

MINERAL OCCURRENCES AND INDICATORS IN THE BAIRD MOUNTAINS QUADRANGLE, NORTHWESTERN ALASKA

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INTRODUCTION

This compilation of mineral occurrences and indicators is a product of the Alaskan Mineral Resource Assessment Program (AMRAP) Level III mapping project within the Baird Mountains 1' by 3' quadrangle during the 1983-86 field seasons. This report consists of a sample-locality map and table that summarizes previously known mineral occurrences and describes new occurrences and mineralization indicators located during the AMRAP field program. Sample locations on the map are numbered in two groups (1-194 and 195-290), both increasing from upper left to lower right, by 1:63,360-scale quadrangle (D-6, D-5, D-4 ... D-1, C-6, C-5 ... C-1 ...). Map numbers 1-194 show locations of sulfide and oxide minerals, barite, fluorite, and copper carbonate and copper oxide minerals. The numbers also include locations of rock samples described in the field as gossans—bleached, altered-appearing, or heavily iron-stained rocks that have high geochemical values in one or more elements (greater than one standard deviation above background). Most macroscopically visible mineral occurrences are noted, including previously published occurrences (P), minerals identified in hand sample (H), and minerals found in panned concentrates of stream sediments and in leached residues of carbonate rocks (M). Trace to minor amounts of iron sulfides in greenstones and metabasalts are not tabulated, since these are a normal accessory phase of mafic lithologies and not necessarily indicative of mineralization. Map numbers 195-290 show the locations of placer gold deposits (G), as well as creeks (C), and rocks or quartz boulders (F) noted in the field to be distinctly red or iron stained. The accompanying table includes the longitude, latitude, and 15-minute quadrangle for each sample site, as well as sample numbers, sample types, name, if any, and short geologic descriptions. Geologic descriptions are quoted from individual field geologists' notes. Where available, the mineralogy, selected geochemical values, and published references for each occurrence are also listed. Sample numbers in the table have been shortened by omitting the "8" that precedes all samples collected in the years 1983-86 (86MZ024 is listed as 6MZ024).

BACKGROUND

The Baird Mountains quadrangle has historically been uninhabited and is geographically isolated. It lies east and

south of the Noatak River and north of the Kobuk River, which are the main transportation routes from the coast into the western Brooks Range. During and after the Nome gold rush at the turn of the century, a few prospectors established temporary (one to two winters) camps along the Kobuk river, and some ventured up the lower portions of the Squirrel River. Gold was discovered in the Klery Creek area in 1909 and was mined intermittently until the early 1940's. The most consistent gold production was from Klery Creek itself, where hand-panning was supplemented with dragline, hydraulic, and dredge production (Cobb, 1975). Most of the Baird Mountains, however, were apparently never prospected.

A 1945 report by Eskil Anderson of the Territory of Alaska Department of Mines (unpub. data) reports a possible cassiterite discovery by prospector Peter Woods in the Eli River area in 1935. Letters in 1955 from lawyers to the heirs of the claim suggest that the occurrence may have been located in the Noatak quadrangle west of the area of this report. Tin minerals have not been identified in the AMRAP program anywhere in the Baird Mountains quadrangle. Bear Creek Mining Company conducted very broad-scale regional reconnaissance stream-sediment sampling and mapping in the western Brooks Range in the late 1950's and early 1960's. Their followup work led to staking and drilling of the Omar claims (B-4 and C-4 quadrangles) in the early to middle 1960's. These claims were subsequently dropped. There was renewed activity on the Timber Creek gold placers in the mid-1980's, but it is not known if this was development work or mining/production.

In 1978, most of the quadrangle was incorporated by Presidential proclamation into the Noatak National Monument and Kobuk Valley National Monument, portions of which are designated wilderness areas, and all of which are closed to mineral entry. The "D-1" status lands of the Squirrel River basin are presently administered by the Bureau of Land Management and are under consideration for inclusion into the National Park system as a designated Wild and Scenic River. Some Native-owned lands are located in the southern and southeastern parts of the quadrangle.

In summary, the geology of the Baird Mountains quadrangle has never been effectively evaluated by prospectors, government agencies, or mineral exploration companies. In part to counteract this long history of neglect, this report in-

cludes all mineral occurrences identified during mapping that could possibly be related to mineralization. The number of occurrences and indicators found during the course of a reconnaissance geologic mapping and drainage-sampling program suggests that the absence of previously known mineral prospects or mines in the quadrangle is a function of its exploration history and does not reflect its true mineral resource potential.

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Table 1.--Mineral occurrences and indicators in the Baird Mountains quadrangle, northwestern Alaska

{Element values reported in parts per million (ppm) unless otherwise noted. Analyses of As, Bi, Cd, Sb, and Zn (except where noted) are by atomic absorption; all other analyses are by semi-quantitative emission spectroscopy. Ag, silver; As, arsenic; Au, gold; B, boron; Ba, barium; Be, beryllium; Bi, bismuth; Cd, cadmium; Co, cobalt; Cr, chromium; Cu, copper; Fe, iron; La, lanthanum; Mg, magnesium; Mn, manganese; Mo, molybdenum; Nb, niobium; Ni, nickel; Pb, lead; Sb, antimony; Sc, scandium; Sr, strontium; Ti, titanium; V, vanadium; Y, yttrium; Zn, zinc; Zr, zirconium; >, greater than value shown; <, less than value shown; ≥, greater than or equal to value shown; %, percent; tr, trace; oz, Troy ounces; quad is 1:63,360}

Map No.	Quad	Latitude	Longitude	Sample ¹ No.	Type ²	Description	Source ³
1	D-6	67°51'09"	161°55'27"	6MZ007	H	Minor chalcopyrite and malachite in basalt rubble, with boxworks.	
2	D-6	67°48'44"	161°57'47"	Uvgoon Cr	P	U.S. Bureau of Mines stream-sediment sample BM27, near diorite and pyritic serpentinite; 1400 Cu, 2075 Zn.	D
3	D-6	67°47'03"	161°54'22"	6SK020	H	Pyritic nodules as large as 4 cm in black mudstone/sandstone.	
4	D-6	67°53'14"	161°45'58"	4JS026A-D 4PFO70R	H	A 30 by 40 m area of red-orange stained pillow basalt. 026A: pyrite in vesicles and matrix; 120 Zn, 1 Ag, 50 Co, 300 Cu, 1000 Mn. 026B: heavy stain; 150 Cu, 1000 Mn. 026C: ochre; 110 Zn, 200 Cu. 026D: pyrite-epidote in vesicles; 20 As, 0.5 Ag, 1500 Mn. 4PFO70R: chalcopyrite-pyrite in basalt; 2 Ag, 50 Co, 500 Cu, 50 Sc, 500 V. Magnetite in stream sediment.	Z
5	D-6	67°58'20"	161°35'48"	5BT084A	H	Red-stained black siliceous shale/chert with pyrite; 4 Sb, 730 Zn, 50 Co, 150 Cu, 7 Mo, 5000 Mn, 300 Ni.	Z
6	D-6	67°52'00"	161°43'12"	4PFO72R	H	Mafic rock with quartz phenocrysts and pyrite in red-stained zone; 380 Zn, 150 Cu, 5000 Mn, 700 V.	Z
7	D-6	67°57'27"	161°39'14"	6MZ024B	H	Light grey dolostone with scattered pyrite.	
8	D-6	67°57'18"	161°39'48"	6MZ026B	H	Grey limestone with minor pyrite at contact with intrusive and basalt.	
9	D-6	67°48'02"	161°44'20"	5SK100	H	Pyritic quartzite.	Z
10	D-6	67°50'17"	161°38'50"	6MZ018	H	Black shale with local chert contains breccia with carbonate and pyrite.	
11	D-6	67°48'31"	161°35'15"	6SK066	H	Boulders with chalcopyrite-pyrite, orange and yellow stain in black, grey, and green shale.	
12	D-6	67°47'57"	161°36'44"	4JS005A-C	H	A: diagenetic barite blebs in pale green and maroon shale. B: quartz with clay and pyrite in shale; 3 Ag, >5000 Ba, 200 Cu, 1500 Mn. C: clay-pyrite (2-5 mm)-quartz-sphalerite(?) in siliceous shales; >5000 Ba, 300 Zn.	Z
13	D-6	67°48'45"	161°40'45"	4SK033A	H	Black shale with white coating, quartz and iron oxide on partings; 60 As, 170 Zn, 5 Ag, 1.5 Be, 300 Cr, 70 Cu, 30 Mo, 70 Ni.	Z

14	D-6	67°52'55"	161°37'07"	6SK035	H	Pyrite in quartzose sandstone.	
15	D-6	67°54'01"	161°36'37"	4SK059A	P	Limonite in cherty limestone; 360 As, 3.9 Cd, 1.5 Ag, 20% Fe, 1000 Zn.	K, Z
16	D-5	67°45'44"	161°22'58"	4JS016C	H	Orange weathering siliceous shale with pyrite and quartz veins; 0.5 Ag, >5000 Ba.	Z
17	D-5	67°50'28"	161°17'43"	4JS018C	H	Ironstone nodules in green and purple fine-grained sandstone; 270 Zn, 70 Co, 15% Fe, 1500 Mn, 150 Pb, 70 Y.	Z
18	D-5	67°47'20"	161°16'15"	4JS015C	H	Trace pyrite and moderate iron oxide in grey chert; 1000 Ba, 3% Fe.	Z
19	D-5	67°47'18"	161°12'24"	4PF045R	H	Red- and yellow-stained creek boulder of silicified shale(?) cut by quartz veins with pyrite and grey submetallic mineral; 45 As, 70 B, 1000 Ba, 100 Cr, 500 Zr.	Z
20	D-5	67°47'57"	161°17'22"	4RB049	H	Pyrite-bornite-quartz in phyllite.	
21	D-5	67°47'38"	161°13'24"	4PF046	H	One-meter-wide stained quartz vein above 5-cm-wide zone of yellow-red-grey gouge in phyllite and quartz-veined sandstone; 45 As, 15 Co, 50 Ni, 20 Pb, 55 Zn (by emission spectroscopy).	Z
22	D-5	67°47'12"	161°17'15"	4JS014B	P	Carbonaceous shale with heavy orange iron oxide; 3 Ag, 100 B, 200 Cr, 10 Mo, 200 V.	K, Z
23	D-5	67°51'33"	161°14'30"	4JS021A	H	Very fine-grained dark grey hornfels(?) with dark red-brown stain; 100 Zn, 1500 Ba, 30 Co, 200 Cr, 150 Cu, 10% Fe, 1500 Mn, 30 Sc, 700 V.	Z
24	D-4	67°50'29"	160°51'04"	5PF178A	H	Green mica-quartz sandstone with trace to as much as 10% pyrite; 150 B, 50 Co, 150 Cr, 5% Fe, 50 La, 20 Sc, 150 V, 50 Y.	Z
25	D-4	67°50'04"	160°48'58"	5JS122A	H	Pyrite cubes (1-3%) in sandstone with quartz pressure shadows; 65 Zn, 150 B, 500 Be, 50 Co, 100 Cr, 10% Fe, 30 La, 2000 Mn, 50 Ni, 20 Sc, 0.5% Ti.	Z
26	D-4	67°52'40"	160°33'59"	Lena Cr	P	Barite in stream float.	U
27	D-4	67°48'52"	160°43'16"	5MF118	H	Hematite and chlorite irregularly stained quartz in 1.5-m-thick zone in grey phyllite; 10 As, 4 Sb, 150 B, 1.5 Be, 100 Cr, 70 Ni, 50 Pb, 30 Sc, 150 V.	Z
28	D-3	67°49'51"	160°15'53"	5MP083	H	Orange-white-red 2-m-wide gossan and bleached vein; 100 As, 8 Sb, 30 Pb, 100 V.	Z
29	D-3	67°47'29"	160°15'36"	5JS092A	H	Quartz vein with iron oxide in grey phyllite; 60 As, 1 Be, 100 Cr, 5% Fe, 50 Ni, 10 Sc, 50 Y, 100 Zr.	Z
30	D-2	67°48'54"	159°51'12"	4PF310	H	Bright red pyritic quartz boulders with some malachite-azurite in red-stained creek, draining schist/phyllite; 1 Be, 100 Cu.	Z
31	D-2	67°53'00"	159°59'10"	3SK106B	H	Orange-yellow stain on 3 m pod of quartz with chalcopyrite; 2 Bi, 4 Sb, 3 Ag, 20 Co, 700 Cu.	Z
32	D-2	67°49'00"	159°59'12"	6SK209	H	Chalcopyrite-pyrite-malachite at quartz vein contact with tan marble.	

Table 1.--Mineral occurrences and indicators in the Baird Mountains quadrangle, northwestern Alaska--Continued

Map No.	Quad	Latitude	Longitude	Sample ¹ No.	Type ²	Description	Source ³
33	D-2	67°52'10"	159°46'36"	Chevron	P	Chalcopyrite-pyrite-(malachite) in quartz lens 18 by 60 m in phyllite; 0.21% Cu to 0.53% Cu in selected samples.	C3,D
34	D-2	67°46'47"	159°36'19"	Hub-n	P	Stream sediment samples draining copper-stained carbonate rocks; 1.5 Ag, 1.9 Ag.	C3,D
35	D-2	67°46'12"	159°36'43"	Hub	P	Six-inch quartz-calcite-chalcopyrite-pyrite veins in dolostone; 1.1% Cu, 0.9-2.2 Ag, 5 ppb Au in selected samples.	D
36	D-2	67°45'04"	159°57'15"	6MZ100	H	Color banded grey and green siliceous schist with pyrite.	
37	D-2	67°54'44"	159°40'26"	Copper Cr	P	Lead, zinc, and copper-bearing quartz veins; no minerals listed in U.S. Bureau of Mines report.	U
38	D-1	67°51'58"	159°18'43"	3EK018J	H	Copper-stained quartz vein with shaly material in dolostone; 80 Zn, 3 Ag, 2000 Cu, 30 Pb.	Z
39	D-1	67°51'45"	159°14'48"	6SK129	H	Pyrite cubes (2-3 mm) in green phyllite interlayered with maroon phyllite.	
40	D-1	67°52'23"	159°07'55"	3SK126A	H	Fluorite disseminated in rhyolite.	
41	D-1	67°49'34"	159°04'35"	5PF187A-E	H	Five samples along 120 m outcrop of black shale with bleached zones and stained quartz veins. A: bleached rock with pyrite-chalcopyrite; 20 As, 5.6 Cd, 300 Zn, 1500 Mn, 10 Mo, 7 Sc. B: white precipitate on black shale; 30 As, 2 Sb, 1500 Ba, 30 Mo. C: iron-stained quartz-calcite veins in black shale; 1500 Ba, 1000 Mn, 2000 Sr. D: fine-grained grey calcareous rock with pyrite-chalcopyrite stringers; 10 As, 2.1 Cd, 4 Sb, 130 Zn, 200 B, 3000 Ba, 2000 Mn. E: pyrite concretions and diagenetic crystals in black shale.	Z
42	D-1	67°49'60"	159°20'05"	4RB209	H	Black shale with iron oxide staining; 40 As, 1.1 Cd, 6 Sb, 110 Zn, 0.7 Ag, 1500 Ba, 50 Mo, 70 Ni.	Z
43	D-1	67°45'54"	159°25'47"	4PF293R	H	Cobble of iron-stained quartz with malachite-azurite; 70 Cu, tr Ag.	Z
44	D-1	67°45'43"	159°07'40"	5SK312	H	Pyrite in matrix of quartz pebble conglomerate with shale chips.	
45	D-1	67°49'27"	159°03'45"	5PF188A	H	Red-stained zone in pebble conglomerate; 20 As, 100 B, 2000 Ba, 2% Fe, 200 V.	Z
46	D-1	67°46'53"	159°07'42"	5JS071ACD	H	Metasediments interlayered over 30 m. A: black phyllite; 50 As, 14 Sb, 280 Zn, 2 Ag, 1500 Ba, 300 Cu, 20 Mo, 3000 V. C: ironstone concretions in limestone; 10 As, 1000 Ba, 50 Co, 7% Fe, 3000 Mn. D: iron oxide-stained calcite vein boxwork; 7% Fe, 2000 Mn, 3000 Sr.	Z

47	C-6	67°43'56"	161°43'51"	Ahus 4RB103A-F 4JS030BD	H	Black shales with stained and bleached zones and lenses of massive botryoidal pyrite-marcasite; pyritic samples contain as much as 60 As, 2 Sb, 100 Zn, 5 Ag, 700 Ba, 20 Co, 200 Cu, 20% Fe, 30 Mo, 100 Ni, 50 Pb.	K, Z
48	C-6	67°44'35"	161°58'41"	6SK010	H	Pyrite in dark siltstone.	
49	C-6	67°42'45"	161°41'03"	4EK063 4EK062B	P	Sample 63: vein quartz in phyllite with chalcopyrite and malachite; 10 As, 75 Zn, 0.7 Ag, 1500 Cu. 62B: red-stained quartz boulder in grey phyllite; 20 As, 2 Sb, 1 Ag.	K, Z
50	C-6	67°40'45"	161°46'00"	4SK089A	P	Ironstone concretions in black phyllite; 50 As, 10% Fe, 1500 Mn.	K, Z
51	C-6	67°39'48"	161°34'23"	5SK094B	H	Yellow-brown stained zone with quartz-pyrite vein network in green phyllite; 110 Zn, 200 Cr, 5% Fe, 70 La, 7 Mo, 50 Pb, 0.5% Ti.	Z
52	C-6	67°40'37"	161°34'57"	4PF089 5PF162A	H	Sample 89: boulders of red-stained quartz with pyrite in phyllite; 10 As, 4.4 Cd, 470 Zn. 162A: quartz cobble with 20% chalcopyrite bands; 130 As, 2 Sb, 50 Ag, 150 Co, >20,000 Cu, 10% Fe, 500 Ni.	Z
53	C-6	67°40'23"	161°35'04"	5PF164A 5PF165B 5PF166B	H	Sample 164A: rubble of red-stained quartz boulders with pyrite; 210 As, 18 Sb, 0.7 Ag, 50 Co, 7% Fe, 100 Pb. 165B: light yellow powder on orange quartz veins in phyllite; 10 As, 6 Sb, 85 Zn, tr Ag, 150 B, 1.5 Be, 100 Cr, 300 Cu, tr Mo, 50 Ni, 50 Pb, 200 V, 150 Zr. 166B: pyrite in quartz band in grey phyllite; 70 As, 2 Sb, tr Ag, 500 Co, 200 Cu, 20% Fe, 70 Pb.	Z
54	C-6	67°40'26"	161°33'55"	5JS113AC 4PF090R	H	Sample 113A: quartz vein and phyllite with iron oxide; 20 As, 100 Zn, 100 B, 30 Co, 100 Cr, 1000 Mn, 100 Ni, 15 Pb, 20 Sc, 200 V, 30 Y, 150 Zr. 113C: quartz stringers with iron oxide and clay; 80 Zn, 1.5 Be, 1000 Mn, 10 Sc. 90R: cobble of chalcopyrite-bornite-pyrite; 300 As, 9 Sb, 20 Ag, 300 Co, >20,000 Cu, 20% Fe, 15 Mo, 1000 Ni, 150 Pb.	Z
55	C-6	67°31'05"	161°58'22"	5MF076B	H	Orange soil in dolostone; 20 As, 4 Sb, 100 B, 100 Cr, 50 Pb, 100 Zr.	Z
56	C-6	67°35'20"	161°49'15"	5MF062	H	Fine-grained phyllitic sandstone with iron oxide-stained quartz lenses; 20 As, tr Mo, 100 Pb, 0.5% Ti, 100 V, 500 Zr.	Z
57	C-6	67°35'02"	161°48'54"	5JS079A-E	H	Quartz veins and iron oxide staining in grey sandstone and phyllite. A: yellow-green oxides on quartz sandstone; 30 As, 1 Be. B: iron oxide-stained vein quartz; 20 As, 1500 Mn. C: pyrite-chalcopyrite cement in sandstone. E: iron oxide-stained sandstone; 20 As, 65 Zn.	Z
58	C-6	67°36'04"	161°43'08"	4SK092B	P	Quartz-pyrite veins in phyllite; 190 As, 1 Bi, 30 Sb, 3 Ag, 70 Co, 100 Cu, 150 Pb.	K, Z
59	C-6	67°35'41"	161°46'26"	5JS078	H	Quartz veins with iron oxide in sandstone; 20 As, 2 Sb, 1 Be, 1000 Mn, tr Mo.	Z
60	C-6	67°33'48"	161°53'28"	5MF063	H	Quartz-pyrite stringers in phyllite; 60 As, 2 Sb, 0.7 Ag, 700 Cu.	Z
61	C-6	67°30'05"	161°41'01"	Eskimo	P	Chalcocite-malachite in bleached limestone.	C3

Table 1.--Mineral occurrences and indicators in the Baird Mountains quadrangle, northwestern Alaska--Continued

Map No.	Quad	Latitude	Longitude	Sample ¹ No.	Type ²	Description	Source ³
62	C-6	67°31'54"	161°32'27"	5PF122A	H	Red-orange quartz vein with malachite, azurite, pyrite, chalcopyrite, and dark grey metallic mineral, 0.5 m thick for 4 m in dark grey limestone; 200 As, 1.9 Cd, 60 Sb, 70 Zn, 0.7 Ag, 500 Cu.	Z
63	C-6	67°32'20"	161°39'57"	5SK205B	H	Disseminated pyrite in phyllite near 20 cm rusty quartz vein; 30 As, 4 Sb, 200 B, 1.5 Be, 50 Co, 150 Cr, 5% Fe, 0.5% Ti, 200 V, 50 Y, 200 Zr.	Z
64	C-6	67°33'09"	161°37'33"	5SK242A	H	A 1 m quartz vein with grey phyllite and small clots of chalcopyrite, malachite, and pyrite(?); 10 As, 2000 Cu.	Z
65	C-6	67°36'14"	161°30'17"	4RB308 5JS114AB	H	Quartz-malachite-chalcopyrite-calcite and iron-stained limestone near contact with grey phyllite; samples contain as much as 50 Zn, 0.5 Ag, 2 Be, 2% Cu, 30 Y.	X,Z
66	C-6	67°34'53"	161°42'17"	5PF079B	H	Red-stained pyritic sandstone, 10 by 40 m, with disseminated and massive pyrite in foliated bands; 90 As, 140 Zn, 1 Ag, 100 Co, 150 Cu, 10% Fe, 70 Pb.	Z
67	C-5	67°39'05"	161°24'23"	5JS047C	H	Iron-carbonate and iron oxide-stained marble; 1.2 Cd, 65 Zn, 1 Be, 2000 Mn, 5 Mo, 30 Ni.	Z
68	C-5	67°38'00"	161°24'59"	4JS028E	P	Quartz vein with minor sphalerite, iron oxide, clay, and trace pyrite in limestone; 40 As, 420 Cd, 3 Sb, 4.6% Zn, 3 Ag, 500 Cu, 150 La, 500 Pb.	X
69	C-5	67°39'54"	161°25'36"	5PF060A	H	Pyrite veinlets in quartz boulder near brown phyllite; 50 As, 45 Zn, 0.5 Ag, 5000 Cu.	Z
70	C-5	67°41'26"	161°23'11"	4PF025R	H	Red- and green-stained cobble with pyrite, bornite(?), chalcopyrite(?), in quartz; 100 As, 2 Ag, 20 Co, 7000 Cu, 300 Ni, 70 Pb.	Z
71	C-5	67°41'06"	161°21'14"	5JS050B	H	Grey limestone with 5% pyrite and iron oxide-stained bands; 2% Fe, 2000 Mn.	Z
72	C-5	67°38'33"	161°25'37"	E11 4EK055	P	E11: quartz vein in limestone with malachite and iron oxide, minor chalcopyrite; <1% Cu. Q55: quartz vein with pyrite; 100 As, 4 Sb, 3 Ag, 3000 Cu, 200 La, 300 Ni, 30 Pb.	C3,X
73	C-5	67°38'49"	161°19'15"	5JS040	H	Minor pyrite and iron oxide in green phyllite.	
74	C-5	67°40'25"	161°28'07"	5SK090B	H	Pyritic semischist/grey phyllitic layers in sandstone; 0.3 Cd, 100 Zn, 200 Zr.	Z
75	C-5	67°35'34"	161°18'41"	5PF177A	H	Brown-grey marble with 5-10% pyrite.	
76	C-5	67°35'20"	161°20'00"	5PF175B	H	Less than 5% pyrite in argillaceous limestone.	Z

77	C-5	67°35'00"	161°17'59"	5JS121BD	H	Pyrite (1-3%) in burrowed argillaceous limestone; 30 Zn, 100 B, 1000 Sr.	Z
78	C-5	67°39'31"	161°11'06"	SSK248B	H	Pyrite (1%) in green shale layer within argillaceous limestone; 0.4 Cd, 200 B, 1.5 Be, 100 Cr, 5% Fe, 100 Ni, 200 V.	Z
79	C-5	67°34'47"	161°06'18"	5JS087 5PF128B	H	Sample 087: limestone with 3% pyrite cubes to 4 mm; 20 As, 5% Fe, 1000 Mn, 100 Pb. 128B: red-stained carbonate and soil; 500 As, 12 Sb, 80 Zn, 2 Ag, 50 Co, 200 Cu, > 20% Fe, 30 Mo, 100 Ni, 200 Pb, 50 Sc.	Z
80	C-5	67°36'52"	161°10'05"	4JS047	H	A 25 cm boulder with iron oxide and pyrite in dolomite-quartz; tr Ag, 30 Co, 150 Cr, 7% Fe, 0.5% Ti, 200 V.	Z
81	C-5	67°37'52"	161°06'45"	5JS086CD	H	Orange, iron oxide-coated marble/calcareous sandstone; 20 As, 0.7 Cd, 2 Sb, 45 Zn, 200 B, 1000 Ba, 1 Be, 5% Fe, 1000 Mn, 30 Ni, 50 Pb, 200 V, 100 Zr.	Z
82	C-5	67°34'42"	161°07'20"	5PF132A	H	Cobble of fine-grained altered-looking dolostone with disseminated and veinlet pyrite (0.2 mm); 20 As, 20 Zn, tr Ag, 500 Ba, 150 V, 200 Zr.	Z
83	C-5	67°37'35"	161°02'28"	4EK136D	H	Light green micaceous pyritic sandstone/tuff layer (<5 m wide) between two dolostones; 50 Zn, 150 B, 1.5 Be, 50 La, 7 Mo, 50 Y.	Z
84	C-5	67°35'09"	161°05'21"	5PF127B	H	Orange weathering carbonate with very small tarnished pyrite and dark brown iron oxide; 20 Ag, 1.8 Cd, 180 Zn, 1000 Mn, 30 Ni, 100 Pb.	Z
85	C-4	67°36'49"	160°59'05"	5BT110B	H	A 3 cm thick zone of chalcopyrite with malachite in marble; 10 Bi, 3.9 Cd, 70 Ag, >20,000 Cu, 15% Fe.	Z
86	C-4	67°41'10"	160°49'20"	5JS095	H	Pan concentrate contains 5% pyrite; drains sandstone and carbonate rocks.	
87	C-4	67°42'41"	160°51'58"	3SK154B	H	Quartz-malachite veins in black phyllite with sandy calcareous layers; >5000 Ba, 3000 Cu.	Z
88	C-4	67°43'58"	160°36'40"	5SK279	H	Chalcopyrite, chlorite, and epidote in quartz veins within grey phyllite.	
89	C-4	67°38'55"	160°41'38"	5JS096A 5JS097	H	Sample 96A: boulder of quartz with malachite-pyrite-iron oxide; 20 As, 0.2 Cd, 5 Ag, 5000 Cu. 97: 2% pyrite and iron oxide in calcareous sandstone.	Z
90	C-4	67°37'36"	160°53'31"	5JS089A	H	Trace pyrite in iron oxide-calcite veins in limestone; 20 As, 5% Fe, 1500 Mn.	Z
91	C-4	67°34'24"	160°49'31"	5MF091	H	Iron oxide on quartz vein; 40 As, 2.5 Cd, 2 Sb, 200 Zn, 50 Pb.	Z
92	C-4	67°33'28"	160°58'17"	4JS051B	H	Iron oxide-stained clay-quartz in dolostone; 2 As, 0.4 Cd, 2 Sb, 100 Zn, 0.5 Ag, 200 B, 300 Cr, 5% Fe, 20 Mo, 150 Pb.	Z
93	C-4	67°36'05"	160°47'35"	5PF145A	H	Quartz cobble with malachite-chalcopyrite-iron oxide; 60 As, 12 Cd, 16 Sb, 200 Zn, 50 Ag, >5000 Ba, 15,000 Cu, 200 V.	Z
94	C-4	67°30'16"	160°46'33"	5JS108AB	H	Calcite and iron oxide breccia in dolostone; 20 As, 0.9 Cd, 30 Sb, 200 Zn, 1000 Mn, tr Nb, 50 Pb.	Z
95	C-4	67°35'47"	160°43'45"	5PF149B	H	Bleached green siltstone; 70 Zn, 70 Co, 10% Fe, 1500 Mn, 30 Sc, 0.5% Ti, 200 V.	Z

Table 1.--Mineral occurrences and indicators in the Baird Mountains quadrangle, northwestern Alaska--Continued

Map No.	Quad	Latitude	Longitude	Sample No. ¹	Type ²	Description	Source ³
96	C-4	67°37'48"	160°35'12"	4PF158	H	Red-yellow-green-stained quartz boulders with pyrite, chalcopyrite, copper oxide; 2000 Cu, 50 Pb.	Z
97	C-4	67°40'17"	160°32'25"	5BT191	H	Pyrite-chalcopyrite and iron oxide and malachite on 20 by 20 by 30 cm boulder. Near argillaceous limestone and sandy phyllite; 20 As, 3 Ag, 10,000 Cu, 7 Co, 20 Ni.	Z
98	C-4	67°40'37"	160°30'13"	6SK155A	H	Quartz-calcite vein with chalcopyrite near phyllite/calcareous siltstone contact; 700 Cu.	Z
99	C-3	67°42'15"	160°29'54"	4EK080	H	Pyritic (<1%) black shale; 30 As, 0.4 Cd, 80 Zn, 0.7 Ag, 200 B, 5000 Ba, 2 Be, 70 Ca, 50 La, 10 Mo, 70 Pb, 0.5% Ti, 200 V, 70 Y.	Z
100	C-3	67°42'26"	160°24'35"	4EK076	H	Pyritic quartz vein float in red-stained creek.	
101	C-3	67°42'34"	160°26'52"	6SK149	H	Grey phyllite with pyrite cubes as large as 5 mm.	
102	C-3	67°40'27"	160°26'35"	4PF114	H	Pyrite-quartz veins in black phyllite; 0.3 Cd, tr Sb, 50 Zn, 7 Co, 15 Mo, 50 Ni.	Z
103	C-3	67°40'29"	160°26'07"	4EK072B	H	Dark grey pyritic phyllite; 1.5 Cd, 70 Zn, 150 B, 1000 Ba, 2 Be, 50 Co, 50 Y.	Z
104	C-3	67°38'04"	160°22'40"	Nakolikurok 4JS032DE	P	Nakolikurok: quartz vein in greenstone sill with 1% Cu. 032DE: trace pyrite in banded calcite-chlorite semischist.	C3
105	C-3	67°37'46"	160°18'25"	4JS031CD	P	Iron oxide, hematite, clay and quartz within thin limestone layer within black phyllite; 230 As, 12 Cd, 20 Sb, 5000 Zn, tr Ag, 200 B, 1500 Ba, 2 Be, 150 Co, 300 Cu, 15% Fe, 20 Mo, 700 Ni, 300 V, 70 Y.	K,Z
106	C-3	67°35'41"	160°22'15"	6SK153	H	Grey phyllite with pyrite cubes.	
107	C-3	67°40'02"	160°23'26"	4EK071A	H	White bloom in shear zones with iron-stained quartz boulders in phyllite; 75 Zn, 200 B, 2000 Ba, 1.5 Be, 10 Mo, 0.5% Ti, 200 V, 50 Y, 300 Zr.	Z
108	C-3	67°40'18"	160°23'57"	4PF112	H	Very red-stained creek, boulders are coralline limestone and red-stained quartz with carbonate and pyrite. Iron-stained quartz cobble: 40 Zn, 15 Co, 3% Fe, 1000 Mn, 50 Ni, 100 Zr.	Z
109	C-3	67°30'33"	160°22'58"	5JS106C-F	H	Grey quartz-mica pelitic schist with very small zones of iron oxide-stained quartz, boxwork and gossans. C: red-weathering schist with 5% iron oxide specks; 20 As, 110 Zn, 150 B, 500 Ba, 150 Cr, 100 Cu, 1000 Mn, 20 Sc, 0.5% Ti, 200 V. D: small pod of powdery quartz-hematite-goethite; tr Ag, 50 Co,	

ID	Sample	Lat	Long	Loc	Notes	Geochem		
					500 Cu, 50 Ni. E: friable gossan in calc-schist layer; 20 As, 0.2 Cd, tr Ag, 500 Cu, 1000 Mn, 50 Ni, 70 Pb. F: quartz-sulfide-iron oxide breccia with schist fragments; 20 As, 75 Zn, 50 Co, 50 La, tr Mo, 100 Ni, 100 Y.	2		
110	C-3	67°30'58"	160°29'54"	3JS074A	M	Trace bornite-pyrite in leached residue of orange and grey argillaceous limestone.		
111	C-3	67°31'46"	160°25'25"	3SK273C	P	Chloritic layer in black and white banded siliceous phyllite; 1 Bi, 2 Cd, 200 Sb, >5000 Ba, 1.5 Be, 50 Co, 150 Cr, 200 La, 2000 Mn, 100 Nb, 100 Ni, 70 Pb, 1% Ti, 200 V.	X,Z	
112	C-3	67°30'58"	160°08'32"	3JS077B	H	Quartzose semischist with <1% pyrite.		
113	C-3	67°30'43"	160°10'29"	6MZ081	H	Minor pyrite in black, quartz-rich well foliated schist.		
114	C-3	67°38'26"	160°14'36"	3SK312A	P	Siliceous slate with minor pyrite; tr Ag, 1500 Ba, 100 Cr, 5 Mo, 70 Ni, 300 Zn, 2000 V.	X,Z	
115	C-3	67°32'56"	160°16'44"	4EK101	H	Black schist with iron oxide in small pockets and on fractures; 30 As, 1.8 Cd, 4 Sb, 220 Zn, 300 B, 5000 Ba, 1.5 Be, 20 La, 30 Mo, 100 Ni, 50 Pb, 20 Sc, 500 V, 70 Y.	Z	
116	C-3	67°33'40"	160°15'40"	4SK107AB	H	Pyritic black siliceous shale; B: 40 As, 3.4 Cd, 6 Sb, 750 Zn, tr Ag, 1000 Ba, 70 Mo, 200 Ni.	Z	
01	117	C-3	67°43'48"	160°01'09"	3JS103B	P	Zone 0.6 by 13 m of iron oxide in marble with 5% limonite-hematite-goethite coated fragments, some botryoidal; 1900 As, 1800 Sb, 650 Zn, 1000 Ba, 7 Be, 50 Co, 200 Cr, >20% Fe, 100 La, 1000 Mn, 20 Mo, 3000 Ni, 200 Y.	X,Z
118	C-2	67°44'48"	159°56'35"	4PF296	H	Iron-stained quartz-mica schist with pyrite and quartz, argillite replaced by silica.		
119	C-2	67°36'29"	159°57'47"	5JS075C	H	Trace pyrite in orange-brown weathering marble; 20 As, 1 Be, 5000 Mn.	Z	
120	C-2	67°44'54"	159°54'24"	4PF305R	H	Quartz boulder with pyrite-iron oxide-malachite-azurite; tr Ag, 3000 Cu.	Z	
121	C-2	67°44'18"	159°52'24"	4PF307	H	Quartz with pyrite and local malachite-azurite in phyllite schist.		
122	C-2	67°34'40"	159°32'56"	Temby	P	Quartz veins with pyrite-chalcopyrite in phyllite; four samples contain 0.15-1.7% Cu, 0.04-0.12 oz/ton Ag, tr Au.	D	
123	C-2	67°40'49"	159°49'29"	Salmon R	P	Quartz-chalcopyrite vein float near pelitic schist; rock samples contain 60 ppm - 2% Cu; 12-94 Pb, 6-11 Ag, 5-80 ppb Au.	C3,D	
124	C-2	67°33'08"	159°12'20"	5BT056A	M	Pyrite in pan concentrate; creek drains grey quartz-mica schist.		
125	C-2	67°32'57"	159°34'42"	3JS137B	H	Fine-grained calcite-chlorite-feldspar semischist with 1% pyrite cubes as large as 2 mm (metavolcaniclastic?).		
126	C-1	67°40'30"	159°08'50"	5PF107E	H	Disseminated pyrite in dark grey to black quartz-mica schist with local quartz veining; 20 As, 1 Bi, 100 Cr, 7% Fe, 7% Mg, 150 Zr.	Z	

Table 1.--Mineral occurrences and indicators in the Baird Mountains quadrangle, northwestern Alaska--Continued

Map No.	Quad	Latitude	Longitude	Sample ¹ No.	Type ²	Description	Source ³
127	C-1	67°42'36"	159°08'06"	4PF196B	H	Red-stained quartz cobble with pyrite-chalcopyrite-azurite-bornite, from area of black carbonaceous shales; 30 As, 2 Ag, 20,000 Cu, 50 Pb.	Z
128	C-1	67°42'50"	159°11'31"	5JS067E	H	Quartz, iron oxide, and boxwork in grey phyllite; 9.6 Cd, 340 Zn, 1000 Mn, 150 V.	Z
129	C-1	67°43'19"	159°13'09"	5JS067C	H	Layers of quartz and 5% pyrite in grey semischist; 20 As, 4 Sb, 100 Zn, 0.7 Ag, 150 B, 1000 Ba, 1 Be, 50 Mo, 1000 V.	Z
130	C-1	67°42'15"	159°09'48"	5JS069B	H	Quartz with iron oxide in 2 m thick black phyllite layer within sandstone/phyllite; 60 As, 2 Sb, 100 B, 1.5 Be, 50 Cr, 20 Sc, 1% Ti, 150 Zr.	Z
131	C-1	67°40'55"	159°08'23"	3SK116B	H	Rusty and bleached zone with boxworks, pyrrhotite greater than pyrite in chlorite schist; tr Cd, 70 Co, 200 Cr, 7% Fe, 2000 Mn, 70 Ni, 70 Sc, 0.7% Ti, 300 V, 70 Y.	Z
132	C-1	67°40'54"	159°07'14"	5PF107BC	H	B,C: orange-stained quartz and grey quartz-mica schist/phyllite; 20 As, 2 Cd, 2 Sb, 270 Zn, 500 B, 2000 Ba, 1.5 Be, 300 Cu, 50 La, 3000 Mn, 5 Mo, 0.7% Ti, 500 V, 50 Y, 150 Zr.	Z
133	C-1	67°38'57"	159°15'25"	5TI222D	H	Dark green mafic schist with local stilpnomelane and carbonate(?) and local pyrite and chalcopyrite; 80 Zn, 200 Cu, 3000 Mn, 30 Sc, 200 V.	Z
134	C-1	67°39'02"	159°08'45"	5TI223B	H	Rusty weathering mafic rock with copper staining and disseminated sulfide; 70 Zn, 150 Cu, 2000 Mn, tr Mo, 20 Nb, 70 Y, 1000 Zr.	Z
135	C-1	67°38'25"	159°01'35"	6JS033AB	H	A: quartz-veined dolostone with <10% pyrite; 5 Ag, 1500 Cu, 15 Sn. B: moderate copper and iron oxide staining in quartz bands in grey dolostone; 2 Ag, 15000 Cu, 2000 Pb, 300 Zn (by emission spectroscopy).	Z
136	C-1	67°39'01"	159°02'24"	5JS076B	H	Ten percent iron oxide spots in quartz-chlorite semischist; 1 Bi, 150 B, 1.5 Be, 20 Co, 5000 Mn.	Z
137	C-1	67°38'37"	159°05'39"	4PF191B	H	Orange-stained pyritic limestone upstream from greenstone contact.	Z
138	C-1	67°38'46"	159°05'22"	4PF192	H	Bladed grey submetallic crystals, probably specular hematite, in metamafic rock near dolostone contact; tr Cd, 20 Co, 150 Cr, 1000 Mn, 70 Ni, 70 Pb, 100 V.	Z
139	C-1	67°35'00"	159°22'45"	5SK350B	H	Chert/quartzite with malachite within quartz-chlorite schist; 40 As, tr Ag, 1 Be, 5000 Cu.	Z

140	C-1	67°35'25"	159°12'18"	5TI246C	H	Orange-weathering dolostone with iron-staining, sulfide(?); 200 B, 1000 Ba, 3 Be, 70 Co, 1000 Cr, 5% Fe, tr Nb, 100 Ni, 30 Sc, 1% Ti.	Z
141	C-1	67°35'44"	159°24'09"	6TI075	H	Vesicular pockets of magnetite and specular hematite in mafic volcanic rocks. Pyrite with epidote at contact of mafic rocks with dolostone.	
142	C-1	67°36'08"	159°10'34"	6JS028ADE	H	A: quartz bands with chalcopyrite in quartzose semischist within dolostone. D,E: up to 15% pyrite, with malachite-azurite, in epidote-green rock with hematite at mafic-carbonate contact.	
143	B-6	67°28'15"	161°50'53"	5PF072B	H	Quartz with orange limonite, galena(?) or sphalerite from area of grey phyllite; 700 Mn.	Z
144	B-6	67°27'10"	161°52'00"	5MF110	H	Phyllite with quartz veins and chalcopyrite; 1 Ag, 70 Co, 5000 Cu, 50 Ni, 0.5% Ti, 150 Zr.	Z
145	B-6	67°20'40"	161°57'00"	5JS119	M	Abundant pyrite in pan concentrate; drains carbonate rocks.	Z
146	B-6	67°27'12"	161°40'24"	4PF283	H	Quartz with pyrite-malachite-azurite-chalcopyrite. One to five percent of quartz boulders are red-stained. From area of carbonate rocks; tr Ag, 1 Be, 2000 Cu.	Z
147	B-6	67°28'45"	161°34'19"	4BT143	H	Orange quartzose carbonate with malachite and chalcopyrite; tr Cd, 2000 Cu, tr Zn.	Z
148	B-6	67°29'40"	161°30'36"	4PF276R	H	Red-stained quartz and pyrite in creek, pan concentrate has pyrite, drains carbonate rocks.	
149	B-6	67°17'57"	161°32'55"	5DN127	H	Hematite, trace pyrite, abundant sphalerite, and barite(?) in marble.	
150	B-6	67°23'59"	161°40'03"	5DN098D	H	Small patch of red and brown non-calcareous gossan chips in dolostone; 30 As, 2 Sb, 500 B, 2 Be, 20 La, 50 Mo, 20 Nb, 70 Ni, 70 Pb, 200 Zr.	Z
151	B-5	67°27'46"	161°17'25"	4BT126	H	Very fine-grained pyrite (5 to 10%) in clay-carbonate-quartz rock with trace chalcopyrite and malachite specks; 20 As, tr Ag, 700 Cr, 10% Fe, 70 La, 30 Nb, 200 Ni, 1% Ti.	Z
152	B-4	67°29'55"	160°52'56"	Omar	P	Chalcopyrite-bornite-tetrahedrite disseminated and as veins and stockworks in Devonian limestone and dolostone.	B,F
153	B-4	67°29'12"	160°48'39"	3PF022	B	Dark grey limestone with less than 1 cm wide calcite veins and scattered pyrite cubes.	
154	B-4	67°28'56"	160°41'32"	Ufrost	H	Malachite-chalcopyrite-sphalerite-iron oxide, quartz-calcite and barite in shear vein crosscutting grey limestone. Two samples (3GK008A and B) contain 70-250 As, 54-110 Cd, 4-180 Sb, 1.3-7.0% Zn, 2-10 Ag, >2000 Ba, 500-3000 Cu, 0.7-1.0% Pb.	D,Z
155	B-4	67°27'16"	160°42'13"	4PF211	H	Rusty pyrite in brecciated and fractured dolomite.	

Table 1.--Mineral occurrences and indicators in the Baird Mountains quadrangle, northwestern Alaska--Continued

Map No.	Quad	Latitude	Longitude	Sample ¹ No.	Type ²	Description	Source ³
156	B-4	67°28'47"	160°39'26"	Frost 3JS014TVX	H	Quartz-barite-sphalerite-chalcopryrite-fluorite-galena with pyrite in zone several hundred meters long crosscutting carbonate rocks. T: limestone boulder with quartz and disseminated sphalerite; 110 As, >100 Cd, 230 Sb, >2000 Zn, 1 Ag, 1000 Ba, 500 Cu, 3000 Pb. V: boulder with quartz-fluorite-sphalerite-galena-bornite; 40 As, >100 Cd, 130 Sb, >2000 Zn, 0.7 Ag, >5000 Ba, 500 Cu, 200 Pb, 5000 Sr. X: boulder with vein galena and fine-grained pyrite-sphalerite; 80 As, 70 Cd, 170 Sb, >2000 Zn, 5 Ag, 1000 Ba, 700 Cu, 5 Mo, 7000 Pb.	D, Z
157	B-4	67°27'22"	160°47'35"	Powdermilk	H	Abundant sphalerite with minor galena, pyrite, and barite as veins and disseminations in layers within dolostones at four locations over approximately 2 km ² area. Samples contain as much as 20% sphalerite and 30% total sulfides.	S, Z
158	B-4	67°27'52"	160°34'48"	4RB168	H	Trace bornite-chalcopryrite-quartz in phyllite/schist.	
51 159	B-4	67°27'24"	160°42'52"	4PF210R	H	Brecciated carbonate with red coating; stream sediment from same locality has very abundant fine, black, nonmagnetic heavy mineral; tr Cd, 40 Zn.	Z
160	B-4	67°21'29"	160°46'27"	4EX117	H	Hematite streaks in dolostone breccia; 10 As, 10 Sb, 15% Fe, 5 Mo, 100 Ni, 300 V, 20 Pb.	Z
161	B-4	67°16'15"	160°45'46"	6SK134	H	Abundant orange stain and minor pyrite in grey phyllite which may contain calcite.	
162	B-3	67°29'18"	160°20'12"	4JS035A	R	Cubes of hematite-clay after pyrite(?), with quartz veins in argillaceous limestone; 300 As, tr Cd, tr Sb.	Z
163	B-3	67°29'37"	160°10'22"	3SK394	H	Pyrite cubes to 6 mm in fine-grained graphitic phyllite.	
164	B-3	67°29'26"	160°12'27"	3SK395	H	Pyrite cubes in rusty weathering siliceous phyllite, with light and dark compositional layering.	
165	B-3	67°28'16"	160°20'09"	4JS036BC	H	Very iron-stained black quartz-rich schist; B: 20 As, 1 Bi, 1.2 Cd, 2 Sb, 120 Zn, 2000 Ba, 30 Mo, 300 V. C: 40 As, 1 Bi, 100 Zn, 70 B, 1000 Ba, 20 Mo.	Z
166	B-3	67°29'23"	160°29'09"	3EK031K	M	Chalcopryrite in leached residue of calcareous-chlorite schist and marble interbedded with quartzite.	
167	B-3	67°21'38"	160°20'05"	3SK222	H	Black quartzite with oval pyritic nodules as large as 4 mm.	
168	B-3	67°22'18"	160°13'40"	6SK103	H	Fluorite in granitic gneiss.	

169	B-3	67°24'10"	160°11'55"	6SK159	H	Minor disseminated pyrite in calcareous chlorite-quartz schist and marble.	
170	B-3	67°22'21"	160°20'30"	5BT178BC	H	B: disseminated sulfides on foliation (yellow-orange) in calc-schist and marble; 200 B, 7 Mo. C: quartz boudins, rust stains and white bloom in graphitic schist; tr Ag, >5000 Ba, 1.5 Be, 20 Mo, 500 V.	Z
171	B-3	67°26'02"	160°13'38"	3EK026B	H	Green schist interlayered with brown weathering marble, has moderate pyrite and iron oxide splotches.	
172	B-3	67°22'14"	160°19'35"	5TI234AB	H	A: rusty quartz boudins in coarse-grained white mica-albite-chlorite schist; 2 Bi. B: rusty locally calcareous black albite-white mica-quartz schist; 10 As, 550 Bi, 0.8 Cd, 120 Sb.	Z
173	B-3	67°24'40"	160°25'37"	3JS031A	H	Heavily iron oxide-stained black slate; 40 As, 14 Cd, 4 Sb, 230 Zn, 0.5 Ag, 150 B, 3000 Ba, 1.5 Be, 150 Cu, 50 Mo, 500 V.	Z
174	B-3	67°15'24"	160°17'12"	4RB175	H	Iron stain on quartz-mica schist; 10 As, 70 Zn, 50 Co, 150 Cr, 70 La, 70 Ni, 20 Sc, 0.5% Ti, 50 Y.	Z
175	B-3	67°15'14"	160°14'44"	5PF093	H	Disseminated pyrite (5-8%) in grey green quartz-mica schist.	
176	B-2	67°23'00"	159°58'26"	6MZ075	H	Grey quartz-chlorite-white mica schist with minor pyrite cubes.	
177	B-1	67°29'55"	159°28'25"	5JS101	M	Pyrite in pan concentrate; 2% pyrite in quartz-mica schist.	
178	B-1	67°23'24"	159°04'34"	3PF126	H	Graphitic quartz-mica schist with pyrite cubes (0.2-0.4 cm).	
179	B-1	67°25'37"	159°05'25"	3EK097CEP	H	C: pyritic brown weathering chlorite-albite-quartz-muscovite schist; 95 Zn, 30 Co, 1% Ti, 50 Y. E: greenish material in similar schist; 80 As, 3 Ag, 1500 Ba, 1500 Cr, 10% Fe, 700 Ni, 50 Sc. F: pyritic black slate (siliceous) with white quartz segregation layers 1-1.5 mm; 10 As, tr Ag, 300 B, 1000 Ba, 2 Be, 150 Cr, 30 La, 15 Mo.	Z
180	B-1	67°28'45"	159°07'11"	3PP148A	M	Tetrahedrite-tennantite in leached residue of marble.	
181	B-1	67°20'55"	159°00'55"	3JS108C	H	Iron oxide-stained black schist within metabasite; tr Ag, 1500 Ba, 30 Co, 200 Cr, 100 Cu, 5% Fe, 5 Mo, 1000 Mn, 70 Ni, 300 V, 0.7% Ti.	Z
182	A-6	67°10'59"	161°54'30"	Gallahorn	P	Two quartz-chalcopryrite veins in pyritiferous schist and phyllite.	C3
183	A-6	67°11'14"	161°45'06"	Uh1	P	Quartz-chalcopryrite vein in schist and phyllite.	C3
184	A-3	67°05'17"	160°16'15"	4EK110	H	Iron-oxidized and stained pockets in calcareous quartz-mica schist; tr Ag, 200 B, 1500 Ba, 2 Be, 70 Cu, 70 La, tr Nb, 70 Pb, 0.5% Ti, 50 Y.	Z
185	A-3	67°12'08"	160°10'27"	4EK090A	H	Iron oxide-stained black quartz schist with blue sheen; 100 As, 0.4 Cd, 2 Sb, 70 Zn, tr Ag, 100 B, 2000 Ba, 1.5 Be, 150 Cu, 30 Mo, 200 V.	Z
186	A-3	67°11'48"	160°07'42"	4PF149R	H	Dark grey micaceous schist, red weathering with red specks in matrix; 10 As, 1.7 Cd, 2 Sb, 160 Zn, tr Ag, 2000 Ba, 50 Mo, 200 V.	Z
187	A-3	67°07'44"	160°18'51"	3JS127D	H	Magnetite in layered epidote-rich rock of mafic or intermediate composition.	

Table 1.--Mineral occurrences and indicators in the Baird Mountains quadrangle, northwestern Alaska--Continued

Map No.	Quad	Latitude	Longitude	Sample No. ¹	Type ²	Description	Source ³
188	A-3	67°07'57"	160°16'24"	4PF186	M	Magnetite and pyrite in pan concentrate.	
189	A-3	67°05'46"	160°14'26"	4EK108	H	Pyrite (<1%) in calcareous quartz-mica schist.	
190	A-3	67°02'18"	160°10'08"	3JS115	H	Diorite knob with disseminated fluorite.	
191	A-3	67°01'58"	160°12'43"	3JS116	H	Banded dark chlorite-epidote rock with 1-2% magnetite (1 mm) throughout, trace pyrite.	
192	A-3	67°02'27"	160°06'14"	Trinity	P	Purple fluorite in rhyolite, and scintillometer anomaly.	C3
193	A-2	67°11'15"	159°52'06"	3EK0241	H	Yellow- and red-stained, altered and leached diorite; 30 Zn, 700 Cu, 20% Fe, 7% Mg, 1500 Mn, 1000 Sr.	Z
194	A-2	67°13'08"	159°56'25"	5JS105	M	Magnetite in pan concentrate.	
195	D-6	67°56'00"	161°48'44"	5BT001	F	Red-stained quartz vein float.	
196	D-6	67°48'07"	161°42'48"	4PF081X	F	Abundant red-stained quartz cobbles.	
197	D-6	67°49'48"	161°32'44"	4PF008	F	Vein brecciated cobbles and iron-stained quartz in brown phyllite.	
198	D-6	67°48'18"	161°38'06"	4JS007	F	Iron oxide-stained black shale.	Z
199	D-6	67°49'39"	161°36'26"	4EK005	F	Hematite spots in quartz-calcite veins within dark grey shale.	
200	D-5	67°54'30"	161°13'06"	4PF053	F	Cobbles of red-stained quartz.	
201	D-5	67°46'47"	161°24'13"	4PF029R	F	Red-stained quartz and carbonate in maroon and green phyllite.	
202	D-5	67°52'02"	161°24'33"	4PF015R	F	Red-weathering phyllite with red-stained quartz veins.	Z
203	D-5	67°48'08"	161°29'07"	4PF007	F	Quartz with iron staining in argillite.	
204	D-5	67°48'20"	161°27'44"	4PF006	F	Iron-stained quartz cobbles in stream.	
205	D-5	67°56'44"	161°10'35"	4EK042	F	Red-stained vein quartz boulders.	
206	D-5	67°56'52"	161°09'51"	4EK041	C	Red creek with abundant algae/moss.	
207	D-4	67°51'17"	160°46'22"	5JS124B	F	Quartz boxwork veins with red-brown clay, in phyllite.	Z
208	D-4	67°49'47"	160°41'44"	5JS093	F	Ten to twenty percent quartz veins with iron oxide in sandstone.	

209	D-3	67°57'50"	160°20'34"	3PF089	F Rusty-red layers in phyllite.	Z
210	D-2	67°47'58"	159°53'28"	5PF045R	F Many red-stained phyllite cobbles.	Z
211	D-2	67°54'29"	159°56'53"	3PF084	F Red-weathering phyllite next to granular chloritic rock.	Z
212	D-2	67°49'13"	159°53'04"	5BT038	F Grey phyllite with abundant orange-stained quartz.	
213	D-1	67°49'29"	159°06'06"	6JS007	F Iron oxide-rich lens within yellow-green-stained black shale.	
214	D-1	67°48'55"	159°06'11"	5MF053A	F Orange-stained black phyllite.	Z
215	D-1	67°46'13"	159°27'59"	4PF294	F Ten to twenty percent of quartz cobbles are iron oxide-stained.	
216	D-1	67°48'42"	159°10'51"	5BT013	F Red-stained creek bed.	Z
217	C-6	67°31'54"	161°32'09"	5PF122CD	F Red-stained quartz and phyllite.	Z
218	C-6	67°34'11"	161°53'03"	5PF116B	F Quartz with red iron oxide patches.	Z
219	C-6	67°38'10"	161°44'03"	5PF084	F Red-stained quartz-carbonate zone in brecciated marble.	Z
220	C-6	67°44'46"	161°48'06"	5MF102D	F Quartz vein with iron oxide in greywacke.	Z
221	C-6	67°40'09"	161°32'43"	5JS112C	F Calcareous phyllite with iron oxide and 5% quartz segregations.	Z
222	C-6	67°35'54"	161°30'29"	5JS083D	F Iron oxide-stained quartz-calcite veins in phyllite.	Z
223	C-6	67°36'15"	161°35'49"	5JS063A	F Iron oxide-stained quartz vein in green-grey phyllite.	Z
224	C-6	67°42'46"	161°51'01"	4RB113	F Red quartz veins in graphitic phyllite.	
225	C-6	67°41'17"	161°37'37"	4PF091	C Very red creek with red-stained rocks and some quartz.	
226	C-6	67°40'32"	161°33'40"	4PF087R	F Iron-stained zone with deformed quartz veins in chloritic phyllite.	Z
227	C-6	67°34'42"	161°44'18"	4PF017	F Red-stained quartz in grey phyllite.	
228	C-5	67°40'31"	161°28'51"	5SK089A 5MF103	F 089A: orange-weathering layers in grey-green phyllite with quartz veins. 103: iron-stained quartz lenses <4 cm, with minor chlorite, in maroon and green phyllite with carbonaceous and sandy layers.	Z
229	C-5	67°40'48"	161°29'46"	5MF104B	F Cobble of quartz with brick red coating.	
230	C-5	67°35'04"	161°04'47"	5MF072	F Dolostone with brick red stain.	Z
231	C-5	67°40'23"	161°27'34"	5JS110ABC	F Iron oxide pockets and red-stained quartz in phyllite and sandstone.	Z
232	C-5	67°32'47"	161°02'34"	5JS100A	F Clay and iron oxide with calcite veins in argillaceous limestone.	
233	C-5	67°31'52"	161°17'00"	4PF262	F Some red-weathering carbonate with possible pyrite.	

Table 1.--Mineral occurrences and indicators in the Baird Mountains quadrangle, northwestern Alaska--Continued

Map No.	Quad	Latitude	Longitude	Sample ¹ No.	Type ²	Description	Source ³
234	C-5	67°31'58"	161°17'35"	4PF261	F	Red coating on carbonate boulders.	
235	C-5	67°36'49"	161°09'34"	4PF230	F	Rusty-orange alteration of grey carbonate cobbles.	
236	C-5	67°37'26"	161°24'49"	4PF031	F	Red-stained quartz in carbonate drainage.	
237	C-5	67°36'32"	161°25'22"	4PF030	F	Red splotches in carbonate rocks.	
238	C-5	67°40'47"	161°22'35"	4PF023	C	Few red-stained drainages observed 1-2 km upstream of this site.	
239	C-5	67°37'42"	161°18'48"	4PF020	C	Small bright-red drainage off west slope of hill.	
240	C-5	67°37'32"	161°18'59"	4PF019	F	Red-streaked drainage 200 m upstream from grey carbonate breccia.	
241	C-5	67°38'52"	161°25'55"	4EK057	F	Red-stained quartz boulders.	
17 242	C-5	67°40'46"	161°18'54"	4EK021	F	Many red-stained quartz boulders.	
243	C-4	67°30'08"	160°47'27"	6JS022	F	Orange and red crusts on dark grey limestone float.	
244	C-4	67°34'24"	160°53'05"	5PF134A	F	Red chips and soil in marble.	Z
245	C-4	67°30'18"	160°46'29"	5JS108	F	Orange brecciated area within grey carbonate.	Z
246	C-4	67°36'15"	160°57'17"	4PF233R	F	Purple carbonate with small rusty spots.	Z
247	C-4	67°37'40"	160°34'60"	4PF159	F	Red and yellow-stained quartz cobbles.	
248	C-4	67°41'32"	160°37'03"	4PF119	C	Red creek with some iron oxide-stained quartz.	
249	C-4	67°43'32"	160°52'54"	3PF041	F	Abundant quartz veins as much as 2 m across in quartz-mica schist.	Z
250	C-4	67°40'54"	160°51'22"	3PF026AB	F	Red-stained zone 2 m across in schist, with 0.5 m thick red-stained quartz vein, also bright purple and green stain on orange outcrop.	Z
251	C-3	67°31'27"	160°00'23"	5PF085	F	Large red-orange-stained quartz boulders.	
252	C-3	67°30'32"	160°23'05"	5JS106C	F	Red-weathering grey schist with iron oxide spots.	Z
253	C-3	67°30'31"	160°29'12"	4PF161	F	Red-stained quartz boulders.	
254	C-3	67°42'22"	160°24'23"	4PF117	C	Red creek with red quartz boulders.	

255	C-3	67°41'10"	160°27'28"	4PF116	C	Red creek with iron-stained quartz boulders.	
256	C-3	67°40'22"	160°23'37"	4PF113	F	Red quartz veins in graphitic phyllite.	Z
257	C-3	67°32'12"	160°15'14"	4JS033A	F	Iron-stained quartz-graphite-chlorite-white mica schist.	Z
258	C-3	67°37'46"	160°18'21"	4JS031B	F	Quartz-calcite-iron oxide cobble in dark grey phyllite.	Z
259	C-3	67°42'52"	160°25'30"	4EK078	F	Red-stained quartz boulders.	
260	C-3	67°42'44"	160°25'45"	4EK077	F	Red-stained quartz cobbles and boulders.	
261	C-3	67°32'32"	160°25'37"	3PF122	F	Very red-weathering phyllite.	Z
262	C-3	67°31'33"	160°22'42"	3PF120	F	Purple red-weathering stain on quartz-rich semischist.	Z
263	C-2	67°31'17"	159°56'55"	5BT053A	C	Red-staining in creek.	
264	C-2	67°44'49"	159°54'23"	4PF304	F	Very red-stained quartz in grey schist.	
265	C-2	67°40'21"	159°59'16"	4PF302	F	Iron oxide-stained quartz in silicified schist.	Z
266	C-2	67°40'39"	159°37'56"	3EK014E	F	Red-stained zone in dolostone.	Z
267	C-1	67°43'23"	159°02'22"	5BT187	F	Black silicious shale, rusty weathering, with white and yellow bloom.	Z
268	C-1	67°44'43"	159°26'52"	4PF297	F	Ten to twenty percent iron oxide-stained quartz boulders.	
269	B-6	67°18'30"	161°33'25"	5MF035	F	Iron oxide and calcite vein in marble.	Z
270	B-6	67°27'41"	161°40'12"	4PF284	F	Iron-stained quartz cobbles in creek with carbonate.	
271	B-4	67°23'29"	160°36'55"	4PF170	F	Some red-stained quartz boulders.	
272	B-3	67°21'37"	160°23'37"	Homestake	G	Gold mined for 12 summers by one man. Production of "several hundred dollars". New activity in 1983-1985.	C3
273	B-3	67°17'46"	160°20'42"	Gold Run	G	Two to three ounces gold recovered prior to 1931.	C3
274	B-3	67°29'34"	160°27'00"	5PF158BC	F	Red-stained quartz-mica schist and quartz vein.	Z
275	B-3	67°27'07"	160°21'44"	4PF131	F	Iron-stained quartz boulders with grey-green phyllite.	
276	B-3	67°21'55"	160°27'21"	3PF140	F	Iron-stained outcrop of mottled siliceous marble.	Z
277	B-3	67°23'48"	160°25'39"	3JS027A	F	Orange-weathering quartzose semischist.	Z
278	B-3	67°25'55"	160°12'47"	3EK026D	F	Eight meters of orange stain and iron oxide within coarse-grained marble.	
279	B-1	67°22'41"	159°05'27"	3PF128	F	Rusty iron oxide stains in quartz-graphite-chlorite schist.	Z
280	A-4	67°09'09"	160°33'17"	3PF144	F	Iron-stained quartz blebs in quartz-muscovite-chlorite schist.	Z

Table 1.--Mineral occurrences and indicators in the Baird Mountains quadrangle, northwestern Alaska--Continued

Map No.	Quad	Latitude	Longitude	Sample ¹ No.	Type ²	Description	Source ³
281	A-3	67°10'52"	160°24'15"	Xlery Cr	G	Fine and flaky to coarse-grained (8.5 oz. nugget) gold. Production through 1931 was 31,300 oz. Bedrock consists of marble and schist with quartz veins. Concentrates contain magnetite, ilmenite, pyrite, and garnet.	C3
282	A-3	67°10'47"	160°20'58"	Jack Cr	G	Stream sediments and pan concentrates contain 5-30 ppb Au and 0.6-1.0 ppm Ag.	D
283	A-3	67°06'57"	160°18'02"	Central Cr	G	Production through 1930 of about 145 oz fine flaky gold. Bedrock consists of marble.	C3
284	A-3	67°09'11"	160°17'19"	Bear Cr	G	Production through 1930 of about 95 oz of gold. Bedrock consists of marble and schist.	C3
285	A-3	67°06'58"	160°12'03"	4RB189	C	Red creek.	
19 286	A-3	67°09'54"	160°15'09"	4PF177	F	Red-weathering quartz-mica schist with quartz veins.	Z
287	A-3	67°11'33"	160°13'26"	4PF174	P	Rusty quartz, red, green and purple-stained mica schist with rusty specks.	Z
288	A-3	67°11'47"	160°12'46"	4PF173A	C	Very red-stained, quartz-veined dark grey schist in red creek.	Z
289	A-3	67°12'01"	160°12'57"	4PF172	C	Red creek with red-stained quartz in quartz-mica schist.	Z
290	A-3	67°13'53"	160°29'33"	3PF078	F	Iron oxide blebs in chloritic mica-quartz schist.	Z

¹ All sample numbers listed here are preceded by an 8 in the original field data, ie. field number 86M2007 is 6M2007 in this table.

² Types of samples include: H - hand sample, P - previous reference, M - leached residue or pan concentrate, C - red-stained creek, F - iron-oxide-stained quartz or rock, G - placer gold.

³ References are: C3 - Cobb and others, 1981; D - Degenhart and others, 1978; F - Folger and Schmidt, 1986; K - Karl and others, 1985; S - Schmidt and Folger, 1986; U - U.S. Bureau of Mines, 1978; Z - Zayatz and others, 1988. All samples without a listed reference are from this AMRAP study.