



PROGRESS MAP OF THE GEOLOGY OF ADMIRALTY ISLAND, ALASKA

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RESULTS OF X-RAY SPECTROSCOPIC EXAMINATION OF SULFIDE, OXIDE, AND RARE EARTH MINERAL-BEARING SAMPLES COLLECTED 1957, 1959

Sample No.	Cr	Mn	Co	Ni	Cu	Zn	As	Se	Sr	Y	Zr	Nb	Mo	Sb	Ba	La	Ce	Pr	Nd	Eu	Gd	Th	Remarks
1	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Dark-brown cellular "limonite" veins.
2	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrite in granite-gneiss.
3	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrrhotite, pyrite in calcite veins in schist.
4	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrite, chalcopyrite, galena in adherent-quartz breccia.
5	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite crystals in schist. Pyrite locally contains chalcopyrite.
6	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated sulfide and oxide minerals in altered (serpentinized) ultramafic sill.
7	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite in spongy quartz associated with serpentine.
8	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated magnetite, pyrite, chalcopyrite in brown weathering schist.
9	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Magnetite crystals in gneissic calc-silicate marble.
10	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Chalcopyrite, minor pyrite veins in chert.
11	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite, chalcopyrite veins in calcite-cemented gneiss breccia.
12	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Copper-colored graphitic (?) on shear surfaces of magmatic-hydrothermal rocks.
13	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Sparse pyrite veins in chert.
14	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrite, pyrrhotite in siliceous greenstone or hornblende.
15	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrrhotite, pyrite, minor chalcopyrite in rust weathering siliceous hornblende.
16	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite crystals in bleached, actinolitic greenstone.
17	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite crystals as much as one inch long in black slate, phyllite.
18	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Small pyrite crystals in brecciated chert.
19	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Quartz, pyrite, minor chalcopyrite (?) veins as much as one inch thick in fractured diabase igneous rock.
20	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite and calcite veins, disseminated pyrite in chert pebbles from sheared conglomerate.
21	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite, chalcopyrite in hands as much as 2 inches thick, interbedded with chert in cherty hornblende. Sulfide-rich layers locally contain quartz or chert.
22	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrite in plutonic igneous rock.
23	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrrhotite, pyrite veins in sheared, mafic volcanic rock.
24	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Veinlike, disseminated crystals of pyrite in sheared, serpentinized greenstone.
25	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Heavy mineral concentrate (bromofrom) of garnet-bearing greenstone.
26	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Heavy mineral concentrate (bromofrom) of rare earth-bearing pegmatite.
27	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Do.
28	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Veinlike and disseminated grains of pyrite, chalcopyrite in orange and brown weathering sheared and brecciated hornblende.
29	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrite, pyrrhotite in biotite-rich hornblende.
30	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Veinlike and disseminated grains of pyrite, minor chalcopyrite in schistose, serpentinized greenstone.
31	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite, pyrrhotite, calcite, quartz veins in brecciated, slightly schistose argillite.
32	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Magnetite, pyrrhotite in schistose greenstone.
33	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrrhotite, pyrite, magnetite in porphyritic igneous rock.
34	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrite, pyrrhotite in foliated plutonic rock.
35	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Chalcopyrite, malachite in quartz- and calcite-cemented siliceous limestone breccia.
36	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Sparse malachite (pyrite?) in mafic dikes.
37	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Sparse chalcopyrite, pyrite in schistose greenstone.
38	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Rust-weathering "limonite" gossans in black chert and argillite.
39	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite, minor chalcopyrite in calcite and quartz veins in mica schist.
40	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite- and chalcopyrite-rich pods in amphibolite near contact with plutonic igneous rock.
41	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrrhotite veins in greenstone.
42	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite crystal in gneissic inclusion in large quartz lens in schist.
43	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite, chalcopyrite, quartz veins in rust weathering quartzite-mica schist. Minor secondary copper salts.
44	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite, chalcopyrite, minor pyrrhotite (?) veins in light-brown weathering marble and calcareous gneiss.
45	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrite cubes in dark-brown weathering quartz-feldspar-mica schist.
46	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite, chalcopyrite, malachite in laminated quartzite-mica schist.
47	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrite in quartzite and mica schist.
48	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Pyrite crystals, veins in brown weathering quartzite or chert, phyllite, schist.
49	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Crystals of niobian rutile as much as 4 inches long in breccia, marble, and gneiss.
50	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Bright-green mica (mariposite), serpentine veins in foliated marble. Marble contains white mica, quartz pyrite.
51	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Bright-green mica (mariposite) interlayered with serpentine, calcite. Associated with opacification.
52	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrite in feldspar-mica-hornblende schist.
53	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Sparse chalcopyrite, pyrite in schistose greenstone.
54	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated magnetite in mafic igneous rock.
55	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	t	Disseminated pyrite, minor magnetite, pyrrhotite (?) in greenstone.

M, major constituent; T, trace constituent; L, minor trace constituent; Q, quantity of mineral is questionable. Iron is major constituent in all samples. X-ray analyses by H. C. Berg.