountain and 1 mile west of Bloomer Peak (Wilson and others, 1988, locality 27). The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: Hg, Pb, Sb

Ore minerals: Gold, pyrite

Gangue minerals: Barite, quartz

Geologic description:

This prospect occurs in rocks mapped as late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). In the immediate area of the prospect an interlayered sequence of silicified and argillized andesitic crystal and lithic tuffs is overlain by unaltered dacite tuff (Ellis and Apel, 1990). A diorite plug crops out in the southeast part of the area.

Silica-replaced permeable tuffs are best exposed at the discovery site, defined in 1979 and 1980 by Resource Associates of Alaska as a siliceous knob (Anderson and others, 1980). Other less exposed zones of silica replacement, siliceous breccias, and areas of clay-pyrite alteration occur throughout the area. The siliceous zones appear to grade laterally into argillically altered rock.

The knob contains pyritic zones and abundant drusy quartz veins. Two stages of silicification have been recognized. The earlier is a pervasive replacement by amorphous silica and the later is represented by small, discontinuous quartz veins. A hot-springs origin of the silica has been suggested by Trujillo and others (1981). Sparse quartz-barite veins contain as much as 11.8 ppm gold, 19 ppm silver, 1,000 ppm lead, 750 ppm arsenic, 170 ppm mercury, and 150 ppm antimony (Trujillo and others, 1981).

Drilling of the knob in 1981 and 1983 by Resource Associates of Alaska and UNC Teton Exploration Drilling Company penetrated a 60- and a 90-foot zone of intense silicification. These holes contained as much as 0.085 ppm gold, 4.25 ppm silver, 55 ppm arse-

nic, and 5 ppm or more mercury.

Alteration:
The rocks exhibit intense silicification and argillization.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold veins, Hot-springs Au-Ag (Cox and Singer, 1986; model 25a)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
25a

Production Status: None

Site Status: Inactive

Workings/exploration:
From 1979 to 1983, Resource Associates of Alaska and UNC Teton Exploration Drilling Company mapped and sampled the prospect, ran magnetometer and EM surveys, and drilled two core holes for a total of 339 feet. They collected 270 soil and about 100 rock samples. In 1990 Battle Mountain Exploration Company mapped and sampled the prospect and relogged the core.

Production notes:

Reserves:

Additional comments:

References:
Anderson and others, 1980; Trujillo and others, 1981; Peterson and others, 1983; Wilson and others, 1988; Ellis and Apel, 1990; Wilson and others, 1995.

Primary reference: Ellis and Apel, 1990

Reporter(s): S.H. Pilcher

Last report date: 1/9/01

Site name(s): Orange Mountain

Site type: Prospect

ARDF no.: PM067

Latitude: 55.209 **Quadrangle:** PM A-2

Longitude: 160.621

Location description and accuracy:

This prospect is on southeastern Unga Island approximately 4,000 feet southwest of Red Mountain (Wilson and others, 1988, locality 29). The map site is at an elevation of 1,060 feet, at the top of a hill marked by a large color anomaly. Orange Mountain is informally named for the color anomaly; it is not named on the topographic map. The location is accurate.

Commodities:

Main: Ag, Au

Other:

Ore minerals: Gold, pyrite, tetrahedrite

Gangue minerals: Barite, quartz

Geologic description:

This prospect, marked by a 2.7-square-mile color anomaly, is the largest single area of alteration on Unga Island. It is in rocks mapped as the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). From 1979 to 1983, it was explored first by Resource Associates of Alaska and then by UNC Teton Exploration Drilling Company (Peterson and others, 1983).

The prospect consists of a gently-dipping, interbedded sequence of silica-replaced felsic tuffs and argillically altered andesite tuffs and flows. The alteration extends over a vertical range of at least 500 feet (Ellis and Apel, 1990). Numerous shears, faults, fracture zones, and breccias result in structural complexities (Peterson and others, 1983).

The silica-replaced tuffs contain 5 percent disseminated pyrite. They also contain veins, disseminations, and pods of barite, and veinlets and pods of quartz. In brecciated areas, the quartz and barite veins locally occur together, and some of the quartz is replaced by barite. The argillically altered andesite contains 25 percent pyrite as veinlets and disseminations. Tetrahedrite has also been reported.

There is a positive correlation between precious metal values and the silicified rock; the highest values are associated with shears and breccias. The highest precious metal values obtained from surface samples were 2.85 ppm gold and 26 ppm silver; their mean value

was 0.045 ppm gold and 0.4 ppm silver (Peterson and others, 1983). Detectable and weakly anomalous gold values occur in drill holes in sections 100 or more feet thick (115 feet in OM-2 and 370 feet in OM-3). The highest subsurface precious metal values were 0.41 ppm gold and 3.4 ppm silver. Mean values of base metals were at 40 ppm copper, 20 ppm lead, 20 ppm zinc, and 50 ppm arsenic. The entire area is enriched in mercury, and values of as much as 107 ppm of mercury occur in silicified tuffs. The mean mercury value is 1.6 ppm. Thallium, tellurium, antimony, and bismuth were also detected.

In 1990 Battle Mountain Exploration Company mapped the site and collected approximately 117 rock chip samples. Their mapping indicated that the silicified rock forms a cap overlying argillically altered tuffs containing as much as 70 percent pyrite (Ellis and Apel, 1990). Gold values in quartz veins cutting the silicified tuffs ranged from 0.05 to 0.25 ppm.

Alteration:

The alteration consists of as pervasive argillization and pyritization of andesite tuffs and silicification of felsic tuffs.

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:

During the period 1979 to 1983 Resource Associates of Alaska and UNC Teton Exploration Drilling Company conducted 8.5 miles of grid mapping, collected and analyzed 750 rock and soil samples, conducted 1.4 miles of VLF-EM survey, and drilled 3 core holes for a total of 2,453 feet. The highest metal values of surface samples were 2.85 ppm gold and 26 ppm silver. The mean values were 0.045 ppm gold and 0.4 ppm silver. The highest subsurface values were 0.41 ppm gold and 3.4 ppm silver.

In 1990 Battle Mountain Exploration mapped the site in detail and collected approximately 150 rock samples. A cluster of low-level gold anomalies was outlined at the top of Orange Mountain. Individual quartz veinlets assayed 0.05 to 0.25 ppm gold.

Production notes:

Reserves:

Additional comments:

References:

Peterson and others, 1982; Peterson and others, 1983; Wilson and others, 1988; Ellis and Apel, 1990; Ellis and Randolph, 1991; Wilson and others, 1995.

Primary reference: Peterson and others, 1983

Reporter(s): S.H. Pilcher

Last report date: 1/11/01

Site name(s): Chance

Site type: Prospect

ARDF no.: PM068

Latitude: 55.206 **Quadrangle:** PM A-3

Longitude: 160.715

Location description and accuracy:

The Chance prospect site is located on Unga Island approximately 2,500 feet north of the head of Acheredin Bay (Wilson and others, 1988, locality 31). The map site is near the north end of the boundary between secs. 31 and 32, T. 57 S., R. 75 W., of the Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: Cu, Hg, Pb

Ore minerals: Gold, pyrite

Gangue minerals: Quartz

Geologic description:

The Chance prospect consists of several quartz veins in an area of silicified and iron-oxide-rich andesite of the the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). The prospect occurs at the intersection of northeast-and northwest-striking faults. Trenching exposed 32 feet of massive quartz. Channel samples contained as much as 0.94 ppm gold, 1.9 ppm silver, 45 ppm copper, 755 ppm lead, 69 ppm zinc, 280 ppm arsenic, and 0.35 ppm mercury. Grab samples contained as much as 0.95 ppm gold, 26 ppm silver, 975 ppm copper, 9,600 ppm lead, 720 ppm zinc, 260 ppm lead, and 3.5 ppm mercury (Peterson and others, 1982).

Alteration:

The alteration consists of silicification.

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:

UNC Teton Exploration Drilling Company sampled and trenched this prospect in 1982. Grab samples contained as much as 0.95 ppm gold, 1.9 ppm silver, 79 ppm copper, 995 ppm lead, 720 ppm zinc, 260 ppm arsenic, and 1.2 ppm mercury.

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Peterson and others, 1982; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/12/01

Site name(s): Beach Vein

Site type: Prospect

ARDF no.: PM069

Latitude: 55.200 **Quadrangle:** PM A-3

Longitude: 160.703

Location description and accuracy:

This prospect is located on the beach at the head of Acheredin Bay on Unga Island (Wilson and others, 1988, locality 34). The map site is due south of the center of sec. 32, T. 57 S., R. 75 W., of the Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Chalcopyrite, galena, gold, pyrite, sphalerite

Gangue minerals: Quartz

Geologic description:

This prospect consists of a multiphase quartz vein system, locally called the Beach Vein, that averages approximately 10 feet in width and has been traced for 1,500 feet along strike. It occurs in argillized and silicified andesite of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). Trenches have exposed 10 feet or more of mineralized quartz veins and as much as 18 feet of clay-rich, sheared andesite containing numerous thin quartz veins (Peterson and others, 1982). Drusy quartz breccias, as much as 400 feet long and 100 feet wide are present in the area. These contain abundant pyrite and minor chalcopyrite, galena, and sphalerite. Single-phase quartz veins as much as 6 inches wide occur along the margins of the Beach Vein.

Ranges of metal values in the vein system are: gold, 0.005 to 4,937 ppm; silver, 1.8 to 14.6 ppm; copper, 45 to 5,400 ppm; lead, 18 to 11,300 ppm; zinc, 15 to 29,000 ppm; arsenic, 19 to 380 ppm; and mercury, 0.095 to 1,000 ppm (Peterson and others, 1982).

Grab samples collected by Battle Mountain Exploration Company contained as much as 0.69 ppm gold; channel samples from trench 5 contained from 0.21 to 3.77 ppm gold (Pilcher, 1986).

Alteration:

The alteration consists of argillization and minor silicification.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold veins, 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:
In 1982 UNC Teton Exploration Drilling Company mapped the prospect, dug 421 feet of trenches, collected 105 channel and 25 grab samples, and conducted 2.8 line-miles of VLF-EM survey. The highest values from trench channel samples are 4,937 ppm gold, 14.6 ppm silver, 5,400 ppm copper, 11,300 ppm lead, 29,000 ppm zinc, 380 ppm arsenic, and 1,000 ppm mercury (Peterson and others, 1982).

Production notes:

Reserves:

Additional comments:
This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Peterson and others, 1982; Pilcher, 1986; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/13/01

Site name(s): Normandy

Site type: Prospect

ARDF no.: PM070

Latitude: 55.191 **Quadrangle:** PM A-3

Longitude: 160.681

Location description and accuracy:

The Normandy prospect is located on Unga Island on the beach and cliffs on the east shore of Acheredin Bay (Wilson and others, 1988, locality 38). The map site is in the NW1/4 of sec. 4, T. 58 S., R. 75 W., of the Seward Meridian. The location is accurate to within 1,000 feet.

Commodities:

Main: Cu, Pb, Zn

Other: Ag, Au

Ore minerals: Chalcopyrite, galena, pyrite, sphalerite

Gangue minerals: Quartz, zeolite

Geologic description:

The Normandy prospect, discovered in 1981, consists of a northeast-striking 15- to 40-foot-wide zone of quartz veins, silicified andesite, and sulfides, chielfly pyrite, chalcopyrite, galena, and sphalerite. The andesite is part of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). The mineralization is exposed on the sea cliffs and extends at least 300 feet into the ocean. It is traceable on land as an airphoto lineament. VLF-EM surveys indicate anomalies on strike at 600 and 3,000 feet from the beach. Deep soil and flooding have prevented trenching from exposing the deposit. Assays of rock samples show up to 0.3 percent copper, 3.7 percent lead, 9.4 percent zinc, 2.6 ppm gold, and 214 ppm silver (Peterson and others, 1982).

Battle Mountain Exploration Company examined the site in 1986. A grab sample collected at that time contained 1.71 ppm gold (Pilcher, 1986).

Alteration:

The alteration consists of silicification.

Age of mineralization:

Eocene or younger.

Deposit model:
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:
Resource Associates of Alaska and UNC Teton Exploration Drilling Company collected 27 rock samples, conducted VLF-EM surveys, and cut several trenches that did not expose the deposit. Rock samples contained as much as 0.3 percent copper, 3.7 percent lead, 9.4 percent zinc, 2.6 ppm gold, and 214 ppm silver.

Battle Mountain Exploration Company examined the site in 1986. A grab sample collected at that time contained 1.71 ppm gold.

Production notes:

Reserves:

Additional comments:
This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Peterson and others, 1982; Pilcher, 1986; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/15/01

Site name(s): Dave's Vein

Site type: Prospect

ARDF no.: PM071

Latitude: 55.186 **Quadrangle:** PM A-3

Longitude: 160.675

Location description and accuracy:

The map site of this prospect is at an elevation of about 300 feet, just above the beach on the east shore of Acheredin Bay on Unga Island (Wilson and others, 1988, locality 39). The site is about 0.15 mile south-southwest of hill 710. The location is accurate to within 1,000 feet.

Commodities:

Main: Ag, Au

Other:

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:

This prospect, discovered, mapped, and sampled in 1980 by Resource Associates of Alaska, consists of a 6-foot-wide, northeast-striking, iron-stained quartz vein in argillized, silicified, and pyritized andesite. The andesite is part of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). The vein is exposed for 200 feet along strike and is associated with a knob of silicified andesite. It may merge with the Altair vein (PM091) farther inland. In 1982 UNC Teton Exploration Drilling Company conducted a VLF-EM survey, and trenched and sampled the prospect. Ranges of metal values from trench channel samples are as follows: 0.025 to 0.17 ppm gold, 0.5 to 4.2 ppm silver, 4 to 24 ppm copper, 5 to 36 ppm lead, 1 to 20 ppm zinc, 16 to 152 ppm arsenic, and 0.06 to 0.6 ppm mercury (Peterson and others, 1982).

Alteration:

The wall rock exhibits strong argillic alteration accompanied by pyrite. Some silicification has also been noted (Peterson and others, 1982).

Age of mineralization:

Eocene or younger.

Deposit model:
Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:
In 1980 Resource Associates of Alaska mapped and sampled the prospect. In 1982 UNC Teton Exploration Drilling Company cut 168 feet of trench, sampled the prospect, and conducted a VLF-EM survey. Twelve trench channel samples assayed as much as 0.17 ppm gold and 4.2 ppm silver over a 120-foot zone. Thirteen grab samples assayed as much as 1.8 ppm gold and 210 ppm silver.

Production notes:

Reserves:

Additional comments:
This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Peterson and others, 1982; Pilcher, 1986; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/15/01

Site name(s): PMRGX-3

Site type: Occurrence

ARDF no.: PM072

Latitude: 55.170 **Quadrangle:** PM A-3

Longitude: 160.669

Location description and accuracy:

The map site of this occurrence is on Unga Island on the east shore of outer Acheredin Bay, about 1.9 miles south of the lagoon at the head of the bay (Christie, 1974, color anomaly 80; Wilson and others, 1988, locality 85). It is referred to as PMRGX-3 (Smoker) in Wilson and others (1988). The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: Cu, Mo, Pb, Sb, Sn, Zn

Ore minerals: Pyrite

Gangue minerals:

Geologic description:

This occurrence consists of a 1- by 2-mile color anomaly (Christie, 1974, color anomaly 80). At this site, Christie noted 6-inch to 3-foot-thick 'beds' of intensely argillized volcanic rock containing as much as 20 percent pyrite. The average pyrite content is 2 to 5 percent. A fractured diorite dike containing disseminated pyrite also crops out in the area. Two rock samples collected by Christie in 1974 contained as much as 0.01 ppm gold, 2.1 ppm silver, 98 ppm copper, 49 ppm zinc, and 1.6 ppm molybdenum. The country rocks are mapped as Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995).

Six rock samples collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in antimony, copper, gold, lead, silver, and tin (Wilson and others, 1988).

Alteration:

Extensive intense clay-pyrite alteration (acid sulfate?).

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

An Aleut-Quintana-Duval joint venture carried out brief reconnaissance mapping and sampling in 1974 (Christie, 1974). Only minor amounts of base and precious metals were found. UNC Teton Exploration Drilling Company geologists examined the site during the period 1979-1981. They called it a 'smoker-type' occurrence, but found little of interest. Samples collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in antimony, copper, gold, lead, silver, and tin (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Christie, 1974; Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Christie, 1974

Reporter(s): S.H. Pilcher

Last report date: 1/27/01

Site name(s): Pook

Site type: Prospect

ARDF no.: PM073

Latitude: 55.195 **Quadrangle:** PM A-2

Longitude: 160.625

Location description and accuracy:

This prospect is approximately 4,000 feet northwest of Apollo Mountain on Unga Island (Wilson and others, 1988, locality 28). The map site is at an elevation of about 750 feet, in the SE1/4 of sec. 35, T. 75 S., R. 75 W., of the Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: Hg

Ore minerals: Chalcopyrite, gold, pyrite

Gangue minerals: Calcite, quartz

Geologic description:

The Pook prospect is in rocks mapped as the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). It is a northeast-striking, gold-bearing pyritic quartz-calcite vein system 10 to 70 feet wide and 2,000 feet long (Trujillo and others, 1981). A trace of chalcopyrite occurs in some of the veins. Individual veins in the system are as much as15 feet thick. The mineralized zone occurs along a fault contact between a basalt flow and a sequence of pyroclastic rocks and andesite flows. The vein material is sheared and crushed and shows evidence of repeated movement, resulting in a complex structural pattern.

Anomalous gold values occur throughout the entire length of the zone. The best surface grades are 0.098 ounce of gold per ton, 1.47 ounces of silver per ton, 210 ppm copper, 1,000 ppm lead, 130 ppm zinc, 300 ppm arsenic, and 0.15 ppm mercury (Trujillo and others, 1981). A single drill hole apparently missed this zone at depth but hit a deeper, 76-foot-thick zone. A 35-foot section of this deeper zone assayed 0.005 to 0.020 ounce of gold per ton and 0.02 to 0.06 ounce of silver per ton.

In 1991 Battle Mountain Exploration Company collected 26 power auger, 19 rock, and 15 soil samples at the prospect in a 2,600- by 1,000-foot area. Eighty percent of these samples returned low-level gold values between 26 ppb and 100 ppb. One high grade vein sample assayed 0.13 ounce of gold per ton (Ellis and Randolph, 1991).

Alteration:
The only alteration reported is silicification.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:
In 1981 Resource Associates of Alaska mapped the prospect, collected about 300 samples, conducted magnetometer and EM surveys, and drilled one 365-foot diamond drill hole. The best metal values obtained from the prospect include 0.098 ounce of gold per ton, 1.47 ounces of silver per ton, 210 ppm copper, 1,000 ppm lead, 130 ppm zinc, 300 ppm arsenic, and 0.15 ppm mercury.

Eighty percent of rock, soil, and power auger samples collected by Battle Mountain Exploration Company in 1991 contained gold values between 26 ppb and 100 ppb. The remainder lacked gold, except for one sample of Pook vein material, which assayed 0.13 ounce of gold per ton.

Production notes:

Reserves:

Additional comments:
The prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Trujillo and others, 1981; Wilson and others, 1988; Ellis and Randolph, 1991; Wilson and others, 1995.

Primary reference: Trujillo and others, 1981

Reporter(s): S.H. Pilcher

Last report date: 1/10/01

Site name(s): PMRGX-2

Site type: Occurrence

ARDF no.: PM074

Latitude: 55.199 **Quadrangle:** PM A-2

Longitude: 160.492

Location description and accuracy:
This occurrence is located on the coast of Unga Island between Baralof Bay and Delarof Harbor. It is referred to as PMRGX-2 in Wilson and others (1988, locality 52). The map site is 1.5 miles west-northwest of Kelly Rock. The location is accurate to within 1,200 feet.

Commodities:

Main: Cu, Pb

Other: As, Sb

Ore minerals: Pyrite

Gangue minerals: Dolomite, quartz?

Geologic description:
This occurrence consists of a pyrite-rich dolomitic vein that cuts sheared volcaniclastic rocks of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). Samples of the vein and of nearby rhyolite were reported to be marginally anomalous in copper, lead, arsenic, and antimony (Wilson and others, 1988).

Alteration:

Age of mineralization:

Deposit model:
Polymetallic vein (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:

Samples 85AWs 294-296 and 82ADt collected by the U.S. Geological Survey in the mid-1980s were reported to be marginally anomalous in copper, lead, arsenic, and antimony (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/20/01

Site name(s): Herron; E.C.

Site type: Prospect

ARDF no.: PM075

Latitude: 55.198 **Quadrangle:** PM A-2

Longitude: 160.506

Location description and accuracy:
This prospect is on a trail at an elevation of about 600 feet, on the east side of Unga Island approximately 1 mile north of the abandoned village of Unga (Wilson and others, 1988, locality 47). The location is accurate to within 1,000 feet.

Commodities:

Main: Ag, Au

Other:

Ore minerals: Pyrite

Gangue minerals: Jasper, quartz

Geologic description:
Trujillo and others (1981) describe this prospect as a 60-foot-wide zone of propylitic and pyritic alteration marked by limonitic and chalcedonic quartz and jasper float. Hand-trenching revealed quartz veins as much as 2 feet in width associated with intense alteration. The best assays obtained were 0.02 ppm gold, 1.5 ppm silver, and 0.78 ppm mercury. An old 20-foot shaft near the veins was sunk into intensely silicified tuffs. The wall rocks are part of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995).

Alteration:
Alteration includes propylitization and silicification.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:

The prospect was covered by two unpatented mining claims. Old workings are a 20-foot shaft at the northwest end of claims and scattered pits elsewhere. In 1981 Resource Associated of Alaska hand trenched and sampled the prospect. Their best values were 0.02 ppm gold, 1.5 ppm silver, and 0.78 ppm mercury. Battle Mountain Exploration Company examined and sampled the prospect in 1986, but their samples contained no metal values of note.

Production notes:

Reserves:

Additional comments:

The prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Webber and others, 1946; Trujillo and others, 1981; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Trujillo and others, 1981

Reporter(s): S.H. Pilcher

Last report date: 1/17/01

Site name(s): Sitka; Sitka Gold Mine

Site type: Mine

ARDF no.: PM076

Latitude: 55.194 **Quadrangle:** PM A-2

Longitude: 160.554

Location description and accuracy:

This mine is located on the southeast part of Unga Island approximately 2,500 feet northwest of the head of Delarof Harbor and 1,200 feet northeast of the Apollo mine (Berg and Cobb, 1967, locality 7; Cobb, 1972 [MF 433], locality 5; MacKevett and Holloway, 1977, locality 5; Nokleberg and others, 1987, locality AP4; Wilson and others, 1988, locality 4). The location site is accurate.

Commodities:

Main: Ag, Au

Other: Cu, Pb, Zn

Ore minerals: Chalcopyrite, galena, gold, pyrite, sphalerite

Gangue minerals: Amethyst, calcite, quartz

Geologic description:

The Sitka deposit is a 5- to 10-foot-wide zone of auriferous quartz-sulfide veins in an east-west-striking shear that cuts rocks mapped as andesite of the Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). The shear zone dips 65 to 80 degrees to the south. The veins contain pyrite and as much as 5 percent chalcopyrite and galena, along with lesser amounts of sphalerite. They are vuggy and show evidence of open-space filling, resulting in inward-facing euhedral quartz crystals. The sulfides occur mostly at the base of the quartz crystals. The gold, where mined, was free-milling (Atwood, 1911).

The mine was operated in conjunction with the Apollo mine (PM079) until about 1915 (Wilson and others, 1988). Production to that time was estimated at 15,000 tons of unknown grade (Brown, 1947). In the 1980s Alaska Apollo Mines cut six trenches and drilled three core holes for a total of 1,571 feet. The remaining resource is said to be 140,000 tons (Wilson and others, 1996). The average grade is not available.

Alteration:

The country rock exhibits pervasive propylitization.

Age of mineralization:

Eocene or younger.

Deposit model:
Sado epithermal gold veins, Polymetallic veins (Cox and Singer, 1986; model 25d; 22c)

Deposit model number (After Cox and Singer, 1986 or Bliss, 1992):
25d; 22c

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:
The mine was operated from about 1900 to 1915. Workings at that time consisted in part of a 400-foot shaft, a 360-foot adit, stopes as much as 150 feet long and 15 feet wide on the 55-foot level, and numerous crosscuts (Wilson and others, 1988). In 1983 Alaska-Apollo Gold Mines cut six trenches and drilled three core holes for a total of 1,571 feet.

Production notes:
The estimated production is about 15,000 tons of unknown grade.

Reserves:
The resource is estimated 140,000 tons (reported in Alaska Construction and Oil, v. 25, no. 3, March, 1984, p. 31). The grade is not available.

Additional comments:
The mine is located on private land.

References:
Martin, 1905; Atwood, 1909; Atwood, 1911; Smith, 1941; Webber and others, 1946; Brown, 1947; Wedow and others, 1952; Berg and Cobb, 1967; Cobb, 1972 (MF 433); MacKevett and Holloway, 1977; Alaska Construction and Oil, 1984, v.25, no. 3; Nokleberg and others, 1987; Wilson and others, 1988; Wilson and others, 1995; Wilson and others, 1996.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 12/31/00

Site name(s): Delarof Harbor

Site type: Occurrence

ARDF no.: PM077

Latitude: 55.187 **Quadrangle:** PM A-2

Longitude: 160.548

Location description and accuracy:
This site, at the head of Delarof Harbor on southeastern Unga Island, represents beach sands at the mouth of the creek draining the Apollo mine area (MacKevett and Holloway, 1977, locality 14; Wilson and others, 1988, locality 14). The location is accurate to within 1,200 feet.

Commodities:

Main: Au

Other:

Ore minerals: Gold

Gangue minerals:

Geologic description:
This occurrence represents placer gold in beach sands at the mouth of a creek draining the Apollo mine area (PM079).

Alteration:

Age of mineralization:
Quaternary.

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:

Some beach mining was reported in 1911 (Brooks, 1912).

Production notes:

Reserves:

Additional comments:

References:

Brooks, 1912; U.S. Bureau of Mines, 1973; MacKevett and Holloway, 1977; Wilson and others, 1988

Primary reference: Brooks, 1912

Reporter(s): S.H. Pilcher

Last report date: 1/4/01

Site name(s): Olgen

Site type: Prospect

ARDF no.: PM078

Latitude: 55.189 **Quadrangle:** PM A-2

Longitude: 160.557

Location description and accuracy:
This prospect is located on southeastern Unga Island and represents an old claim block on the creek draining the Apollo mine site. It is approximately 1,600 feet northwest of the head of Delarof Bay and 1,500 feet east of the Apollo mine adit portal (Wilson and others, 1988, locality 41). The location is accurate to within 1,200 feet.

Commodities:

Main: Au

Other:

Ore minerals: Chalcopyrite, galena, pyrite, sphalerite

Gangue minerals: Quartz

Geologic description:
This prospect is a vuggy, oxidized quartz vein that strikes N 38 E and has a strike length of approximately 500 feet (Wilson and others, 1988). It occurs in volcanic rocks of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). The vein is exposed in a short adit and may be the southwestern continuation of the Sitka fracture system (Wilson and others, 1988). Sulfides present in the vein include chalcopyrite, galena, pyrite, and sphalerite.

Alteration:

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold vein, Polymetallic vein (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:
This prospect has been explored by a short adit.

Production notes:

Reserves:

Additional comments:

References:
Webber and others, 1946; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/15/01

Site name(s): Apollo

Site type: Mine

ARDF no.: PM079

Latitude: 55.1911 **Quadrangle:** PM A-2

Longitude: 160.5626

Location description and accuracy:

The Apollo mine is located on the southeast part of Unga Island approximately 2,500 feet northwest of the head of Delarof Harbor (Berg and Cobb, 1967, locality 7; Cobb, 1972 [MF 433], locality 6; MacKevett and Holloway, 1977, locality 6; Nokleberg and others, 1987, locality AP4; Wilson and others, 1988, locality 6). The mine location is accurate.

Commodities:

Main: Au

Other: Ag, Cu, Pb, Zn

Ore minerals: Chalcopyrite, galena, gold, native copper, pyrite, sphalerite

Gangue minerals: Adularia, calcite, chlorite, quartz

Geologic description:

This mine occurs in rocks mapped as the Eocene to Oligocene Popof volcanic rocks, which are equivalent to the Meshik Volcanics (Wilson and others, 1995).

The deposit was discovered in 1891. It was first described by Becker (1898) as a steeply-dipping, reticulated vein zone at the northeast end of the northeast-striking 'Apollo trend', which is a system of faults and linears that cuts across the Unga Island.

Three subparallel veins were mined. The veins cut altered andesite, strike N 20 E and dip steeply to the south. Riehle (1999), however, reports that they strike N 43 E. The veins are generally less than 60 feet apart. They tend to be vuggy and contain euhedral quartz crystals, indicating open growth. Other minerals in the veins include gold, chalcopyrite, sphalerite, galena, pyrite, native copper, calcite, chlorite, and rare adularia. Singer (1999) suggests that this is a Sado-type gold deposit.

An anonymous review written in 1935 and included in Brown (1947) suggested that there were four ore shoots 400 to 800 feet long between the surface and a depth of 1,400 feet distributed over 5,000 feet of strike. Most of the ore mined apparently came from two shoots, the largest of which was 800 feet long and 8 to 16 feet wide and extended down dip for 500 feet (Wilson and others, 1996). The shoots plunged 60 to 70 degrees to the northeast (Butherus and others, 1979).

The mine was in production from 1892 to 1904 and from 1908 to 1913. Small amounts of ore were mined in 1916 and 1922. Most of the ore mined was free milling; however, at depth most of the gold was apparently in the sulfides and could not be recovered. Some of this ore was concentrated and sent to the Tacoma smelter in Washington. A small cyanide plant was installed at the mine in 1916 to work on tailings.

Estimates of the total production are as follows: 500,000 tons at 0.25 ounce of gold per ton (Wilson and others, 1996); 490,000 tons at 0.22 ounce of gold per ton (Bundtzen and others, 1987); and 242,000 tons at 0.4 ounce of gold per ton (Berg and Cobb, 1967).

In 1983 extensive trenching was done on the property, and nine core holes were drilled by Alaska-Apollo Gold Mines for a total of 9,483 feet. Inferred reserves were estimated at 748,000 tons grading 0.76 ounce of gold and 2.16 ounces of silver per ton (Bundtzen and others, 1991).

Alteration:

The wall rock exhibits extensive propylitization. According to Butherus and others (1979), some silicification is also present.

Age of mineralization:

Eocene or younger.

Deposit model:

Sado epithermal gold veins, Polymetallic veins (Cox and singer, 1986; model 25d; 22c)

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

25d; 22c

Production Status: Yes; small

Site Status: Inactive

Workings/exploration:

Workings consist of two tunnels, one 1,200 feet and the other 3,200 feet in length; two shafts, 460 and 820 feet deep; and numerous subsidiary crosscuts. A 60-stamp mill was operated at the mine in the 1890's and early 1900's. The mine was reopened in 1983 and was partly accessible in 1988. In 1983, Alaska-Apollo Gold Mines did extensive trenching and drilled nine holes totalling 9,483 feet of core. Inferred reserves from this recent work were 748,000 tons grading 0.76 ounce of gold and 2.16 ounces of silver per ton, plus base metal values (Bundtzen and others, 1991).

Production notes:

From 1892 to the early 1900's the mine produced between 242,000 and 500,000 tons grading between 0.22 and 0.4 ounce of gold per ton.

Reserves:

Reserves are estimated at 748,000 tons grading 0.76 ounce gold and 2.16 ounces silver per ton.

Additional comments:

This mine is located on private land.

References:

Becker, 1898; Martin, 1905; Brooks, 1906; Brooks, 1911; Brooks, 1912; Brooks, 1913; Brooks, 1915; Brooks, 1918; Atwood, 1909; Atwood, 1911; Brooks and Capps, 1924; Smith, 1941; Webber and others, 1946; Brown, 1947; Wedow and others, 1952; Berg and Cobb, 1967; Cobb, 1972 (MF 433); MacKevett and Holloway, 1977; MacKevett and others, 1978; Butherus and others, 1979; Bundtzen and others, 1987; Bundtzen and others, 1991; Nokleberg and others, 1987; Alaska Construction and Oil, 1984, vol. 25, no. 3; Wilson and others, 1988; Wilson and others, 1995; Wilson and others, 1996; Riehle, 1999; Singer, 1999.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/2/01

Site name(s): Empire

Site type: Prospect

ARDF no.: PM080

Latitude: 55.188 **Quadrangle:** PM A-2

Longitude: 160.568

Location description and accuracy:
The Empire prospect is located on Unga Island approximately 4,000 feet southwest of the lower adit portal of the Apollo mine (PM079) (Wilson and others, 1988, locality 33). The location is accurate to within 2,500 feet.

Commodities:

Main: Ag, Au

Other:

Ore minerals:

Gangue minerals: Quartz

Geologic description:
The Empire prospect is described as vuggy quartz veins, less than 0.5 inch wide, cutting iron-oxide-stained, silicified andesite (Wilson and others, 1988). The andesite is part of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). By analogy with other deposits in the area, the veins presumably contain small amounts of gold or silver.

Alteration:
The alteration consists of silicification of andesite.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:

A 150-foot, south-trending adit is present on the prospect. In 1983 UNC Teton Exploration Drilling Company drilled three core holes for a total of 4,737 feet, conducted VLF and EM surveys, and trenched the prospect.

Production notes:

Reserves:

Additional comments:

References:

Webber and others, 1946; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/12/01

Site name(s): Rising Sun

Site type: Prospect

ARDF no.: PM081

Latitude: 55.19 **Quadrangle:** PM A-2

Longitude: 160.57

Location description and accuracy:

This site represents an old claim block on southeastern Unga Island. It is southwest of the Apollo mine (PM079) and approximately 1 mile west of the head of Delarof Bay (Wilson and others, 1988, locality 40). The map site is at an elevation of 700 feet, about 0.15 mile southeast of the center of sec. 6, T. 58 S., R. 74 W., of the Seward Meridian. The location is accurate to within 1 mile.

Commodities:

Main: Ag, Au

Other:

Ore minerals:

Gangue minerals: Quartz

Geologic description:

This prospect is described as two zones of reticulated quartz veins exposed in a 37-foot drift (Wilson and others, 1988). The zones decrease in width from 14 feet at the adit to 1 foot at the end of the drift, where they are faulted off. The veins contain no visible sulfides. They are hosted in the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). Five samples assayed by the U.S. Bureau of Mines contained as much as 0.3 ppm gold and 69 ppm silver (Wilson and others, 1988).

Alteration:

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Work on this prospect includes a 580-foot adit tunnel and a 37-foot drift. The best values from five samples are 0.3 ppm gold and 69 ppm silver.

Production notes:

Reserves:

Additional comments:

References:

Webber and others, 1946; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/15/01

Site name(s): California

Site type: Prospect

ARDF no.: PM082

Latitude: 55.180 **Quadrangle:** PM A-2

Longitude: 160.593

Location description and accuracy:
This prospect is at an elevation of about 500 feet on southeastern Unga Island approximately 1 mile southeast of Apollo Mountain. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other:

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:
The California prospect consists of a system of multiple, 2-inch-wide, open-growth quartz veinlets in bleached, partly argillized felsic tuff containing disseminated iron oxide pseudomorphs of pyrite (Wilson and others, 1988). The hostrocks are part of the Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). Battle Mountain Exploration Company (Ellis and Apel, 1990) traced the vein system southwest to the Heather Creek prospect (PM085). A rock sample collected at the California adit contained 2.19 ppm gold. Other samples collected between the California and Heather Creek prospects contained as much as 0.41 ppm gold, 100 ppm or more arsenic, and 1 ppm or more mercury.

Alteration:
Alteration types are silicification and argillization.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Old workings include a caved north-trending adit and a small dump. In 1983 UNC Teton Exploration Drilling Company mapped the prospect, conducted VLF-EM surveys, collected geochemical samples, and drilled four holes for a total of 2,575 feet (Wilson and others, 1988). In 1990 Battle Mountain Exploration examined and sampled the prospect. One sample collected at the adit contained 2.19 ppm gold.

Production notes:

Reserves:

Additional comments:

References:

Wilson and others, 1988; Ellis and Apel, 1990; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/29/01

Site name(s): Unnamed (coast south of Apollo Mountain)

Site type: Occurrence

ARDF no.: PM083

Latitude: 55.16 **Quadrangle:** PM A-2

Longitude: 160.60

Location description and accuracy:

This site is located on the south shore of southeastern Unga island about 2.5 miles south-southeast of Apollo Mountain (Christie, 1974, color anomaly 80). The locality is accurate to within 1 mile.

Commodities:

Main: Cu, Zn

Other: Ag, Au, Mo

Ore minerals: Pyrite

Gangue minerals:

Geologic description:

This site represents a color anomaly that covers an area of 1 by 2 miles (Christie, 1974, anomaly 80). Within the anomaly Christie noted diorite and argillically altered volcanic rock containing as much as 20 percent disseminated pyrite. Samples of the volcanic rock contained as much as 0.01 ppm gold, 1.8 ppm silver, 48 ppm copper, 55 ppm zinc, and 1.6 ppm molybdenum. The rocks are mapped as the Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995).

Alteration:

Volcanic rocks here exhibit argillic alteration.

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

The Aleut-Quintana-Duval joint venture examined and sampled this site in 1974 (Christie, 1974).

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Christie, 1974; Wilson and others, 1995.

Primary reference: Christie, 1974

Reporter(s): S.H. Pilcher

Last report date: 2/5/01

Site name(s): Apollo Mountain

Site type: Occurrence

ARDF no.: PM084

Latitude: 55.18 **Quadrangle:** PM A-2

Longitude: 160.61

Location description and accuracy:
This occurrence is approximately located. The map site is at an elevation of about 700 feet, due south of 1,630 foot peak of Apollo Mountain on southeastern Unga Island (MacKevett and Holloway, 1977, locality 13; Wilson and others, 1988, locality 13). The location is accurate to within 2 miles.

Commodities:

Main: Au, Cu

Other:

Ore minerals:

Gangue minerals: Quartz

Geologic description:
This occurrence consists of quartz veins less than 12 inches thick that crop out discontinuously along stike for 2,500 feet. It also includes a knoblike, 100- by 1,000-foot area of brecciated and silicified andesite containing numerous quartz-filled vugs and limonitic shears. The vein system cuts rocks mapped as Popof volcanic rocks of late Eocene to early Oligocene age (Wilson and others, 1995). Grab samples of the quartz contained as much as 0.23 ppm gold and 10 ppm silver (Wilson and others, 1988). Base metal values are low.

Alteration:

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Some evaluation work may have been done by UNC Teton Exploration Drilling Company for the Aleut Corporation in 1979, 1981, and 1982 (Wilson and others, 1988). Grab samples contained as much as 0.23 ppm gold and 10 ppm silver. Base metal values were low.

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

U.S. Bureau of Mines, 1973; MacKevett and Holloway, 1977; Peterson and others, 1982; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/4/01

Site name(s): Heather Creek

Site type: Occurrence

ARDF no.: PM085

Latitude: 55.177 **Quadrangle:** PM A-2

Longitude: 160.615

Location description and accuracy:

This prospect is at an elevation of about 600 feet, on Unga Island approximately 5,000 feet due south of the top of Apollo Mountain (Wilson and others, 1988, locality 50). Location is accurate to within 1,200 feet. Heather Creek is not named on the A-2 topographic map.

Commodities:

Main: Ag, Au

Other: As, Hg

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:

Peterson and others (1982) described this occurrence as a northeast-striking quartz vein system containing quartz veins less than a foot in width. The system is discontinuous along a 2,500 foot strike length and includes a knob of brecciated and silicified andesite 100 feet wide and 1,000 feet long characterized by numerous quartz-filled vugs and limonitic shears. Pyrite is the only sulfide that has been identified. The veins system cuts andesite flows and tuffs of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). Grab samples from the knob contained as much as 0.23 ppm gold, 10 ppm silver, 390 ppm arsenic, and 0.28 ppm mercury. Channel samples of the veins contained as much as 0.02 ppm gold, 3.8 ppm silver, and 0.35 ppm mercury.

Ellis and Apel (1990) described the occurrence as a 50- to 150-foot-wide, totally silicified and brecciated fault zone exhibiting multiple episodes of brecciation and mineralization. The zone extends 7,000 feet on strike from the California vein adit (PM082) west-southwest to Heather Creek. Argillic alteration forms halos 5 to 100 feet wide in tuff or flow wall rock. Samples of silicified breccia collected at approximately 200-foot intervals at selected sites along the trend contained as much as 0.414 ppm gold, more than 100 ppm arsenic, and more than 1.0 ppm mercury.

Alteration:

The main mineralized zone has been silicified, whereas the wall rocks exhibit strong argillization.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:
Resource Associates of Alaska and UNC Teton Exploration Drilling Company mapped and sampled the prospect in 1981and 1982. Grab samples from the knob contained as much as 0.23 ppm gold, 10 ppm silver, 390 ppm arsenic, and 0.28 ppm mercury. Vein channel samples contained as much as 0.02 ppm gold, 3.8 ppm silver, and 0.35 ppm mercury.

Battle Mountain Exploration collected 56 rock samples in 1990; these contained as much as 0.414 ppm gold, more than 100 ppm arsenic, and more than 1 ppm mercury.

Production notes:

Reserves:

Additional comments:

References:
Webber and others, 1946; Peterson and others, 1982; Wilson and others, 1988; Ellis and Apel, 1990; Wilson and others, 1995.

Primary reference: Ellis and Apel, 1990

Reporter(s): S.H. Pilcher

Last report date: 1/20/01

Site name(s): Aquila

Site type: Prospect

ARDF no.: PM086

Latitude: 55.190 **Quadrangle:** PM A-2

Longitude: 160.654

Location description and accuracy:

The Aquila prospect is located on southeastern Unga Island east of Acheredin Bay (Nokleberg and others, 1987, locality AP3; Wilson and others, l988, locality 37). The map site is at an elevation of 700 feet, 0.2 mile north of the center of sec. 3, T. 58 S., R. 75 W., of the Seward Meridian. The location is accurate.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Sb, Zn

Ore minerals: Chalcopyrite, galena, gold, galena, sphalerite

Gangue minerals: Quartz

Geologic description:

The Aquila prospect is one of several northeast-striking epithermal vein systems in an area approximately 1,000 by 2,000 feet. The systems include veins on the Origin (PM087), Freds (PM088), Surprise (PM089), Ankle Creek (PM090), Altair (PM091), and Amethyst (PM092) prospects.

The Aquila vein system cuts andesite flows and tuffs of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). It is as much as 100 feet in width and can be traced along strike for as much as 2,000 feet. It exhibits evidence of open-space filling and repeated phases of fracturing and deposition, resulting in vein breccias and quartz stockworks (Peterson and others, 1982). The veins contain pyrite, and, locally free gold, along with trace amounts of chalcopyrite, galena, and sphalerite.

Many sets of lineaments characterize in the prospect area. The widest and richest zones of veins seem to occur at the intersection of these lineaments with northwest-striking faults. Higher gold values are also associated with zones of multiple brecciation. The gold is free-milling and ranges in size from 20 to 40 microns.

Precious metal values in trench samples include 0.335 ounce of gold and 1.56 ounces of silver per ton over 12 feet, 0.242 ounce of gold and 0.68 ounce of silver per ton over 12 feet, 0.105 ounce of gold and 0.17 ounce of silver per ton over 12 feet, and 0.165 ounce of gold and 0.18 ounce of silver per ton over 10 feet. Selected drill core assays include 0.20

ounce of gold and 0.4 ounce of silver per ton over 31.2 feet, 0.19 ounce of gold and 0.51 ounce of silver per ton over 17.5 feet, and 3.31 ounces of gold and 3.2 ounces of silver per ton over 1.4 feet (Peterson and others, 1982).

Alteration:

The alteration is zoned outward from the veins from silicification to argillization to propylitization.

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:

This prospect was explored by Resource Associates of Alaska and UNC Teton Exploration Drilling Company during the period 1979 to 1983. During that time they mapped the area; conducted magnetometer, VLF-EM and IP surveys; drilled 12 core holes for a total of 4,446 feet; collected 675 rock samples; cut 17 trenches for a total of 3,310 feet; and took 472 trench samples.

The highest grade trench sample contained 0.335 ounce of gold and 1.56 ounces of silver per ton over 12 feet. One core sample contained 0.20 ounce of gold and 0.4 ounce of silver per ton over 31.2 feet (includes 3.31 ounces of gold and 3.2 ounces of silver per ton over 1.4 feet).

In 1986 Battle Mountain Exploration Company examined the vein systems and later mapped and sampled some of them. In 1990 they explored the area looking for large zones of argillic and silicic alteration having potential for disseminated gold mineralization. Argillized and silicified tuffs were found to be anomalous in arsenic and mercury and had spotty gold values as much as 0.025 ppm (Ellis and Apel, 1990).

Production notes:

Reserves:

Additional comments:

This prospect is located on land patented by, or conveyed to, the Aleut Corporation.

References:

Anderson and others, 1980; Trujillo and others, 1981; Peterson and others, 1982; Nokleberg and others, 1987; Wilson and others, 1988; Ellis and Apel, 1990; Wilson and others,

1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/14/00

Site name(s): Origin

Site type: Prospect

ARDF no.: PM087

Latitude: 55.190 **Quadrangle:** PM A-2

Longitude: 160.665

Location description and accuracy:

The map site of the Origin prospect is at an elevation of 400 feet, near the north end of the boundary between secs. 3 and 4, T. 58 S., R. 75 W., Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Au

Other:

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:

The Origin prospect consists of a knob of silicified and propylitized andesite on the trace of the Aquila linear (Peterson and others, 1982, figure 11). The andesite, which contains as much as 5 percent disseminated pyrite, is part of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995).

Trenches exposed a 70-foot-wide quartz-clay vein comprising 80 percent quartz and 20 percent clay. No trench sample of the vein contained more than 0.138 ppm gold, and most contained no detectable gold. Combined copper, lead, and zinc values ranged from 80 to 100 ppm. The samples contained as much as 500 ppm arsenic and 0.45 ppm mercury. One drill hole intersected a 25-foot zone averaging 0.171 ppm gold.

Alteration:

The host rocks are silicified and propylitized.

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

During the period 1979 to 1982 Resource Associates of Alaska and UNC Teton Exploration Drilling Company mapped and sampled the prospect, drilled one 577-foot core hole, and cut four trenches for a total of 805 feet (Peterson and others, 1982). The 145 trench samples were essentially barren of base and precious metals. The drill hole intersected a 25-foot zone averaging 0.171 ppm gold.

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Peterson and others, 1982; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 2/1/01

Site name(s): Freds

Site type: Prospect

ARDF no.: PM088

Latitude: 55.191 **Quadrangle:** PM A-2

Longitude: 160.658

Location description and accuracy:
The map site of the Freds prospect is at an elevation of 500 feet, about 2,000 feet northwest of the center of sec. 3, T. 58 S., R. 75 W., Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Au

Other:

Ore minerals:

Gangue minerals: Quartz

Geologic description:
The Freds prospect is located 800 feet northeast of the Origin prospect (PM087), along or near the Aquila linear (Peterson and others, 1982). The country rock is relatively fresh andesite of the late Eocene to late Oligocene Popof volcanic rocks (Wilson and others, 1995). A grab sample collected in 1981 contained more than 10 ppm gold. A 40-foot trench dug in 1982 revealed a 3-inch quartz vein. None of the trench samples contained detectable gold (Peterson and others, 1982).

Alteration:

Age of mineralization:
Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1982 UNC Teton Exploration Drilling Company dug a 40-foot trench on the prospect. Eight trench samples contained no detectable gold (Peterson and others, 1982).

Production notes:

Reserves:

Additional comments:

This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Peterson and others, 1982; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 2/1/01

Site name(s): Surprise

Site type: Prospect

ARDF no.: PM089

Latitude: 55.190 **Quadrangle:** PM A-2

Longitude: 160.656

Location description and accuracy:

The map site of the Surprise prospect is at an elevation of 600 feet, about 1,500 feet north-northwest of the center of sec. 3, T. 58 S., R. 75 W., Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Gold, pyrite

Gangue minerals: Quartz

Geologic description:

The Surprise vein is approximately 10 feet in width and is composed of massive and comb quartz containing 0.5 to 3.0 percent pyrite. It strikes northeast and can be followed for 1,000 feet as a magnetic low (Trujillo and others, 1981). This previously unknown vein was penetrated in the upper part of a drill hole positioned to test another vein at depth. Host rocks are propylitized and argillized andesite flows of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995).

The drill hole cut an upper 7.9 feet grading 0.012 ounce of gold and 0.07 ounce of silver per ton. A lower 3.7-foot intercept graded 0.05 ounce of gold and 0.04 ounce of silver per ton. These core intervals also assayed as much as 160 ppm copper, 90 ppm lead, 625 ppm zinc, 100 ppm arsenic, and 0.27 ppm mercury (Trujillo and others, 1981).

Alteration:

The host rocks exhibit propylitic and argillic alteration.

Age of mineralization:

Eocene of younger.

Deposit model:

Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1981, Resource Associates of Alaska explored this prospect by a 255-foot drill hole and several trenches. The best drill intercept was 3.7 feet grading 0.05 ounce of gold and 0.04 ounce of silver per ton (Trujillo and others, 1981).

Production notes:

Reserves:

Additional comments:

This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Trujillo and others, 1981; Wilson and others, 1995.

Primary reference: Trujillo and others, 1981

Reporter(s): S.H. Pilcher

Last report date: 2/1/01

Site name(s): Ankle Creek

Site type: Prospect

ARDF no.: PM090

Latitude: 55.189 **Quadrangle:** PM A-2

Longitude: 160.655

Location description and accuracy:

The map site of the Ankle Creek prospect is at an elevation of 600 feet, about 1,000 feet north-northwest of the center of sec. 3, T. 58 S., R. 75 W., Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Gold, pyrite

Gangue minerals: Quartz

Geologic description:

The Ankle Creek quartz vein is parallel to the Surprise vein (PM089), and crops out approximately 200 feet to the southeast. It is as much as 50 feet in width and has been exposed for 130 feet on strike. Based on float, air photo lineaments, and ground magnetics, the Ankle Creek vein has been traced for approximately 1,200 feet to the northeast where it intersects the Amethyst vein (PM092) (Peterson and others, 1982, figure 11). The vein is hosted in andesite flows which belong to the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). The flows exhibit propylitic alteration near the vein. Pyrite apparently is widespread.

Two trenches have been cut across the vein at its southwest end. Float samples of vein material assayed as much as 0.30 ounce of gold and 0.60 ounce of silver per ton (Trujillo and others, 1981). The best trench sample assayed 0.014 ounce of gold and 0.03 ounce of silver per ton over 12 feet. This includes a 5-foot interval grading 0.048 ounce of gold and 0.03 ounce of silver per ton. Assays from the other trench were 0.003 ounce of gold and 0.02 ounce of silver per ton over 7 feet, and 0.005 ounce of gold and 0.04 ounce of silver per ton over 3 feet. The assays also show varying amounts of copper, lead, zinc, and mercury.

Three holes were drilled to intersect the vein at depth. Apparently only one hole (AQANK-2) was successful. Where intersected, the vein had narrowed to 8 feet and was almost entirely devoid of gold (Trujillo and others, 1981).

Alteration:
Andesite host rocks are propylitically altered.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:
During the period 1979 to 1981 Resource Associates of Alaska mapped and sampled the prospect, conducted a magnetic survey, cut two trenches, and drilled three core holes (Trujillo and others, 1981). Float samples assayed as much as 0.30 ounce of gold per ton, whereas the best in-place metal values were from a 12-foot-long trench sample that assayed 0.014 ounce of gold per ton.

Production notes:

Reserves:

Additional comments:
This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Anderson and others, 1980; Trujillo and others, 1981; Peterson and others, 1982; Wilson and others, 1995.

Primary reference: Trujillo and others, 1981

Reporter(s): S.H. Pilcher

Last report date: 2/2/01

Site name(s): Altair

Site type: Prospect

ARDF no.: PM091

Latitude: 55.188 **Quadrangle:** PM A-2

Longitude: 160.656

Location description and accuracy:

The map site of the Altair prospect is at an elevation of 400 feet, about 750 feet west-northwest of the center of sec. 3, T. 58 S., R. 75 W., Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Chalcopyrite (?), galena (?), gold, pyrite, sphalerite (?)

Gangue minerals: Quartz

Geologic description:

The Altair deposit is a northeast-striking vein system that crops out approximately 500 feet southeast of, and parallel to, the Ankle Creek vein (PM090) (Peterson and others, 1982, figure 11). The system is approximately 25 feet wide in the discovery area. Individual quartz veins are as much as 18 inches wide (Trujillo and others, 1981). The sulfide minerals include pyrite, and, based on assays probably chalcopyrite, galena, and sphalerite. The system has been traced for approximately 1,400 feet along strike, and at its northeast end it intersects the Amethyst vein (PM092). The host rocks are propylitized and argillized andesite flows of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995).

At the intersection of the Ankle Creek and Amethyst veins, the vein systems form an ore shoot 150 to 200 feet long. The shoot is 30 feet wide and consists of a loose network of braided and parallel quartz veins 0.5 to 8 inches in width. Comb structures and banding are common. One drill hole and trench have penetrated the shoot. Gold is present mostly in the hanging wall of the shoot. The best assay of trench samples of the shoot was 5.14 ppm gold and 6.17 ppm silver over 9 feet (Trujillo and others, 1981). The drill hole intersected 16.5 feet assaying (core plus sludge) up to 8.3 ppm gold, 24.5 ppm silver, 1,120 ppm copper, 2,300 ppm lead, 870 ppm zinc, 240 ppm arsenic, and 0.11 ppm mercury (Anderson and others, 1980). At the southwest end of the shoot, two holes cut 35- to 40-foot wide vein zones. No gold was detected. It is assumed that good precious metal values

occur only at changes in strike and at structural intersections (Trujillo and others, 1981).

Alteration:

Alteration in the host rock grades from strongly propylitic to argillic, mainly in zones 20 to 60 feet wide adjacent to the vein systems.

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:

During the period 1980 to 1981 Resource Associates of Alaska mapped and sampled the prospect, conducted geophysical surveys, dug two trenches, and drilled three core holes (Trujillo and others, 1981). The best trench sample contained 5.14 ppm gold and 6.17 ppm silver over 9 feet. A drill hole intersected 16.5 feet of an ore shoot assaying as much as 8.3 ppm gold and 24.5 ppm silver.

Production notes:

Reserves:

Additional comments:

This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Anderson and others, 1980; Trujillo and others, 1981; Peterson and others, 1982; Wilson and others, 1995.

Primary reference: Trujillo and others, 1981

Reporter(s): S.H. Pilcher

Last report date: 2/2/01

Site name(s): Amethyst

Site type: Prospect

ARDF no.: PM092

Latitude: 55.188 **Quadrangle:** PM A-2

Longitude: 160.654

Location description and accuracy:

The map site of the Amethyst prospect is at an elevation of 500 feet, 500 feet northwest of the center of sec 3, T. 58 S., R. 75 W., Seward Meridian. The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Chalcopyrite, galena, gold, pyrite, sphalerite

Gangue minerals: Quartz

Geologic description:

The northeast-striking Amethyst vein at its westernmost end is located approximately 200 feet south of the Altair vein (PM091); however, it has a more northerly strike, and farther to the northeast it intersects both the Altair (PM091) and the Ankle Creek (PM090) veins (Peterson and others, 1982, figure 11). The Amethyst vein has been traced for approximately 2,000 feet on strike. The vein is a braided system, generally 15 to 20 feet in width, composed of numerous quartz veins of varying widths. Individual veins in the system branch, interweave, pinch, and swell (Trujillo and others, 1982). It exhibits evidence of crushing, brecciation, and partial rehealing. Vein quartz generally makes up 20 to 50 percent of the system. Sulfide minerlas include pyrite, chalcopyrite, galena, and sphalerite. The host rocks are propylitized and argillized, pyritic andesite flows and tuffs of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995).

An ore shoot at the intersection of the Amethyst and Ankle Creek veins has been drilled and trenched It is approximately 300 feet long, 12 feet wide, and extends to a depth of 100 feet. Ore intercepts of three core holes include 16.3 feet grading 0.20 ounce of gold and 0.6 ounce of silver per ton, 31 feet grading 0.20 ounce of gold and 0.4 ounce of silver per ton, and 10 feet grading 0.08 ounce of gold and 0.6 ounce of silver per ton (Anderson and others, 1980). The assays also show up to 1,120 ppm copper, 2,300 ppm lead, 670 ppm zinc, 1,100 ppm arsenic, and 0.64 ppm mercury. Trench samples include 12 feet grading 0.105 ounce of gold and 0.17 ounce of silver per ton, 12 feet grading 0.242 ounce

of gold and 0.68 ounce of silver per ton, and 12 feet grading 0.335 ounce of gold and 1.56 ounces of silver per ton (Trujillo and others, 1981). The resource is estimated to be 30,000 tons of ore grading 0.23 ounce of gold and 0.8 ounce of silver per ton.

Other trenches and drill holes along the system indicate anomalous, but not sub-ore-grade precious metal values.

Alteration:

The host rocks exhibit weak to strong propylitic and argillic alteration. The propylitic alteration is accompanied by 2 to 5 percent disseminated pyrite.

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:

During the period 1980 to 1982 Resource Associates of Alaska and UNC Teton Exploration Drilling Company mapped and sampled the prospect conducted VLF-EM, IP, and magnetometer surveys, core drilled 11 holes for a total of 4,446 feet, and cut 11 trenches. One ore shoot was outlined and evaluated at 30,000 tons grading 0.23 ounce of gold and 0.8 ounce of silver per ton (Trujillo and others, 1981).

In 1986 Battle Mountain Exploration Company carried out orientation soil, magnetometer, and VLF surveys over the prospect.

Production notes:

Reserves:

An ore shoot on the prospect contains an estimated 30,000 tons grading 0.23 ounce of gold and 0.8 ounce of silver per ton.

Additional comments:

This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Anderson and others, 1980; Trujillo and others, 1981; Peterson and others, 1982; Wilson and others, 1995.

Primary reference: Trujillo and others, 1981

Reporter(s): S.H. Pilcher

Last report date: 2/3/01

Site name(s): Unnamed (east of Sapsuk Lake)

Site type: Occurrence

ARDF no.: PM093

Latitude: 55.67 **Quadrangle:** PM C-3

Longitude: 160.92

Location description and accuracy:

The map site of this occurrence is at an elevation of about 1,750 feet, approximately 2.3 miles east-southeast of the east end of Sapsuk Lake (Wilson and others, 1988, locality 87). The site is about 0.25 mile south-southeast of the top of hill 2150. The location is accurate to within 1 mile.

Commodities:

Main: Ag, Cu, Pb, Zn

Other: Au, Mo

Ore minerals: Chalcopyrite, pyrite

Gangue minerals: Tourmaline

Geologic description:

At this site a 0.5-mile-square color anomaly has resulted from the oxidation of disseminated pyrite in Tertiary andesitic to dacitic volcanic rocks (Wilson and others, 1988; 1995). The main areas of interest are three or more tourmaline-cemented breccia pipes occurring near a 40- by 200-foot plug or dike of quartz porphyry (Trujillo and others, 1982). The largest pipe is approximately 40 feet in diameter and contains dacite porphyry fragments and some disseminated chalcopyrite. Soil, rock, and pan samples contained as much as 0.13 ppm gold, 2.8 ppm silver, 255 ppm copper, 410 ppm lead, 232 ppm zinc, and 21 ppm molybdenum.

Alteration:

Age of mineralization:

Tertiary.

Deposit model:

Porphyry Cu, Porphyry Cu-Mo (Cox and Singer; 1986; models 17 and 21a)

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

17, 21a

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1982 Resource Associates of Alaska examined the occurrence and collected 30 rock samples, 4 pan samples, and 1 soil sample. These assayed as much as 0.13 ppm gold, 2.8 ppm silver, 255 ppm copper, 410 ppm lead, 232 ppm zinc, and 21 ppm molybdenum (Trujillo and others, 1982).

Production notes:

Reserves:

Additional comments:

This site is located within the Alaska Peninsula National Wildlife Refuge.

References:

Trujillo and others, 1982; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Trujillo and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/28/01

Site name(s): North Popof Strait

Site type: Occurrence

ARDF no.: PM094

Latitude: 55.35 **Quadrangle:** PM B-2

Longitude: 160.49

Location description and accuracy:
This site represents beach gold placer claims on Popof Island northwest of the town of Sand Point (MacKevett and Holloway, 1977, locality 12; Wilson and others, 1988, locality 12). The map site is at the south head of Mud Bay. The location is accurate to within 2 miles.

Commodities:

Main: Au

Other:

Ore minerals: Gold

Gangue minerals:

Geologic description:
This occurrence represents gold placer claims located on the beaches northwest of the town of Sand Point, and indicated on U.S. Bureau of Mines (1973) maps. No other information is available.

Alteration:

Age of mineralization:
Quaternary.

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:

Production notes:

Reserves:

Additional comments:

References:

U.S. Bureau of Mines, 1973; MacKevett and Holloway, 1977; Wilson and others, 1988.

Primary reference: U.S. Bureau of Mines, 1973

Reporter(s): S.H. Pilcher

Last report date: 1/4/01

Site name(s): Mary Lou; Sand Point; Popof Island Beach

Site type: Mine

ARDF no.: PM095

Latitude: 55.308 **Quadrangle:** PM B-2

Longitude: 160.508

Location description and accuracy:

This mine, representing beach gold placer deposits, is located on Popof Island approximately 2.5 miles south of the town of Sand Point (Cobb, 1972 [MF 433], locality 9; Cobb, 1973 [B 1374], locality 4; MacKevett and Holloway, 1977, locality 9; Wilson and others, 1988, locality 9). The map site is 0.3 mile northwest of triangulation point Red. The location is accurate.

Commodities:

Main: Au

Other:

Ore minerals: Gold

Gangue minerals:

Geologic description:

This beach gold placer deposit was discovered by Louis Herman in 1904 and described by Martin in 1905. The deposit was 4,000 feet in length and was apparently derived by erosion of nearby mineralized volcanic rocks. The gold was generally found below mid-tide, especially around boulders.

Atwood (1909) reported that 20 to 40 men were working the deposit with rockers in 1904 and that about 12,000 ounces were recovered in 1904 and 1905. Since that time there has been minor production.

Alteration:

Age of mineralization:

Quaternary.

Deposit model:

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

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

39a

Production Status: Yes; small

Site Status: Active

Workings/exploration:

The deposit occurs along 4,000 feet of beach. It was worked primarily during the period 1904 and 1905, when 20 to 40 men worked the deposit with rockers. Atwood (1909) estimated a production of 12,000 ounces during that time. Minor, intermittent work has taken place since.

Production notes:

Atwood (1909) estimated that 12,000 ounces of gold were recovered in 1904 and 1905.

Reserves:

Additional comments:

References:

Martin, 1905; Atwood, 1909; Atwood, 1911; Smith, 1932; Cobb, 1972 (MF 433); Cobb, 1973 (B 1374); MacKevett and Holloway, 1977; Wilson and others, 1988; Wilson and others, 1996.

Primary reference: Atwood, 1909

Reporter(s): S.H. Pilcher

Last report date: 1/2/01

Site name(s): Herman Lode; Trench; Popof Island Gold; Centennial

Site type: Prospect

ARDF no.: PM096

Latitude: 55.308 **Quadrangle:** PM B2

Longitude: 160.497

Location description and accuracy:

This prospect is at an elevation of about 300 feet, approximately 2 miles south of the town of Sand Point (Berg and Cobb, 1967, locality 6; Cobb, 1972 [MF 433], locality 3; MacKevett and Holloway, 1977, locality 3; Wilson and others, 1988, locality 3). The location is accurate.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Chalcopyrite, galena, gold, pyrite, sphalerite

Gangue minerals: Calcite, quartz

Geologic description:

The rocks at this prospect are the Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). At this locality they consist mostly of basalt flows and tuffs.

The names Herman Lode and Trench refer to prospects explored by several adits, pits, and a trench in the early 1900's. A mineralized zone 5 to 10 feet wide was reported to contain free gold (Atwood, 1909). The name Centennial was given to a gold deposit discovered in the same area in 1987 by Battle Mountain Exploration Company.

The Centennial deposit is a large, low grade, disseminated gold lode. The country rocks consist of basalt flows, plugs, dikes, tuffs, and epiclastic deposits that overlie a basement sedimentary complex. The main mineralized zone occurs in a window eroded through a basalt flow. The mineralization is thought to be controlled in part by a plug margin, and in part by north-northeast-trending high-angle faults and fracture zones from which mineralizing fluids spread out into surrounding permeable rock (Ellis and Harris, 1989). The gold is disseminated in the matrix of the basaltic tuffs and also occurs in fractures and veins that cut the flows. The distribution of the mineralization seems to have a lower limit at 240 to 400 feet above the sedimentary basement complex.

The gold is free and occurs in the plus-25-micron range (Ellis and Harris, 1989). Silver, mercury, and arsenic values are associated with the gold. The mineralization is accompanied by enrichment in silica and potassium, as shown by the presence of quartz, sericite,

and adularia. Quartz and quartz-calcite veins and veinlets containing galena, sphalerite, pyrite, and some chalcopyrite were cut in some of the drill holes. Their relationship to the gold mineralization is not known.

In sea cliffs due south of the Centennial deposit, a zone of north-striking quartz-sulfide veins cuts tuffs and overlying flows. These veins may occupy the same structures that control the mineralization at the Centennial deposit. At the base of the cliff the vein zone is 10.5 feet wide and consists of five sulfide-bearing veins. At 175 feet vertically above the base, the zone is 50 feet wide and consists of 12 narrow, poorly mineralized veins. In the early 1900's a short adit was driven at the base of the zone. No assays of interest from this area were reported by Battle Mountain Exploration Company.

Alteration:

The rocks in the area exhibit pervasive propylitic alteration. The mineralization is accompanied by enrichment in silica and potassium, resulting in deposition of adularia, sericite, and quartz. Argillic alteration is locally present. Calcite stockwork veining is widespread.

Age of mineralization:

Eocene or younger.

Deposit model:

Volcanic-hosted disseminated gold deposit

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

Production Status: None

Site Status: Probably inactive

Workings/exploration:

In the early 1900's the prospect area was explored by tunnels, trenches, and pits. Battle Mountain Exploration Company evaluated the area in the late 1980s and carried out detailed mapping and sampling programs. Their exploration also included drilling 484 auger holes and 59 diamond drill holes, 7,275 feet of trenching, and magnetic and VLF-EM surveys.

Production notes:

Reserves:

The resource is estimated at 4.8 million tons grading 0.042 ounce of gold per ton within 175 feet of the surface (Ellis and Harris, 1989).

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Atwood, 1909; Atwood, 1911; Smith, 1932; Webber and others, 1946; Wedow and others, 1952; Berg and Cobb, 1967; Cobb, 1972 (MF433); MacKevett and Holloway, 1977; Peterson and others, 1982; Angeloni and others, 1985; Wilson and others, 1988; Ellis and Harris, 1989; Wilson and others, 1995.

Primary reference: Ellis and Harris, 1989

Reporter(s): S.H. Pilcher

Last report date: 12/23/00

Site name(s): PMRGX-7

Site type: Occurrence

ARDF no.: PM097

Latitude: 55.312 **Quadrangle:** PM B-2

Longitude: 160.460

Location description and accuracy:

This map site, which represents an area of four rock geochemical samples, is at an elevation of about 700 feet, on a broad ridge on western Popof Island approximately 1.25 miles northwest of the head of Red Cove. The site is at the approximate center of the area, in the SE1/4 of sec. 21, T. 56 S., R. 73 W., of the Seward Meridian. The site is referred referred to as PMRGX-7 in Wilson and others (1988, locality 56). The location is accurate to within 1,200 feet.

Commodities:

Main: Cu

Other: As, Pb, Sb

Ore minerals:

Gangue minerals:

Geologic description:

Four rock samples of altered basalt collected in this area by the U.S. Geological Survey in the mid-1980s contained anomalous values of arsenic, antimony, copper, and lead (Wilson and others, 1988). The basalt is part of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995).

Alteration:

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Rock samples 85ACe225-227 and 85AWs299 collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in antimony, arsenic, copper, and lead (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/23/01

Site name(s): Vent

Site type: Occurrence

ARDF no.: PM098

Latitude: 55.31 **Quadrangle:** PM B-2

Longitude: 160.45

Location description and accuracy:

This occurrence is located on Popof Island approximately 1 mile north of Red Cove and 0.75 mile west of the lagoon at the head of the cove. The location is accurate to within 1,200 feet.

Commodities:

Main: Au

Other: As, Hg

Ore minerals: Pyrite

Gangue minerals:

Geologic description:

At this site two dome-shaped bodies of porphyritic, pyrite-bearing, andesite crop out in an area mapped as Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). The domes exhibit sheeted jointing and are accompanied by radiating dikes. Ellis (1988) suggests that they occur on the side of a vent complex. Of 12 rock samples, only one contained gold (0.44 ppm). The sample also contained 202 ppm arsenic, and 0.88 ppm mercury. Most of the samples contained anomalous mercury. A few pan samples contained weakly anomalous gold (0.11 to 0.38 ppm) and mercury (0.195 to 1.35 ppm).

Alteration:

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1988 Battle Mountain Exploration Company examined the occurrence and collected 12 rock and 12 pan samples. Only one sample contained detectable gold (0.44 ppm), as reported by Ellis (1988).

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Ellis, 1988; Wilson and others, 1995.

Primary reference: Ellis, 1988

Reporter(s): S.H. Pilcher

Last report date: 2/5/00

Site name(s): Ring; Propalof

Site type: Prospect

ARDF no.: PM099

Latitude: 55.3029 **Quadrangle:** PM B-2

Longitude: 160.4662

Location description and accuracy:

This prospect is northwest of Red Cove on Popof Island. The map site is at an elevation of 500 feet, about 0.2 mile east-northeast of the center of sec. 28, T. 56 S., R. 73 W., Seward Meridian. The location is accurate to within 500 feet. This site has been referred to by Ellis and Apel (1990) as the Ring vein and Propalof zone.

Commodities:

Main: Au

Other:

Ore minerals: Gold, pyrite

Gangue minerals: Quartz

Geologic description:

Anomalous gold and arsenic values in rocks and soils define two north-trending parallel zones 500 to 600 feet wide, several thousand feet long, and approximately 600 feet apart. Pyrite mineralization occurs in silicified breccia and fault zones. Gold values in the easternmost deposit (Propalof zone) reach 0.035 ounce per ton, and in the westernmost deposit (Ring vein) they reach 0.037 ounce per ton (Ellis and Apel, 1990). Three drill holes had scattered intervals grading 0.1 to 1.2 ppm gold. At a depth of 160 feet, a drill hole on the Propalof zone cut 109 feet grading 0.28 ppm gold (includes 11 feet grading 0.035 ounce per ton) in silicified and quartz-veined rock. The rocks at the prospect are part of the Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995).

Alteration:

Silicification.

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold vein

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

Production Status: None

Site Status: Inactive

Workings/exploration:

In 1990 Battle Mountain Exploration Company mapped the prospect, collected rock, soil, and power auger samples, cut three trenches for a total of 1,420 feet, and drilled three core holes for a total of 1,211 feet. One drill hole intersected 11 feet grading as high as 0.035 ounce of gold per ton.

Production notes:

Reserves:

Additional comments:

This prospect is located on land patented by, or conveyed to, the Aleut Corporation.

References:

Ellis and Apel, 1990; Wilson and others, 1995.

Primary reference: Ellis and Apel, 1990

Reporter(s): S.H. Pilcher

Last report date: 1/28/01

Site name(s): Rhodo

Site type: Prospect

ARDF no.: PM100

Latitude: 55.2903 **Quadrangle:** PM B-2

Longitude: 160.4693

Location description and accuracy:

This prospect is at an elevation of about 300 feet, on a bluff overlooking Popov Strait west of Red Cove (Wilson and others, 1988, locality 45). The map site is about 0.3 mile south of hill 545, in sec. 33, T. 56 S., R. 73 W., of the Seward Meridian. The location is accurate to within 500 feet.

Commodities:

Main: Ag, Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Chalcopyrite, galena, gold, pyrite, sphalerite

Gangue minerals: Calcite, quartz, rhodonite, siderite

Geologic description:

The Rhodo vein system, exposed over a 400-foot vertical extent, cuts andesite of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). The system is 4 to 5 feet thick, and consists of quartz-carbonate veins containing chalcopyrite, galena, sphalerite, and pyrite. The veins are generally fine grained with very few vugs or open-growth features. The veins are unique for this area in containing the carbonate gangue minerals calcite, rhodonite, and siderite. There may be a vertical zonation marked by increased base metals at lower elevations (Peterson and others, 1982).

Eight channel samples contained as much as 0.13 ppm gold, 1.3 ppm silver, 290 ppm copper, 1,830 ppm lead, 198 ppm zinc, 310 ppm arsenic, and 0.45 ppm mercury. Six grab samples contained as much as 5.46 ppm gold, 108 ppm silver, 2,200 ppm copper, 7.88 percent lead, 8.4 percent zinc, 140 ppm arsenic, and 1.5 ppm mercury (Peterson and others, 1982).

Alteration:

The wall rocks exhibit strong carbonate alteration accompanied by pyrite.

Age of mineralization:

Eocene or younger.

Deposit model:
Epithermal gold vein, 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:
UNC Teton Exploration Drilling Company collected 14 samples of this deposit. Their channel samples contained as much as 0.13 ppm gold and 1.3 ppm silver; their grab samples contained as much as 5.46 ppm gold, 108 ppm silver, 2,200 ppm copper, 7.88 percent lead, 8.4 percent zinc, 140 ppm arsenic, and 1.5 ppm mercury. Earlier workers drove a short adit on the prospect (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:
The site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Peterson and others, 1982; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/16/01

Site name(s): Brown Zinc; Suzy

Site type: Prospect

ARDF no.: PM101

Latitude: 55.291 **Quadrangle:** PM B-2

Longitude: 160.467

Location description and accuracy:

This prospect is located on western Popof Island on sea cliffs 100 feet above sea level approximately 1.5 miles west of Red Cove (Christie, 1974, color anomaly 91?; MacKevett and Holloway, 1977, locality 11; Wilson and others, 1988, locality 11). The map site is due south of hill 545. The location is accurate to within 1,000 feet.

Commodities:

Main: Ag, Au

Other: Cu, Pb, Zn

Ore minerals: Chalcopyrite, galena, gold, pyrite, sphalerite

Gangue minerals: Calcite, quartz

Geologic description:

The Suzy prospect is in volcanic rocks belonging to the Popof volcanic rocks of late Eocene to early Oligocene age (Wilson and others, 1995). A 130-foot adit and 18-foot drift are evidence of work probably done in the early 1900's.

The deposit was mapped and sampled by UNC Teton Exploration Drilling Company in 1982 (Peterson and others, 1982), and by Battle Mountain Exploration Company in 1986. It consists of a system of veins that strikes N 7 E and dips steeply to the northwest. It has a 200-foot vertical extent and a possible strike length of 700 feet. The vein system is 6 to 15 feet in width and is made up of several subparallel quartz-calcite veins. Pyrite, sphalerite, galena, and chalcopyrite are present, especially along the vein margins.

Channel samples collected from surface exposures by UNC Teton Exploration Drilling Company assayed as much as 0.624 ounce of gold and 1.63 ounces of silver per ton and 13.8 percent combined copper, lead, and zinc Three continuous chip samples collected by Battle Mountain Exploration Company over 6 feet of vein averaged 0.212 ounce of gold per ton. At the end of the drift, 6 feet of sulfide-rich rock assayed only 0.04 ounce of gold per ton. A 2-foot channel sample collected at the end of the drift by UNC Teton Exploration Drilling, Inc. assayed 410 ppm copper, 0.85 percent lead, 14,100 ppm zinc, 0.06 ppm gold, and 4.6 ppm silver. There is no apparent relationship between gold values and sulfide content.

Alteration:
The country rock is propylitically altered.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold vein, Polymetallic vein (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:
Early workings on this prospect included a 130-foot adit and an 18-foot drift. UNC Teton Exploration Drilling Company sampled and mapped the deposit in 1982. Battle Mountain Exploration Company sampled it in 1986. The U.S. Geological Survey sampled the prospect in the 1980s. A dump sample 82AWs50, assayed 3 ppm silver, 300 ppm arsenic, 100 ppm copper, 10,000 ppm lead, and 4,700 ppm zinc.

Production notes:

Reserves:

Additional comments:
This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Atwood, 1911; Webber and others, 1946; U.S. Bureau of Mines, 1973; Christie, 1974; MacKevett and Holloway, 1977; Peterson and others, 1982; Angeloni and others, 1985; Pilcher, 1986; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/3/01

Site name(s): West Lodes; Sowhat

Site type: Occurrence

ARDF no.: PM102

Latitude: 55.2932 **Quadrangle:** PM B-2

Longitude: 160.4540

Location description and accuracy:

This occurrence is in sea cliffs above the west shore of Red Cove on Popof Island (Christie 1974, color anomaly 91; Wilson and others, 1988, locality 46). The map site is in sec. 34, T. 56 S., R. 73 W., of the Seward Meridian. The location is accurate to within 500 feet.

Commodities:

Main: Ag, Au

Other: Cu, Pb, Zn

Ore minerals: Chalcopyrite, galena, pyrite, sphalerite

Gangue minerals: Calcite, quartz

Geologic description:

This occurrence consists of two parallel quartz veins that strike northeast and cut andesite? belonging to the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). Vein I is 1 to 4 feet thick and is intermittently exposed over a strike length of 800 to 1,000 feet (Wilson and others, 1988). Vein II is as much as 4.6 feet thick and has a strike length of 800 feet. The veins project into the ocean to the south and appear to pinch out to the north. The best mineralization consists of high-grade pods of banded sphalerite and galena, accompanied by chalcopyrite and pyrite, in a gangue of calcite and quartz. Grab samples contain as much as 1.18 ppm gold, 78.2 ppm silver, and 9.9 percent zinc (Peterson and others, 1982).

Alteration:

The veins exhibit an alteration halo of unknown type.

Age of mineralization:

Eocene or younger.

Deposit model:

Epithermal gold veins, 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:
In the past the occurrence was located on two unpatented claims (Wilson and others, 1988). UNC Teton Exploration Drilling Conpany mapped and sampled the site in 1982. Grab samples were reported to contain as much as 1.18 ppm gold, 78.2 ppm silver, and 9.9 percent zinc (Peterson and others, 1982).

Production notes:

Reserves:

Additional comments:
This prospect is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:
Webber and others, 1946; Christie, 1974; Peterson and others, 1982; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/17/01

Site name(s): PMRGX-6

Site type: Occurrence

ARDF no.: PM103

Latitude: 55.293 **Quadrangle:** PM B-2

Longitude: 160.426

Location description and accuracy:
This occurrence is located on the east shore of Red Cove on Popof Island. It is referred to as PMRGX-6 in Wilson and others (1988, locality 55). The location is accurate to within 1,000 feet.

Commodities:

Main: Au

Other: As, Pb, Sb

Ore minerals:

Gangue minerals:

Geologic description:
Rocks at this site are fresh to highly altered volcanic breccias and andesite flows (Wilson and others, 1988) mapped as Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). Rock samples are anomalous in arsenic, antimony, gold, and lead (Wilson and others, 1988).

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:
Rock samples 83AAi57-61and 85AAi101-106 collected by the U.S. Geological Survey

in the mid-1980s are anomalous in arsenic, antimony, gold, and lead (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

The site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/23/01

Site name(s): Unnamed (north of Simeon Bight)

Site type: Prospect

ARDF no.: PM104

Latitude: 55.294 **Quadrangle:** PM B-3

Longitude: 160.409

Location description and accuracy:

This prospect is at an elevation of 300 feet on western Popof Island approximately 0.3 mile north of the west part of Simeon Bight. The map site is in the northeast corner of sec. 35, T. 56 S., R. 73 W., of the Seward Meridian. The location is accurate.

Commodities:

Main: Au

Other: As, Cu, Hg, Pb, Zn

Ore minerals: Gold, pyrite

Gangue minerals:

Geologic description:

The rocks at this site are basaltic tuffs and flows interbedded with ash and crystal-lithic tuffs of the Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). Two distinct areas of alteration are present. The westernmost is a north-trending 5,000- by 1,000-foot zone of silicification. Approximately 1,000 feet to the east is a 2,000- by 2,000-foot zone of mixed silicified and argillized rock (Ellis and Apel, 1989). Pyrite is the only sulfide reported.

Grid sampling of soil and rocks revealed only scattered, low-order gold anomalies; however, widespread arsenic and mercury anomalies were outlined. The prospect was explored by 5 drill holes. Three were drilled on a gold-arsenic anomaly just southwest of a 4,000-gamma magnetic low. This drilling penetrated rock carrying scattered gold values of 20 to 200 ppb and localized base metal values of 100 to 2,500 ppm copper, 100 to 800 ppm lead, and 200 to 700 ppm zinc (Ellis and Apel, 1989). All five drill holes cut strong to pervasive silicification, argillization, pyritization, and localized solfataric alteration marked by native sulfur.

Alteration:

The volcanic rocks exhibit silicic, argillic and solfataric alteration.

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status:

Workings/exploration:

In 1989 Battle Mountain Exploration Company mapped this prospect, collected 250 rock and 500 soil samples, conducted VLF-EM surveys, power-augered 97 holes, and drilled five core holes for a total of 2,795 feet (Ellis and Apel, 1989; 1990). Fifty-five rock samples were taken in 1990. Only scattered low-level gold values were found.

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Ellis and Apel, 1989; Ellis and Apel, 1990; Wilson and others, 1995.

Primary reference: Ellis and Apel, 1989

Reporter(s): S.H. Pilcher

Last report date: 1/31/01

Site name(s): PMRGX-6 (Simeon Bight)

Site type: Occurrence

ARDF no.: PM105

Latitude: 55.284 **Quadrangle:** PM B-2

Longitude: 160.385

Location description and accuracy:
This site is located on western Popof Island on the east shore of Simeon Bight. It is referred to as PMRGX-6 in Wilson and others (1988). The location is accurate to within 1,200 feet.

Commodities:

Main: Au

Other: As, Pb, Sb

Ore minerals:

Gangue minerals:

Geologic description:
Rocks at this site are fresh to highly altered volcanic breccias and andesite flows. They are mapped as Eocene to Oligocene Popof volcanic rocks (Wilson and others, 1995). Rock samples collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in antimony, arsenic, gold, and lead (Wilson and others, 1988).

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:
Rock samples collected by the U.S. Geological Survey in the mid-1980s were reported

to be anomalous in antimony, arsenic, gold, and lead (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is located on land patented by, or interim-conveyed to, the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1987; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/31/01

Site name(s): Scarp

Site type: Occurrence

ARDF no.: PM106

Latitude: 55.2587 **Quadrangle:** PM B-2

Longitude: 160.3421

Location description and accuracy:

This site is on a coastal bluff at an elevation of about 300 feet, approximately 1 mile north-northwest of Popof Head on the southern tip of Popof Island (Wilson and others, 1988, locality 44). The location is accurate to within 500 feet.

Commodities:

Main: Ag, Au

Other: As, Hg

Ore minerals: Gold, marcasite, pyrite

Gangue minerals: Amethyst, quartz

Geologic description:

This occurrence is a 2,000- by 2,500- foot alteration zone in an area of slumped blocks of tuffs and flows. The rocks are part of the late Eocene to early Oligocene Popof volcanic rocks (Wilson and others, 1995). Mineralization consists of weakly auriferous quartz-marcasite-amethyst veins localized mostly along the margins of a slump block. The veins average 1.5 feet in width and can be traced for as much as 1,200 feet on strike. The veins generally are discontinuous, however, and do not seem to form a well -defined system (Peterson and others, 1982). The wall rock marginal to the veins has been replaced by silica and pyrite. Argillic alteration is widespread throughout the area. Some of the country rocks have been completely replaced by clay and some by pervasive chlorite and pyrite. The mineralization may be controlled by a north-northwest-trending fracture zone that can be traced for approximately 2 miles.

Fifteen grab samples contained as much as 0.975 ppm gold, 13 ppm silver, 66 ppm copper, 45 ppm lead, 175 ppm zinc, 1,000 ppm or more arsenic, and 4.75 ppm mercury (Peterson and others, 1982). Two samples collected by Battle Mountain Exploration Company in 1986 contained 0.032 and 0.038 ounce of gold per ton and as much as 4.7 ppm mercury.

Alteration:

The rocks at this occurrence exhibit strong argillization and local silicification.

Age of mineralization:
Eocene or younger.

Deposit model:
Epithermal gold veins

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

Production Status: None

Site Status: Inactive

Workings/exploration:
In 1982 UNC Teton Exploration Drilling Company mapped and sampled this occurrence. The samples contained as much as 0.975 ppm gold and 13 ppm silver.

Production notes:

Reserves:

Additional comments:
This site is on land selected by the Aleut Corporation.

References:
Peterson and others, 1982; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Peterson and others, 1982

Reporter(s): S.H. Pilcher

Last report date: 1/16/01

Site name(s): PMRGX-9

Site type: Occurrence

ARDF no.: PM107

Latitude: 55.393 **Quadrangle:** PM B-1

Longitude: 160.152

Location description and accuracy:
This site is located on the southeast coast of Korovin Island just north of Cape Devine. It is referred to as PMRGX-9 in Wilson and others (1988, locality 58). The location is accurate.

Commodities:

Main: Au, Cu

Other: As, Pb

Ore minerals: Pyrite

Gangue minerals: Quartz

Geologic description:
At this site altered pyritized dacite(?) intrudes sedimentary rocks of the Paleocene to Eocene Tolstoi Formation (Wilson and others, 1995). Andesite sills and 3-inch-wide quartz veins were also reported in the area (Wilson and others, 1988). Seven samples collected by the U.S. Geological Survey in the mid-1980's were reported to be anomalous in arsenic, copper, gold, and lead (Wilson and others, 1988).

Alteration:
Pyritization.

Age of mineralization:
Paleocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Rock samples 82ASh6, 82AWs7-7a, 82Ayb1a-1c, and 82ADt43 were reported to be anomalous in arsenic, copper, gold, and lead (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is is located on land selected by the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1988; Wilson and others, 1995.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/23/01

Site name(s): Andronica

Site type: Occurrence

ARDF no.: PM108

Latitude: 55.331 **Quadrangle:** PM B-1

Longitude: 160.079

Location description and accuracy:

This occurrence is at an elevation of about 1,100 feet on western Adronica Island. The map site is at the midpoint of the boundary between R. 70 and 71 W, T. 56 S., Seward Meridian, (Christie 1974, color anomaly 84; MacKevett and Holloway, 1977, locality 18; Wilson and others, 1988, locality 18). The location site is accurate.

Commodities:

Main: Au, Hg

Other:

Ore minerals: Cinnabar, gold, pyrite

Gangue minerals:

Geologic description:

This occurrence is in rocks mapped as Popof volcanic rocks of late Eocene to early Oligocene age (Wilson and others, 1995). It is marked by a color anomaly measuring about 6,000 feet by 1,000 feet (Christie, 1974). The anomaly is marked by pyritic-argillic alteration.

The rocks include flat-lying flows, tuffs, and volcaniclastic sedimentary rocks (Ellis and Apel, 1989). Moderate pervasive pyritic alteration occurs in several areas. Rock, soil, and pan-concentrate samples outlined 2-square-mile area containing anomalous mercury values. Cinnabar and gold were noted in several pan-concentrate samples. Gold values in the 100-to 500-ppb range are common in the stream-sediment and soil samples. No rock samples contained anomalous gold values. Major north-to north-northwest-trending zones of shearing and faulting may in part, control the mineralization.

Alteration:

Pyritic-argillic alteration has been noted.

Age of mineralization:

Eocene or younger.

Deposit model:

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

Production Status: None

Site Status: Inactive

Workings/exploration:

Battle Mountain Exploration Company explored this area from 1988 to 1989. They mapped, sampled, and prospected along six grid lines, and collected a total of 357 rock, soil, and pan-concentrate samples. They also ran magnetometer and VLF-EM surveys.

Production notes:

Reserves:

Additional comments:

The site is located on land selected by the Aleut Corporation.

References:

Christie, 1974; MacKevett and Holloway, 1977; Wilson and others, 1988; Ellis and Apel, 1989; Wilson and others, 1995.

Primary reference: Ellis and Apel, 1989

Reporter(s): S.H. Pilcher

Last report date: 1/5/01

Site name(s): PMRGX-1

Site type: Occurrence

ARDF no.: PM109

Latitude: 55.101 **Quadrangle:** PM A-1

Longitude: 160.008

Location description and accuracy:

This site is located on Nagai Island at the head of Sanborn Harbor approximately 1.5 miles south of Macks Head. It is referred to as PMRGX-1 in Wilson and others (1988, locality 51).The location is accurate to within 1,200 feet.

Commodities:

Main: Ag, Cu

Other: Sb, Zn

Ore minerals:

Gangue minerals:

Geologic description:

This occcurrence represents a group of geochemical anomalies in the late Cretaceous Shumagin Formation near a contact with the Shumagin batholith (Wilson and others, 1988). Of five samples collected, one is pale-green, fine-grained sulfide-bearing sandstone, one is leucocratic granite(?) of the Shumagin batholith, and three are sandstone and siltstone of the Shumagin Formation. The samples were reported to be anomalous in copper, silver, antimony, and zinc.

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:

Rock samples 84AWs145a-c, 84AWs152, and 84ADt169 collected by the U.S. Geological Survey in the mid-1980s were reported to be anomalous in copper, silver, antimony, and zinc (Wilson and others, 1988).

Production notes:

Reserves:

Additional comments:

This site is located on land selected or patented by, or interim-conveyed to, the Aleut Corporation.

References:

Angeloni and others, 1985; Wilson and others, 1988.

Primary reference: Wilson and others, 1988

Reporter(s): S.H. Pilcher

Last report date: 1/20/01

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