

PROGRAM

9th Freiberg Short Course in Economic Geology “Magmatic Ni-Cu-PGE deposits: petrogenesis and exploration”

Monday, December 6th, 2010

17:00-18:30	Registration (Department of Mineralogy, TU BAF)
19:00	Ice Breaker Party (Mineralogical Collection, Institute of Mineralogy)

Tuesday, December 7th, 2010

Introduction

09:00-10:30	Magmatic Ni-Cu-PGE deposits: Classification, distribution of deposits in time and space
10:30-11:00	Coffee Break
11:00-12:30	Magmatic Ni-Cu-PGE deposits: Petrological principles
12:30-14:30	Lunch

PGE deposits

14:30-16:00	Layered Intrusions: Terminology, general petrological models, origins of layering
16:00-16:30	Coffee Break
16:30-18:00	The Bushveld Complex, South Africa: Igneous stratigraphy, petrography, nature of parental magma

Wednesday, December 8th, 2010

PGE deposits

09:00-10:30	Bushveld Complex: Reef type PGE deposits (UG2, Merensky Reef)
10:30-11:00	Coffee Break
11:00-12:30	Bushveld Complex: Contact-style PGE deposits (Platreef)
12:30-14:30	Lunch
14:30-16:00	PGE deposits of the Stillwater (USA), Great Dyke (Zimbabwe), Lac des Iles (Canada), and Stella (South Africa) intrusions
16:00-16:30	Coffee Break
16:30-18:00	PGE deposits of the Karelian and Kola cratons, Finland and Russia

Thursday, December 9th, 2010

Ni-Cu deposits

09:00-10:30	Ni-Cu deposits hosted by volcanic (or subvolcanic) rocks: Komatiite-hosted deposits of the Yilgarn, Superior and Zimbabwe cratons
10:30-11:00	Coffee Break
11:00-12:30	Ni-Cu-(PGE) deposits hosted by intrusions emplaced into sulfidic-pelitic rocks: Kabanga (Tanzania), Pechenga (Russia), Thompson (Canada), Finnish Ni-belt
12:30-14:00	Lunch

Thursday, December 9th, 2010

Ni-Cu deposits

- 14:00-15:30 Ni-Cu-(PGE) deposits hosted by intrusions emplaced into evaporitic rocks: Noril'sk (Russia)
- 15:30-16:00 Coffee Break
- 16:00-17:30 Ni-Cu-(PGE) deposits hosted by intrusive rocks emplaced into sulfur-poor rocks: Santa Rita (Brazil), Nebo Babel (Western Australia)
- 19:30 Short Course Dinner

Friday, December 10th, 2010

Ni-Cu deposits

- 09:00-10:30 Ni-Cu deposits related to an astrobleme: Sudbury (Canada)
- 10:30-11:00 Coffee Break

Exploration criteria

- 11:00-12:30 Why are there no Ni-Cu deposits in large layered intrusions?
- 12:30-14:30 Lunch
- 14:30-16:00 Lithospheric architecture and its control on emplacement of PGE and Ni-Cu deposits
- 16:00-16:30 Coffee Break
- 16:30-18:00 General Discussion

Freiberg University of Mining and Technology



**9th FREIBERG SHORT COURSE
IN ECONOMIC GEOLOGY**

December 6-10, 2010

Professor Wolfgang Maier

University of Oulu, Finland

**Magmatic Ni-Cu-PGE deposits:
petrogenesis and exploration**



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