



Energy, Mines and  
Resources Canada

Geological Survey  
of Canada Sector

Énergie, Mines et  
Ressources Canada

Secteur de la Commission  
géologique du Canada

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Ottawa, Ontario  
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25 April 1991

F.G. Hewett (and B. Way)  
Newhawk Gold Mines Ltd.  
860 - 625 Howe Street  
Vancouver, B.C.  
V6C 2T6

Dear Fred, Barry, and Tony:

Bruce put these analyses together for samples that he, Don Harris, and I collected in 1988. Bruce requested me to send them to you. We stopped at this locality with a helicopter and rapidly collected these five samples (889084 to 88) from west to east about 20 to 30m apart about 50 to 20m (?) south of Mitchell Creek (see enclosed sketch map and copy of photo #10-288). Most of the samples were taken in thick alders and only the two(?) eastern ones were from bare outcrop. The reason that we sampled this locality is because I remembered from my 1961 work some very high sulphide-bearing rocks in the area. These are probably highly metasomatized Stuhini Group sedimentary rocks in close proximity to a porphyry system (note high  $K_2O$  values).

Note that the two high-sulphide (pyrite) rocks contain interesting levels of gold and anomalous amounts of molybdenum, arsenic, selenium, and other elements. The two western samples also contain elevated copper. Immediately to the east is a well-developed quartz vein stockwork with pyrite, chalcopyrite, tennantite, and molybdenite with low levels of copper and molybdenum but unfortunately no gold of consequence.

This area, because of its interesting mineral occurrences and low elevation, would be a good area to concentrate on early in the season (But watch out for bears!). I would prospect carefully all low outcrops especially south of Mitchell Creek

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Canada

and up the hill south to the main fault bounding the alteration zone (base of waterfalls). Altered and mineralized rocks should extend north and south under the main bounding fault. Therefore, if any zones of interest are found they could have larger tonnage potential than might be apparent from the outcrop distribution of altered rocks.

Sincerely,



R.V. Kirkham

RVK/lo

Encl.

cc: A. Ransom  
S. Roach  
S.B. Ballantyne  
D.C. Harris



G 8908051-10-288

GEOGRAPHIC AIR SURVEY

17 AIRPORT ROAD, MUNICIPAL AIRPORT, EDMONTON, ALBERTA T5G 0W8

MOTAG

GLACIER

RVK, SBB, DCH April 25/91

Approximate limit  
of area recommended  
for detailed geology  
and lithochemistry

untested altered  
rocks in  
another  
fault by DCH

main area  
of interest referred to  
in accompanying letter

N 35-45°  
N 9°

MITCHELL

Mitchell Creek

Ag Zone

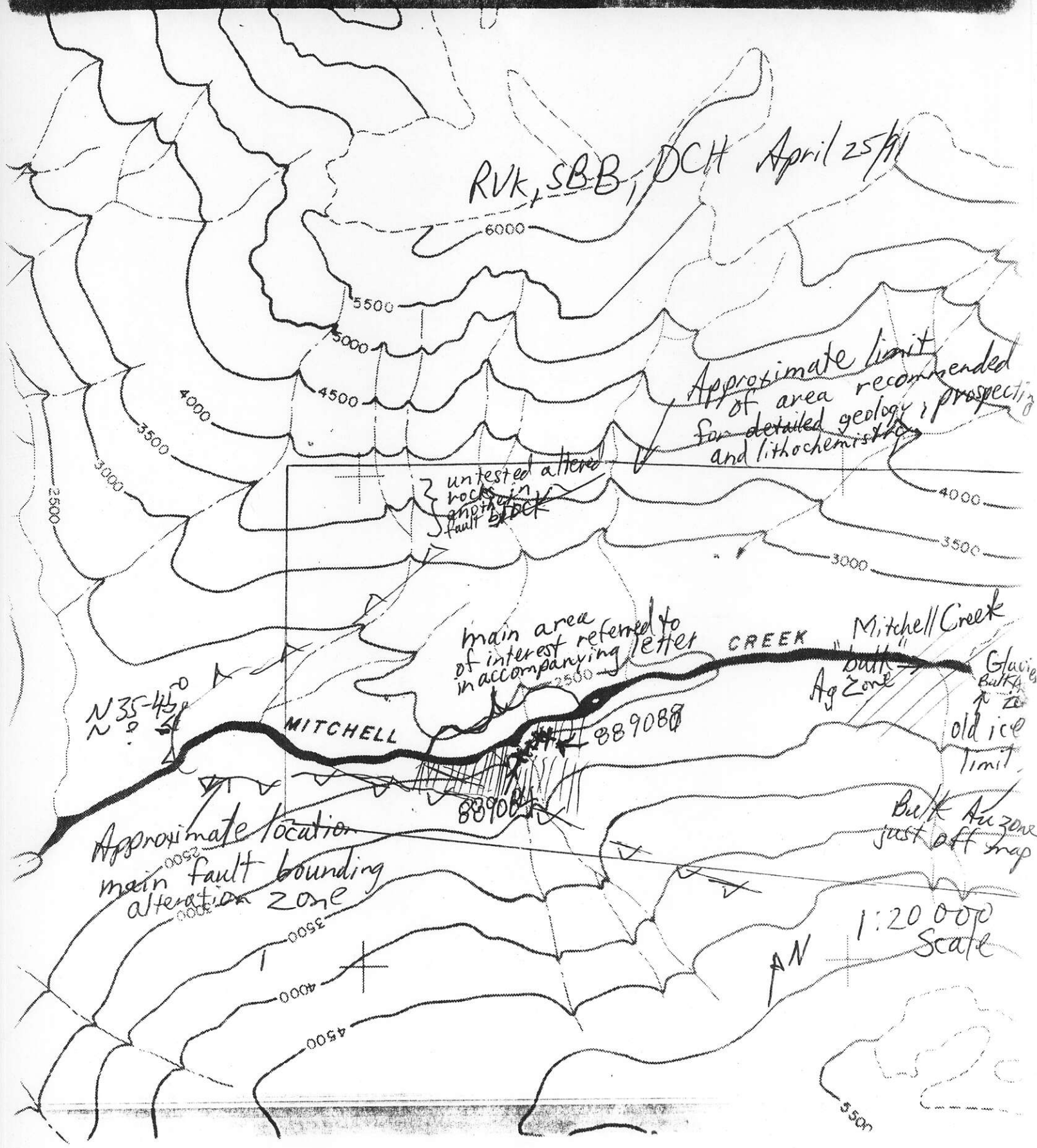
Glacier  
Bulk Ag  
zone  
old ice  
limit

Bulk Ag zone  
just off map

Approximate location  
main fault bounding  
alteration zone

1:20,000  
Scale

AN



104B	889084	889085	889086	889087	889088
F	4924	4166	1648	5386	1143
Cl	<100	<100	<100	<100	<100
S ppm %	35413 3.69	47156 4.60	- 34.6	95592 9.31	- 33.0
Mo	14	42	210	44	226
Sb	8.2	40.0	10.3	3.9	5.0
Ba	6530 5900	2900 2800	3000 3100	2800 2800	200 260
W	14	14	3	19	10
Ag	0	0	4	0	5
Au ppb	180	58	1740	57	1510
Fe % Fe <sub>2</sub> O <sub>3</sub> T %	3.5 5.70	4.3 6.30	25.9 45.6	7.3 12.5	21.6 42.6
Zn	600 430	480 250	<100 22	160 63	<100 21
As	44	41	336	10	314
Se	5	10	46	13	120
Cu	1400	710	200	49	82
Pb	240	210	200	55	79
K <sub>2</sub> O	10.1	9.06	2.96	7.35	1.95
Na <sub>2</sub> O	0.40	0.60	0.17	3.20	0.18
CaO	3.52	1.59	0.19	0.97	0.11
SiO <sub>2</sub>	53.5	54.5	18.1	50.2	23.4
TiO <sub>2</sub>	0.36	0.69	0.27	0.61	0.21
Al <sub>2</sub> O <sub>3</sub>	15.3	18.0	5.50	14.0	5.14