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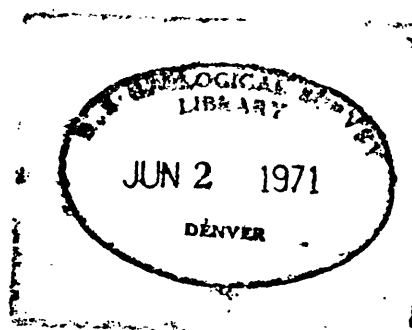
UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

474

GEOCHEMICAL DATA FROM THE NABESNA D-5 QUADRANGLE, ALASKA

By

N.A. Matson, Jr. and D.H. Richter



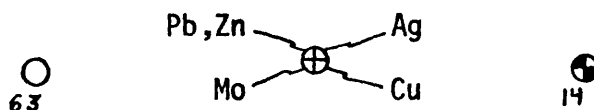
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This report is preliminary  
and has not been edited or  
reviewed for conformity with  
Geological Survey standards  
or nomenclature.

## MAP EXPLANATION

Nabesna D-5 quadrangle,  
Alaska



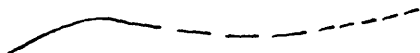
Stream sediment sample locality with map number on upstream side. Darkened quadrants indicate anomalous concentrations of Ag, Cu, Mo, Pb and/or Zn, in clockwise order from top. Example 14 is anomalous in Cu and Pb. See Table 1 for analytical values.



Rock sample locality and map number. See Table 2 for analytical values and description of samples.



Altered zone characterized by limonite staining from the weathering of disseminated sulfides, predominantly pyrite.



Approximate contact of intrusive rocks, long dashed where covered, short dashed where inferred.



Zone of alpine-type serpentinization in a sheared magnesite envelope. Locally includes knots of nephrite.

TABLE 1

Analyses of stream sediments  
Nabesna D-5 quadrangle, Alaska

Limits of determination shown in parentheses under element.

Map No.	Field No.	Concentration (ppm)									
		Ag (.5)	Au (.02)	B (10)	Cr (5)	Cu (5)	Mo (5)	Ni (5)	Pb (10)	V (10)	Zn (200)
1	69-ARh-261	N	L	70	100	70	L	100	10	200	L
2	69-ARh-262	N	L	50	150	70	15	150	L	200	L
3	69-ARh-264	L	L	50	100	50	L	70	L	200	200
4	69-ARh-265	L	L	100	150	70	7	100	15	200	200
5	69-ARh-266	N	L	100	100	50	L	70	30	200	L
6	67-ACx-249	.5	L	150	150	100	7	150	50	300	300
7	67-ACx-246	.5	L	100	150	100	5	100	30	200	200
8	67-AMn-85	1.5	L	100	200	100	N	150	20	200	200
9	67-AMn-88	1	L	150	150	200	30	200	30	700	1500
10	69-DW-138	.7	L	150	100	100	7	150	70	500	2000
11	69-PL-248	N	L	50	100	30	L	50	20	200	L
12	70-RL-150	N	L	30	200	150	L	150	10	500	N
13	69-PL-242	N	L	30	100	70	5	70	L	200	N
14	70-RL-138	L	L	70	150	150	L	100	30	300	L
15	70-RL-139	L	L	70	100	150	L	70	30	300	L
16	70-RL-140	.7	L	70	150	150	10	100	50	500	L
17	70-RL-148	N	L	50	150	70	L	70	15	500	L
18	69-PL-245	N	L	15	150	30	N	100	N	300	200
19	70-AMn-119	L	L	70	150	150	7	150	30	700	300
20	70-AMn-120	N	L	70	150	70	L	70	30	300	N
21	70-RL-147	L	L	70	150	200	7	150	30	300	L
22	70-RL-146	.5	L	70	150	70	L	70	15	300	L
23	70-RL-145	.7	L	70	150	70	5	70	30	500	200
24	70-RL-144	.7	L	70	150	100	5	70	30	300	L
25	70-RL-141	.7	L	70	150	150	L	100	30	300	300
26	70-RL-143	L	L	70	150	70	L	70	30	300	L
27	70-RL-142	.5	L	100	150	70	L	100	30	300	L
28	68-AMn-397	N	L	N	15	10	N	30	15	50	N
29	68-AMn-395	N	L	10	100	7	N	20	30	150	N
30	68-AMn-396	N	L	L	30	5	N	15	20	100	N
31	68-AMn-390	N	L	N	100	10	N	30	30	100	N
32	68-AMn-391	N	L	N	30	15	N	30	20	100	N
33	68-AMn-392	N	L	N	30	15	N	30	20	100	N
34	68-AMn-393	N	L	N	30	10	N	30	20	100	N
35	68-AMn-394	N	L	N	50	10	N	30	20	100	N

TABLE 1, cont.

Map No.	Field No.	Concentration (ppm)									
		Ag (.5)	Au (.02)	B (10)	Cr (5)	Cu (5)	Mo (5)	Ni (5)	Pb (10)	V (10)	Zn (200)
36	70-RL-1	N	L	20	500	100	5	100	30	300	N
37	70-RL-2	N	L*	30	150	100	L	100	20	200	N
38	70-RL-4	N	L	30	200	100	5	100	20	300	N
39	70-RL-5	N	L	50	300	100	L	50	30	300	N
40	70-RL-7	N	L	15	700	200	L	150	15	300	N
41	70-PCL-13	N	L*	10	1500	150	L	150	10	500	N
42	70-RL-6	N	L	20	200	70	L	70	30	300	N
43	70-AMn-25	N	L	15	150	100	L	100	30	300	N
44	70-AMn-33	N	L*	30	150	150	L	100	15	500	N
45	70-AMn-32	N	L*	50	150	150	L	100	30	300	L
46	70-PCL-15	N	L*	20	700	100	L	150	15	500	N
47	70-PCL-14	N	L*	15	1500	150	L	150	10	500	N
48	70-AMn-26	N	L	15	150	100	L	50	30	300	N
49	70-AMn-30	N	L	15	200	150	L	100	20	300	N
50	70-AMn-28	N	L	15	150	100	L	70	30	300	N
51	70-AMn-29	N	L	20	150	70	L	50	50	300	N
52	68-AMn-398	N	L	N	30	30	N	30	15	100	L
53	67-AMn-67	N	L*	30	70	70	N	30	30	200	N
54	67-ACx-209	N	L	30	150	50	N	50	20	200	L
55	67-AMn-52	N	L	30	50	30	L	30	10	200	N
56	67-AMn-51	N	L	50	70	50	5	50	20	200	N
57	67-ACx-192	N	L	20	150	50	5	100	L	300	N
58	67-AMn-55	N	L	50	150	50	5	100	10	300	N
59	67-AMn-54	N	L	50	150	70	N	150	15	200	N
60	67-AMn-80	N	L*	50	100	70	N	150	15	200	L
61	67-AMn-79	N	L	50	150	50	N	70	20	200	N
62	67-ACx-208	N	L	30	700	70	N	300	10	300	200
63	67-AMn-66	N	L	20	300	50	L	150	15	300	L
64	67-AMn-65	N	L	20	150	70	N	50	15	200	N
65	67-ACx-207	L	L	70	70	50	10	100	15	200	L
66	67-ACx-206	N	L	30	150	50	N	70	30	300	N
67	67-ACx-199	N	L	50	150	70	N	70	20	300	L
68	68-AMn-374	L	L	30	150	100	7	100	30	200	300
69	68-AMn-371	N	L	20	150	70	5	70	20	150	L
70	68-AMn-373	N	L	20	150	100	5	100	30	150	L
71	68-AMn-377	N	L	20	150	70	L	70	30	200	200
72	68-AMn-367	N	L	30	150	70	5	70	30	150	200
73	68-AMn-381	N	L	20	150	50	N	70	30	300	L
74	68-AMn-382	N	L	15	100	30	L	50	30	150	200
75	67-AMn-57	N	L	20	150	30	N	100	20	300	N

TABLE 1, cont.

Map No.	Field No.	Concentration (ppm)									
		Ag (.5)	Au (.02)	B (10)	Cr (5)	Cu (5)	Mo (5)	Ni (5)	Pb (10)	V (10)	Zn (200)
76	67-AMn-64	N	L	50	200	70	5	150	30	300	300
77	67-ACx-205	N	L	50	500	50	5	200	20	300	200
78	67-AMn-61	N	L*	100	1000	50	N	200	15	300	N
79	67-ACx-204	N	L	30	150	30	5	100	L	300	200
80	67-AMn-63	N	L	30	1000	50	7	200	15	300	200
81	67-AMn-68	N	L*	50	200	50	7	70	20	300	300
82	67-AMn-62	N	L*	70	3000	30	N	700	10	200	200

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L = detected but below limit of determination; \* = usual limits of determination do not apply due to use of different sample weight; N = not detected.

Gold by atomic absorption. Analysts: Campbell, W.L.; King, H.D.; Meier, A.L.; Miller, R.L.; Murrey, D.G.; Rickard, M.S.

Other elements by semiquantitative spectrographic analysis. Analysts: Curry, K.J.; Motooka, J.

TABLE 2

Analyses of rocks, alteration zones and veins  
Nabesna D-5 quadrangle, Alaska

Limits of determination shown in parentheses under element.

Map No.	Field No.	Concentration (ppm)									
		Ag (.5)	Au (.02)	B (10)	Cr (5)	Cu (5)	Mo (5)	Ni (5)	Pb (10)	V (10)	Zn (200)
83	69-ARh-260	.1	L	10	30	150	20	150	N	700	L
84	67-ACx-194	N		15	30	300	N	30	30	500	200
85	67-AMn-77	N	L	10	50	30	10	15	15	200	N
86	67-AMn-78	N	L	20	20	7	50	5	10	150	N
87	67-ARh-231	N		50	300	150	N	150	10	200	200
88	68-AMn-383	N	L	10	15	20	N	30	N	100	L
89	68-AMn-385	N	L	10	150	30	L	30	L	150	L
90	68-AMn-386	N	L	10	70	30	N	30	L	150	L
91	67-ARh-220	.7		100	150	150	N	70	30	300	300
92	67-ARh-221	N		30	15	150	N	50	15	300	200
93	68-AMn-375	N	L	L	100	70	N	100	L	200	N
94	68-AMn-376	N	L	50	150	100	7	100	10	300	300
95	68-AMn-369	N	L	30	70	150	L	30	L	150	N
96	67-ACx-257	L		70	150	150	N	150	70	150	L
97	68-AMn-378	N	L	L	20	50	N	30	N	700	N
98	68-AMn-379	N	.02	L	70	100	N	30	N	300	N
99	68-AMn-380	N	L	N	5	70	N	7	L	70	N
100	67-ACx-256	N		30	70	30	N	70	20	300	200
101	67-ACx-201	N		L	30	70	N	70	20	500	300
102	67-ACx-200	N	.02	15	2000	20	L	2000	15	50	L
103	67-ACx-235	N		70	700	150	N	150	15	300	200
104	67-ACx-214	N	L	50	150	15	N	15	10	70	N
105	67-ACx-222	N		50	3000	15	N	2000	L	50	200
106	67-ACx-223	N	L	L	5000	15	30	500	20	50	L
107	68-ARh-375	N	L	10	2000	7	N	2000	N	70	L
108	67-ACx-240	N	.04	30	20	500	N	100	10	700	300
109	68-AMn-414	N	L	L	15	70	7	30	N	100	200

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= detected but below limit of determination; N = not detected.

Gold by atomic absorption. Analysts: Campbell, W.L.; Friskin, J.G.; King, H.D.;  
Meier, A.L.; Miller, R.L.; Rickard, M.S.

Other elements by semiquantitative spectrographic analysis. Analysts: Curry, K.J.;  
Farley, Arnold, Jr.; Motooka, J.; Siems, David.

## Description of Samples

Map No.	Elevation	Description
83	2130'	Grab sample of pyrite-bearing gray quartzite pendant in metadiorite.
84	3100'	Grab sample of thinly banded, garnet-rich hornfels.
85	4000'	Grab sample of brown-rusty limonite-stained clay.
86	4000'	Grab sample of yellow ocher-stained clay.
87	3600'	Grab sample of 5-foot thick diorite dike.
88	2620'	Random chip sample of silicified phyllite with quartz veinlets.
89	2660'	Grab sample of altered dike.
90	2660'	Grab sample of metaconglomerate.
91	4100'	Grab sample of gray phyllite.
92	4060'	Grab sample of magnetite diorite.
93	4130'	Chip sample across 25-foot stained shear zone in graphitic phyllite.
94	4280'	Chip sample of sheared and stained phyllite.
95	4430'	Chip sample across 130 foot thick stained shear zone in phyllite.
96	5200'	Grab sample of stained, foliated hornfels.
97	4610'	Grab sample of chloritic phyllite.
98	4610'	Grab sample of a stained silicified dike.
99	4590'	Chip sample of stained quartz vein in sheared phyllite.
100	5450'	Grab sample of fine-grained biotite diorite.
101	5200'	Grab sample dark-gray hornfels.
102	4800'	Grab sample of sheared, silicified and iron-stained limestone.
103	4200'	Grab sample of diorite dike.
104	5250'	Chip sample of iron-stained metaquartzite.

## Description of Samples

Map No.	Elevation	Description
105	5180'	Grab sample of banded serpentinite.
106	5200'	Grab sample of interlaminated stained limestone and calcareous siltstone.
107	4800'	Chip sample across 100 feet of magnesite-bearing carbonate associated with serpentinite.
108	3900'	Chip sample of magnetite diorite.
109	3320'	Chip sample of silicified and stained thin-bedded siltstone.



## ANALYTICAL NOTES

### Nabesna D-5 quadrangle, Alaska

1. All stream sediment analyses performed on -80 mesh fraction.
2. In all analyses, excepting gold, the results are reported to the nearest number in the series 0.1, 0.15, 0.2, 0.3, 0.5, 0.7, 1, ...
3. Copper, lead, molybdenum, and zinc are considered anomalous if they are reported in concentrations approximating, or greater than, 3 times their mean background. Mean background in the area closely approximates average crustal abundance: i.e. copper, 55 ppm; lead, 12.5 ppm; molybdenum, 1.5 ppm; zinc 70 ppm.
4. Gold and silver are considered anomalous for all values at or above their limits of determination since these limits are greater than 3 times the average crustal abundance for these metals.
5. As, Ba, Be, Bi, Ca, Cd, Fe, La, Mg, Mn, Nb, Sb, Sc, Sn, Sr, Ti, W, Y and Zr were also looked for and significant anomalies are as follows:

<u>Sample No.</u>	<u>Anomalies (values in ppm)</u>
9	Ba 3000, Cd 20
10	Ba 3000
22	Sr 1500
40	Sr 1500
41	Sr 1500
76	Ba 3000
85	Ba 3000
86	Ba 3000
87	Ba G(5000)
96	La 200, Nb 70
100	Ba 3000
102	Sn 20
105	Sn 20
106	Sn 70

G = greater than the value shown