

Energy, Mines and **Resources Canada Geological Survey**

of Canada Sector

Energie, Mines et **Ressources Canada** Secteur de la Commission géologique du Canada

601 Booth Street Ottawa, Ontario KIA OE8

5 July 1991

F.G. Hewett Newhawk Gold Mines Ltd. 860 - 625 Howe Street Vancouver, British Columbia V6C 2T6

Dear Fred,

I assume that you have received the Bondar-Clegg analyses by now. The results can be characterized only as highly positive and very encouraging. I am truly delighted.

Results (see below) for both the Chibougamau Zone and North Brucejack enhance the potential of both of these zones. KQ-90-164, with 1.1 ounce gold and 5 ounces silver per ton, is from chips taken about 10 to 20cm apart over 3m. Because of difficulties in sampling I felt that the sample might be slightly higher than average grade. Hopefully you will be able to confirm these high grades with your channel samples. The zone also contains significant copper.

The North Brucejack results (KQ-90-157) (see below) support my conviction that despite the initial negative results for gold (letter to Barry Way, January 17, 1991) that this vein system warrants significant work. I will have to check sample 157A (0.29 oz Au and 16.1 oz Ag/t) to see if it contains electrum.

Sample KQ-89-111C (0.33 ounces gold and 114.3 ounces silver per ton) from the Hanging Glacier area is from a 10cm-wide vein with visible electrum and ruby silver. It is on strike east of the veins in which Ken Hicks and I found ruby silver in 1986 (see letter to F.G. Hewett, March 31, 1988). This zone of several small, anastomosing, sub-parallel quartz-calcite-barite gash veins is about 3m wide and has been traced for over 150m along strike. Values in the vein system show a strong nugget effect. The scattered high gold and silver values in this vein system have convinced me that it should be sampled systematically at very close intervals (~2-4m?). As this is clean glaciated outcrop, it should be easy to do channel sampling with a saw.



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Samples KQ-90-150A to 151B with anomalous gold come from the southeast portion of the bare outcrop below the Hanging Glacier. These samples are from highly altered pyritic hornfelsic Stuhini Group sedimentary rocks and plagioclase-hornblende ("diorite") porphyry. These rocks also contain small amounts of chalcopyrite. I interpret this to be the top of a potentially large (?) copper zone anomalous in gold. This anomalous area might be in some way related to that in the Golden Marmot area (#4 area reported to Fred Hewett, March 31, 1988). This gives encouragement for both high-grade vein systems and bulk tonnage zones in the Hanging Glacier area. Undoubtedly more work should be done in this area. This summer I will try to put in at least two geology and lithochemistry traverses down bushy streams to the Sulphurets Glacier adjacent to the streams that drain the Hanging Glacier.

For the Iron Cap area there is also a little encouragement. KQ-89-107B and C and 108 are anomalous in gold and 108A, a chalcopyrite-rich vein doesn't contain gold but has over an ounce silver per ton. These samples are from near the base of the ice at the top of the Iron Cap. There are also low copper values in this area. KQ-90-142B, from a 3m-wide brecciated quartz vein about 250m west of the Brucejack Lineament, also has slightly elevated gold values.

Several samples with copper (analyses not available yet) from several different areas spread over several kilometres have low (100 to 900 ppb) but consistent gold values (listed below). This feature is encouraging suggesting, that if substantial copper zones can be found, they should contain byproduct or possibly even coproduct(?) levels of gold.

Samples KQ-90-144B to 145I, with anomalous gold, were taken from the Sulphurets Gold Zone down the steep hillside mainly below the lowest thrust fault. Sample 145A, with the high value (4010 ppb Au), is from a 10 to 20 cm-wide quartz vein with pyrite and molybdenite. Sample 145D, with 1810 ppb Au, is from an altered monzonite or diorite(?) porphyry with some copper. This area is part of the Sulphurets Gold Zone drilled by Granduc Mines Ltd. and Esso Minerals.

Other samples with high gold and silver values are from known zones (e.g. KQ-89-115 "Notch" (Old Yeller), KQ-89-117 West Zone, KQ-89-118 West Zone, R2-1300' Level, and KQ-90-161 Bielecki Zone).

If you have any further questions about the results let me know. These values confirm that much more work is warranted on the property. We very much appreciate Newhawk paying for these analyses. In this case the company has been justly rewarded. I hope that our highly cooperative relationship continues.

Best regards, ou Muthan

R.V. Kirkham

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Selected Analyses, June 1991

	Au ppb (oz/t)		λg ppm (oz/t)		Sample Numbers	
					RVK	Geochem.
Chibouganau Soae						
chips over 3m	38500	(1.12)	170	(5)	KQ-90-164	
high-grade Cu (near hanging wall of zone)	7 90000	(>2.6)	320	, 6	16 4 7	
low-grade py seprock (near footwall of zone)	540		< 2		16 4AA	
3m into footwall	110		< 2		16 4B	
3m into hangingwall	.39		3		164D	
North Brucejack	9200	(0.29)	552	(16.1)	KQ-90-157A	
	23		3		157 B	
	216		924	(26.5)	157C	
	3240	(0.09)	29		157D	
	407		24		157 E	
	225		96	(2.8)	157 F	
	241		13		157G	
Hanging Glacier						
10-20 cm vein-gn, sp	< 7		21		KQ-89-111A	1048 899699
20-50 cm vein-gn, sp	84		62		111B	700
10 cm vein-ruby Ag & electrum	11300	(0.33)	3920	(114.3)	1110	701
pyritic hornfels 150^{M}_{Λ} south of bare outcrop	170		30		112 <u>A</u>	702
pyritic hornfels	350	1	< 2		KQ-90-150A	
	628		< 2		150 B	
pyritic porphyry	310		< 2		151A	
** **	256		< 2		151B	

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Selected Analyses, June 1991 (Cont'd)

	Au ppb (oz/t)	Ag ppm (oz/t)	Sample Numbers	
			RV	Geochem.
Copper-bearing samples	120	< 2	KQ-89-107B	104B 899691
	491	< 2	107C	692
	271	5	108	693
cp-rich vein	48	40	108A	694
	416	< 2	KQ-90-136	1.12.12.1
	863	< 2	136A	
	110	< 2	136B	
	110	< 2	136C	
	757	< 2	144B	
	1810	< 2	145D	
	949	< 2	145E	
	222	< 2	145F	
	350	< 2	150A	
	628	< 2	150B	
	310	< 2	151A	
	256	< 2	151B	
	238	8	173B	
	963	3	173C	

Average = 380 (0.01)