

VOCATIONAL REPORT

on

MANGANESE IN THE TWENTY-FIRST CENTURY

Short course held in Hungary

5-9, September, Veszprém, Hotel GIZELLA (H-8200 Jókai str. 48.)

The course was supported as main sponsor by National Office for Research and Technology, Hungary, MEC-07-4-2009-0237.

Scientific support: Mangán Mining and Processing Ltd. Úrkút, Institute for Geochemical Research, Hungarian Academy of Sciences, National Office of Research and Technology, Hungary, Hungarian Geological Society, Eötvös Loránd University, Department of Mineralogy, Hungarian Mining and Metallurgical Society, International Association on Genesis of Ore Deposits (IAGOD), Society for Geology Applied to Mineral Deposits (SGA).

The scientific program was the following:

SCIENTIFIC PROGRAM

Day 1 (5th, September, 2009)

Prof. Dr. Nicolas J. Beukes (University of Johannesburg, South Africa) – Precambrian manganese deposits geological setting, metallogenesis and paleoenvironmental implications

Prof. Dr. Jens Gutzmer (Bergakademie Freiberg, Germany, and University of Johannesburg, South Africa) – The giant Kalahari manganese field, South Africa

Prof. Dr. Michael Bau (Jacobs University Bremen, Germany) – Trace element scavenging mechanisms in marine manganese and iron oxide and carbonate sediments throughout Earth history

Day 2 (6th, September, 2009)

Tamás Vigh, István Farkas (Mangán Mining and Processing Ltd., Úrkút) – Úrkút Manganese Mine, past, present, and future

Prof. Dr. János Haas (Hungarian Academy of Sciences, Eötvös Loránd University, Budapest, Hungary) – Global, regional, and local natural environmental impact on Jurassic manganese formations

Dr. Habil. Tamás G. Weiszbürg et al. (Eötvös Loránd University, Budapest, Department of Mineralogy, Hungary) – Mineralogy of the Úrkút Manganese deposit

Márta Polgári C.Sc. et. al. (Hungarian Academy of Sciences, Budapest, Hungary) – Characterization and genetic aspects of the Úrkút Manganese deposit. The role of microbes in manganese accumulations in low temperature aquatic systems

Lóránt Bíró (Szeged University, PhD school) – 3D modelling and mathematical-statistical study of the manganese deposits, Úrkút.

Day 3 (7th, September, 2009)

Prof. Dr. Barrie R. Bolton (Monash University, Australia) – Geological setting and metallogenesis of Phanerozoic manganese deposits

Economics and market conditions for manganese today and exploration methods of land-based deposits – general perspective

Prof. Dr. James R. Hein (USGS, Menlo Park, USA) – Genesis and evolution of marine manganese deposits, economic issues, exploration methods, and international activities

8-9 September Excursions to Úrkút underground mine and Csárdahegy area and visit Jurassic formations in the vicinity of the Mn mineralization

Poster session

Igor G. Zhukov, Nuriya R. Ayupova (Institute of Mineralogy Urals Branch Russian Academy of Science Chelyabinsk district Miass, 456317 Russia): Manganese deposits of the Urals, Russia

Uros Herlec (Department of Geology, Faculty for Natural Sciences and Engineering University of Ljubljana, Askerceva 12, Ljubljana, Slovenia): Manganese deposits of Slovenia

Zoltán Szabó, Tamás Vigh (Mangán Mining and Processing Ltd. Úrkút): Scientific and industrial investigations of manganese ore deposits in Hungary, 1959-2009

Norbert Kávási¹, Tamás Vigh², János Somlai¹, Gábor Szeiler¹, Shinji Tokonami³, Tetsuo Ishikawa³, Yoshinori Yatabe³, Tibor Kovács¹ (¹Department of Radiochemistry, University of Pannonia, Veszprém, Hungary; ²Mangán Mining and Processing Ltd., Úrkút, Hungary; ³National Institute of Radiological Sciences, Chiba, Japan): Radiological qualification of Mn-rich black clay

After the presentations for 2 days field excursions took place, the participants visited the underground manganese mining at Úrkút, the Csárda Hill ancient open pit and the Nyírás Bauxite Mine (open pit).

On the course 28 persons registered (11 from abroad and 17 Hungarian), 21 participated. 5 Continents (Europe, Asia, Africa, Australia, America), 8 countries (Hungary, Slovenia, Germany, Portugal, Russia, South Africa, Australia, U.S.A.) were represented.

In the frame of the course 7 presentations were held by foreign scientific experts and 5 by Hungarian ones. The length of the presentations each was around 2-3 hours.

The contents of the presentations were summarized in the form of Abstract Volume (extended abstracts) published for the registered participants. The scientific papers are planned to publish as a special volume of an international journal.

The participants found the course and the excursions well organized, very useful and up to par. The atmosphere of the location was also friendly and comfortable, which is due to the staff of Hotel GIZELLA.

The group photo of the course participants and the mine visitors are below.

