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Tectonomagmatic Influences on Metallogeny
and Hydrothermal Ore Deposits:
A Tribute to Jeremy P. Richards

Ali Sholeh and Rui Wang, Editors

The Society of Economic Geologists, Inc.



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Foreword



Jeremy P. Richards (1960–2019)

This publication is dedicated to the memory of Jeremy Richards, who studied many aspects of metal deposits worldwide, at global to local scales, from their relationship to tectonics to the role of metal resources in sustainability.

Jeremy developed an early interest in geology from visiting historic mines in the Yorkshire Pennines of his native England. He studied geology at the University of Cambridge (B.Sc., 1983), then at the University of Toronto (M.Sc., 1986), followed by a Ph.D. degree at the Australian National University in 1990 and a postdoctoral position at the University of Saskatchewan (1990–1992). He taught at the University of Leicester (1992–1997) and then the University of Alberta (1997–2017) before joining Laurentian University as a Canada Research Chair in Metallogeny at the Harquail School of Earth Sciences and Mineral Exploration Research Centre (HES-MERC).

Early in his career Jeremy developed an in-depth understanding of petrochemistry and isotope geology that was effectively brought to bear on regional-, district-, and deposit-scale aspects of metallogeny, in particular porphyry and epithermal systems. His studies began in Zambia and then Papua New Guinea, followed by the central Andes. Latterly, his efforts were focused on postsubduction deposits, particularly in the Tethyan belt, from Turkey through Iran and Pakistan to Tibet, as well as Archean porphyry-style deposits (e.g., in Namibia and Canada). Wherever he focused his attention, it was the tectono-magmatic settings and controls of ore genesis that captivated his geologic interest, as reflected in his many publications—in particular, his most highly cited "Tectono-magmatic precursors for porphyry Cu-(Mo-Au) deposit formation" (*Economic Geology*, 2003).

Jeremy inspired many because he viewed porphyry and epithermal systems from a holistic perspective, encompassing geodynamics, tectonics, magma chemistry, and metal endowment. This structured and systematic approach to economic geology embodied the mineral systems concept.

He was influential as an economic geologist because his lucid and easy-to-understand writing style complemented his breadth of interest and ability to pinpoint topical questions to address.

Jeremy was a creative researcher with original interpretations, many of which resulted in provocative papers that led to debate and new research avenues. He never shied away from controversial issues, whether on fairness and equity, publishing practices, or university governance. His outspoken commentary gained him some notoriety—and many followers. He collaborated with a wide range of colleagues and mentored many students and postdoctoral fellows, particularly from the countries where he worked. His efforts to help students become better scientists was well known, emphasizing a focus on fundamental questions, insightful illustration, and clarity of writing.

A committed worker and humanist at heart, Jeremy also demonstrated intellectual leadership with his early critical assessment of the impact of resource extraction on sustainable development. His research in Vietnam, Nigeria, northern Canada, and elsewhere led him to argue that metals must be considered "irreplaceable," to encourage conservation of use. In addition to his publications on the topic, he organized and edited the book *Mining, Society, and a Sustainable World* (Springer, 2009) and chaired the Canadian Geoscience Council Standing Committee on Sustainable Mineral Resources Development.

It is this delicate balance between mineral exploration and sustainable development that we continue to grapple with today. BHP has at its core a desire to bring people and resources together to build a better world, and Jeremy was a strong advocate of this mission through his teaching and research at Laurentian University. As the environment in which we conduct research and exploration becomes ever more complex, Jeremy's holistic view of mineral deposits and their custodianship gains increasing relevance.

BHP and HES-MERC are proud to sponsor this memorial volume to honor and promote the dynamic, creative, and socially progressive thinking for which Jeremy was renowned, and to support his vision of Open Access publications. He laid an exemplary foundation for how to move forward together in continuing to unite people and resources to improve the world.

Keenan Jennings
Vice President, Metals Exploration
BHP

Pedro J. Jugo
Associate Professor, on behalf of HES-MERC
Laurentian University

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