



Future Understanding of Tectonics, Ores, Resources, Environment and Sustainability

Skarn Deposits

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¹ EGRU, James Cook University; ² USGS, Mineral Resources Program

James Cook University

3 June 2017

9 am - 5pm

Course Description

Skarn deposits are some of the largest ore deposits in the world but can be complicated in the field. This one-day workshop is designed to help explorers understand skarn deposits with common sense exploration concepts and easy to apply mineralogical guides. We will clarify the basic concepts and terminology, explain the current understanding of skarn-forming processes, and summarize the general characteristics of major skarn types. The focus will be on the zonation patterns in skarns that are useful in exploration with a discussion of how the zonation pattern varies in different environments. The workshop will cover the following topics:

1. Introduction, definition and mineralogy
2. Classification and terminology
3. Skarn-forming processes and evolutionary stages
4. General characteristics of major skarn types
5. Zonation in skarn systems
6. Factors affecting the formation of skarns and zonation patterns
7. Skarn exploration techniques.

The workshop will include hand samples to demonstrate various skarn minerals, skarn types, and zonation patterns.

Date:	3 June 2017
Location:	James Cook University. Room to be advised
Minimum:	15
Catering:	Morning/afternoon tea & lunch will be provided
Course fee:	EGRU Members \$440.00
(GST Incl)	Non-EGRU Members \$550.00
	Full time student \$225.00 - student registration will not be confirmed till minimum full registrations are achieved.
Registration:	http://www.jcu.edu.au/futores

Presenters

Zhaoshan Chang

EGRU Director, James Cook University, Australia

Zhaoshan received his PhD degrees on skarns from Washington State University, USA (WSU), in 2003, and from Peking University, China, in 1997. Between 1997 and 2000 he worked as a Lecturer at Peking University. In early 2004 he conducted a half-year postdoctoral study on LA-ICP-MS U-Pb zircon dating at WSU. From mid-2004 to 2011 he worked on epithermal and porphyry deposits at CODES, University of Tasmania, Australia, as a Research Fellow and then a Senior Research Fellow. In mid-2011 he moved to James Cook University to take up a Senior Lecturer position, and became the EGRU Director in July 2012.

Larry Meinert

Head of the US Geological Survey Mineral Resources Program

Larry is a world renowned expert on skarns. He received his PhD degree on skarns from Stanford University, USA, in 1980. After working for a short period of time in the industry, Larry took a faculty position at Washington State University in 1981. He left WSU in 2003 as a full professor. Since then Larry has been a professor in Smith College, an AAAS GSA/USGS Congressional Fellow, and is currently the head of the USGS Mineral Resources Program. He is also the chief editor of Economic Geology.