Acceptance of the SGA-Newmont Gold Medal 2019

I received the news that I’d been awarded the SGA-Newmont Gold Medal for 2019 while in the small coastal town of Puerto San Julián in Patagonia, southernmost Argentina – where Charles Darwin and the Beagle made landfall in 1834. Perhaps I got the award for contributions to discovery, for writing a few well-received papers in my spare time or a bit of both. Nonetheless, I felt honoured and thrilled to get it although one of my proposers later told me that he felt relieved.

I’d love to regale you with some good stories of life on the road as a geological consultant in 100 countries and for more years than I care to remember (or admit), but time constraints and the formality of the occasion unfortunately prevent it. Some of you may have conducted fieldwork in Afghanistan (where I was visited by Kalashnikov-toting tribesmen while sleeping under the stars), Dominica (almost washed away in a thunderstorm), Greenland (living on an ice-breaker), Madagascar (using Mr Oppenheimer’s blue suede-lined private helicopter), North Korea (confronted by a phalanx of tanks on straying into the DMZ) or Tibet (a two-day property inspection extended to three weeks by diabolical weather); however, I suspect no one has had the pleasure of working in all of them.

On occasions like this, it seems customary to address a topic of greater significance than one’s own professional life. I’ve chosen to say a few words about the continuing importance and benefits of geological fieldwork, over and above the obvious ones of seeing the world, enjoying the natural environment and staying reasonably fit without an expensive gym membership. My proposition is that mapping and drill core logging of many mineral deposits and prospects throughout single metallogenic provinces or, even better, globally enables appreciation of geological features, relationships and processes that are rarely apparent from detailed, single-deposit studies, especially when these are predominantly laboratory based. Using examples with which I’m most familiar, recognition of the significance of advanced argillic lithocaps, alteration-mineralization telescoping and diatreme breccias in porphyry copper systems or the linkages between porphyry copper and epithermal deposits requires comparative studies for their proper appreciation. Subsequent detailed analytical studies of individual localities can then enhance understanding and contribute further to genetic interpretation.

Furthermore, I would argue that it is precisely such overarching features and concepts that, once they have become familiar to the exploration community, advance comprehension of mineral systems and, as a direct consequence, increase the effectiveness of exploration and lead to discovery. In terms of the above examples, deep drilling for porphyry copper deposits beneath advanced argillic lithocaps and high-sulphidation epithermal mineralization is fast becoming commonplace in attempts to secure the deep copper resources that will be needed for our future low-carbon society.
If these scientific and economic benefits of fieldwork are accepted, then obviously we need future generations of field-oriented economic geologists who are broadly experienced and capable of making the observations that can lead to new ways of looking at familiar and supposedly well-understood ore deposit types. Suitable candidates will need to develop competency in the many rapidly expanding facets of the core earth-science disciplines as well as familiarity with a broad spectrum of ore deposit types and their potential interrelationships. And, of course, an awareness of financial, mining, metallurgical, social, environmental and safety issues is also mandatory. The recent graduates who are most likely to fill this future role are those committed to being exposed to as much geology and mineralization as possible, to travel widely and to take the rough with the smooth. Garnering the credentials to become an economic geology consultant is certainly an effective way of satisfying these requirements as well as the adage: ‘the best geologists are the ones who’ve seen the most rocks’, to which I would add ‘especially if they’re mineralized’.

My geological life has been devoted to and motivated by fieldwork: trying to learn as much as possible about mineralized rock relationships in arc terranes and elsewhere and their direct application to exploration and discovery. I commend this career path to any young aspiring geologist able to cope – indeed flourish – with an unconventional lifestyle. Fieldwork led to my receiving this prestigious medal for which I’m indebted to the SGA as well as to the literally thousands of field geologists of well over 100 nationalities who have guided and inspired me on the outcrop, in the core shed and after work. And, of course, thanks to Newmont Goldcorp for kindly donating part of its 2019 gold production.

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