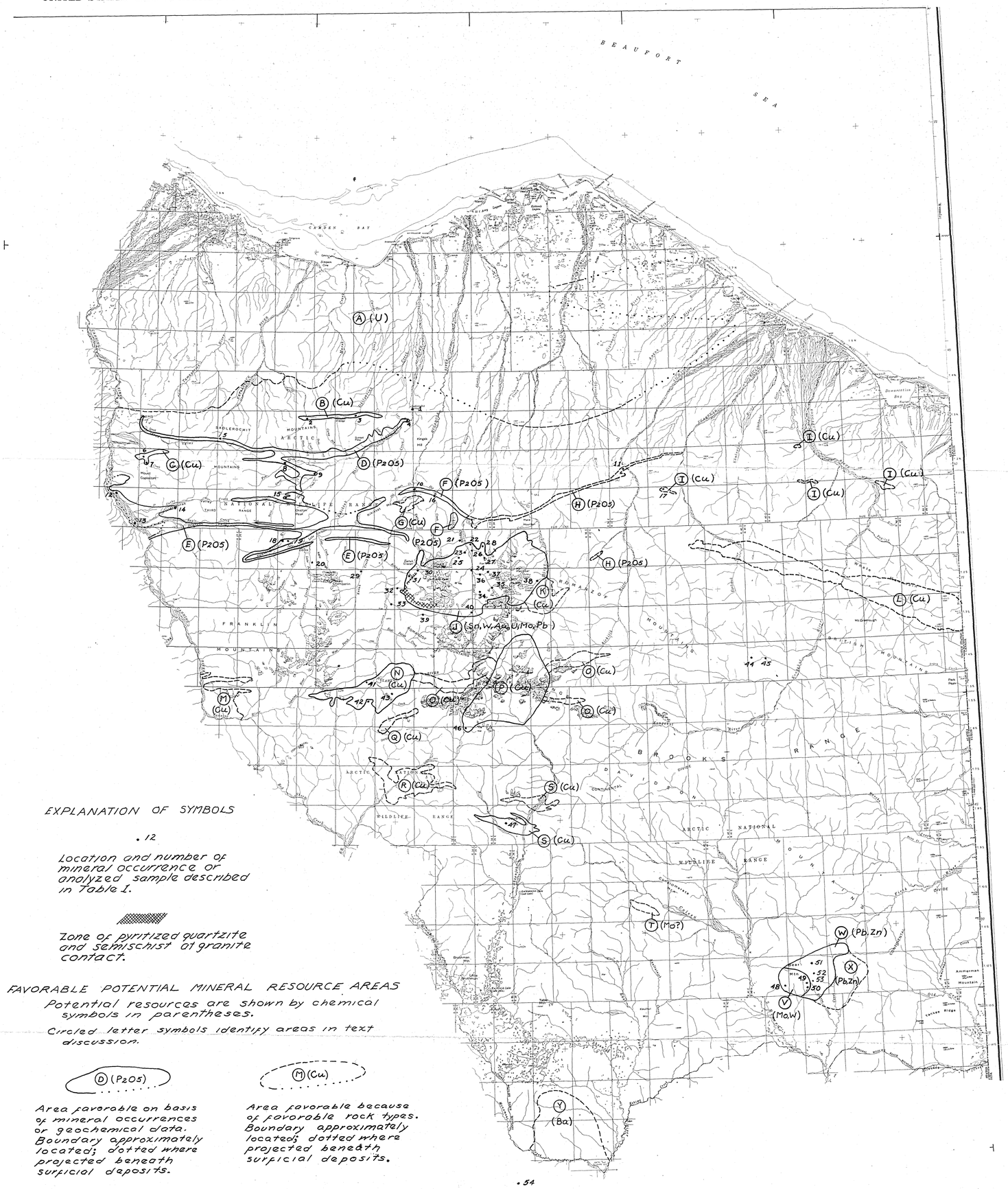
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN FILE MAP
76-539

SHEET 4 OF 4



EXPLANATION OF SYMBOLS

• 12

Location and number of mineral occurrence or analyzed sample described in Table 1.

Zone of pyritized quartzite and semischist at granite contact.

FAVORABLE POTENTIAL MINERAL RESOURCE AREAS

Potential resources are shown by chemical symbols in parentheses.

Circled letter symbols identify areas in text discussion.

(D) (P2O5)

Area favorable on basis of mineral occurrences or geochemical data. Boundary approximately located; dotted where projected beneath surficial deposits.

(M) (Cu)

Area favorable because of favorable rock types. Boundary approximately located; dotted where projected beneath surficial deposits.

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Table 1.--Mineral occurrences, prospects, and concentrations of phosphate, uranium, gold and base metals in rocks and panned concentrates

No.	T.	R.	Resource	Description	References[1]
1	4N,	31E	U	20 parts per million (ppm) equivalent uranium (eU) in sample of Kingak Shale (Jurassic)	Tourtelot and Tailleur, 1971
2	3N,	29E	Cu	Copper sulfides in amygdaloidal basalt; minor occurrence	
3	3N,	30E	Cu	Native copper reported in basalt	
4	3N,	31E	U; P_2O_5	20% P_2O_5 and 40 ppm eU in sample from 10-foot bed of phosphate rock 25 feet above base of Shublik Fm. (Triassic). Less than 5% P_2O_5; 20 ppm eU in two samples about 100 and 150 feet above base of Shublik	Patton and Matzko, 1959
5	3N,	27E	U; P_2O_5	35.8% P_2O_5; 80 ppm eU in sample from 20-foot bed of phosphatic limestone at base of Shublik Fm.	Patton and Matzko, 1959
6	2N,	25E	Cu	Minor malachite and azurite stains in amygdaloidal basalt	
7	2N,	25E	Cu	Native copper reported in basalt. Azurite and malachite in breccia zone in Devonian or older dolomite overlying the basalt	
8	2N,	28E	U P_2O_5	30 ppm eU in sample of Kingak Shale Complete 475-foot section of Shublik Fm. sampled at 1-foot intervals. Averaged P_2O_5: 19.2% in 5-foot zone 75 feet above base, 11.5% in 20-foot zone 100 feet above base, 7.6% in 25-foot zone 275 feet above base, 16.7% in 10-foot zone 325 feet above base. P_2O_5 in remainder of formation generally less than 5% P_2O_5	Tourtelot and Tailleur, 1971 Detterman, 1970
9	2N,	29E	U; P_2O_5	5% P_2O_5; 20 ppm eU in sample from about 150 feet above base of Shublik Fm.	Patton and Matzko, 1959
10	1N,	32E	U; P_2O_5	15% P_2O_5, 30 ppm eU in sample from 20-foot bed of phosphatic limestone 300 feet above base of Shublik Fm. Samples of phosphatic siltstone and shale in lower part of Shublik contain 10% P_2O_5, 30 ppm eU and less than 5% P_2O_5, 10 ppm eU, respectively?	Patton and Matzko, 1959
			P_2O_5	7% P_2O_5 in siltstone in lowest 130 feet of Shublik Fm.; 5% P_2O_5 in phosphatic limestone near top	Tourtelot and Tailleur, 1971
			U	20 ppm eU in sample of Kingak Shale	Tourtelot and Tailleur, 1971
11	2N,	37E	P_2O_5 U	1% P_2O_5 in phosphatic limestone in Shublik Fm. 20 ppm eU in sample of Kingak Shale	Tourtelot and Tailleur, 1971 Tourtelot and Tailleur, 1971
12	1N,	24E	U; P_2O_5	14.7% P_2O_5; 10 ppm chemical uranium in sample of phosphatic rock from Shublik Fm.	Patton and Matzko, 1959
13	1N,	24E	U, P_2O_5	1.6% P_2O_5, 10 ppm chemical uranium in sample of phosphatic limestone from Shublik Fm.	Patton and Matzko, 1959
14	1N,	25E	P_2O_5	Maximum P_2O_5 3% in 10 samples from upper 195 feet of Shublik Fm.	Tourtelot and Tailleur, 1971
15	1N,	28E	U; P_2O_5	18.4% P_2O_5, 30 ppm eU in sample of siltstone near base of Shublik Fm.	Patton and Matzko, 1959
16	1N,	32E	U, P_2O_5	22% P_2O_5, 70 ppm eU in sample of phosphate rock probably from Shublik Fm.	Patton and Matzko, 1959
17	1N,	38E	Cu	Chalcopyrite in quartz vein in volcanic rocks	
18	1S,	29E	U; P_2O_5	Less than 5% P_2O_5 and 10 ppm eU in sample of limestone from Shublik Fm.	Patton and Matzko, 1959
19	1S,	29E	U; P_2O_5	Less than 5% P_2O_5; 30 ppm eU in sample of siltstone near base of Shublik Fm.	Patton and Matzko, 1959
20	1S,	29E	Cu	0.3% Cu in thin vein in quartzite	
21	1S,	33E	U, W	Heavy fraction of panned concentrate of stream sediment contains scheelite and 300 ppm eU	White, 1952
22	1S,	33E	U	50 ppm eU in sample of granite	White, 1952
23	1S,	33E	U, Pb	Heavy fraction of panned concentrate of stream sediment contains fluorite; galena; 400 ppm eU	White, 1952
24	1S,	33E	U, Mo	70-80 ppm eU, fluorite, molybdenite in 3 granite samples	White, 1952
25	1S,	33E	Mo	Molybdenite in granite	Sable, 1965, p. 207
26	1S,	33E		Fluorite in vein quartz	
27	1S,	34E	Pb, Zn, Sn	Sulfides and vein quartz in schist	
28	1S,	34E	Pb, Zn	Fluorite in small isolated body of granite; As, Pb, Zn by analysis in quartz veins	
29	2S,	31E	Sn	Clastic grains of cassiterite in Kekituk Conglomerate (Mississippian)	Reed, 1968, p. 31-33
30	2S,	32E	Pb, Zn, Sn	Skarn contains galena, sphalerite, malachite, axinite; up to 300 ppm Sn and 1,500 ppm W, and quartz-tourmaline-fluorite veins. Schist contains fluorite	•
31	2S,	32E	U	Heavy fraction of panned concentrate of stream sediments contains fluorite and 300 ppm eU	White, 1952
32	2S,	32E	Sn	More than 0.1% Sn in panned concentrate of stream sediments	
33	2S,	31E	Sn, Au	60 ppm Au and more than 0.1% Sn in panned concentrate of stream sediments	
34	2S,	34E	Mo	Molybdenite at contact of quartz veins with granite	
35	2S,	34E	Au, Ag	Pyritic zone in granite contains traces of Au and Ag, by chemical analysis	
36	2S,	34E		Fluorite in greisen in granite	
37	2S,	34E	Pb, Zn, Cu	Galena, sphalerite(?), chalcopyrite in quartz veins	Sable, 1965, p. 207
38	2S,	35E	Cu	Malachite and azurite in calcareous hornfels	
39	3S,	32E	Sn	More than 0.1% Sn in panned concentrate of stream sediments	
40	3S,	33E	Au?	Boiler and prospector's tools dated 1953. About 3 miles from coordinate location of 1932 Au placer claim	Heiner and Porter, 1972
41	4S,	31E	Cu	Chalcopyrite in sheared volcanic rocks	
42	5S,	31E	Cu	Chalcopyrite in brecciated quartzite of Kekiktuk Conglomerate (Mississippian)	
43	5S,	32E	Cu	Chalcopyrite in phyllite interbedded with chert and volcanic rocks	
44	4S,	40E	Mn	5% Mn in sample of manganiferous siltstone from interval 175 feet thick in Lower Cretaceous rocks that includes thin layers of Mn nodules	Detterman, 1975, p. 24
45	4S,	41E	Mn	0.2% Mn in sample of Lower Cretaceous siltstone	Detterman, 1975, p. 24
46	6S,	34E	Cu	Malachite and azurite in sandstone	
47	8S,	35E	Cu	0.5% Cu and 0.15% Pb in sample of quartz veins in green slate and volcanic rocks	Brosgé and Reiser, 1968
48	12S,	42E	W, Sn	200 ppm W; 10 ppm Sn in sample of gossan in rhyolite	Brosgé and Reiser, 1968
49	12S,	43E	Pb, Zn	Galena, sphalerite, chalcopyrite in quartz at contact of rhyolite dike in quartzite; 0.28% Zn in sample	Brosgé and Reiser, 1968
50	12S,	43E	Pb, Cu	Mineralized zone in phyllite near small rhyolite dike. As much as 2% Pb, 1% Cu, 0.16% Zn, 0.002% Mo in samples	Brosgé and Reiser, 1968
51	12S,	43E	Pb	Gossan in quartzite and conglomerate; 0.05% Pb in sample	Brosgé and Reiser, 1968
52	12S,	43E	Cu, Pb	Pyrite, chalcopyrite in greenstone at contact of conglomerate on phyllite; 0.06% Pb in sample	Brosgé and Reiser, 1968
53	12S,	43E	Pb	Galena veinlets in greenstone	
54	36N,	17E	Ba	Bed or lens of barite about 20 feet thick in interlayered chert, shale and mafic rocks about 5 miles from Wildlife Range	Brosgé and Reiser, 1968

[1] Where no reference is given, data are from fieldwork by E. G. Sable, 1957, 1958, 1969; H. N. Reiser and W. P. Brosgé, 1967, 1969; and R. L. Detterman, 1971.

Base from USGS 1:250,000 Topo Series:
BARTER ISLAND, 1959; FLAXMAN ISLAND, 1955;
DEMARCATION POINT, 1955; MT MICHAELSON, 1956;
ARCTIC, 1956; TABLE MOUNTAIN, 1956; CHRISTIAN,
1956, COLEEN, 1956, ALASKA.

N

Scale 1:500,000
5 0 25 miles
5 0 25 Kilometres

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey standards and nomenclature.

Preliminary Geologic and Mineral Resource Maps, (excluding petroleum) Arctic National Wildlife Range, Alaska

by W.P. Brosgé and H.N. Reiser, 1976

Sheet 4 - Mineral Resources