

A Report on the International Symposium on Magmatic Ore Deposits (Covering Cr, PGE, Ni-Cu-Sulphide System) at IMMT, Bhubaneswar – V. Balaram, NGRI, Hyderabad; G.V. Rao, IIMT, Bhubaneswar and R.H. Sawkar, GSI, Bangalore

Institute of Minerals and Materials Technology (IMMT), Bhubaneswar, National Geophysical Research Institute (NGRI), Hyderabad, Geological Society of India, Bangalore and Society of Geoscientists and Allied Technologists, Bhubaneswar, jointly organized an International Symposium on Magmatic Ore Deposits (covering Cr, PGE, Ni-Cu-sulphides system) from 1st to 4th December, 2009 at IMMT, Bhubaneswar. A total of 120 research scientists and students representing several academic and research institutions had participated in the symposium. A pre-symposium Short Course and post-symposium Field Visit were also arranged. Six GSI officers from across the country, and representatives from three exploration companies such as Tata Steel, Orissa Mining Company (OMC), IMFA from India actively participated. The foreign participants came from UK, USA, Australia, Finland and South Africa. Several government agencies as well as a few mining companies such as OMC, IMFA, MSPL, etc supported this international event. This international conference provided the participants an opportunity to the latest concepts in the area of magmatic Ni-Cu-PGE deposits, exploration strategies and their mining.

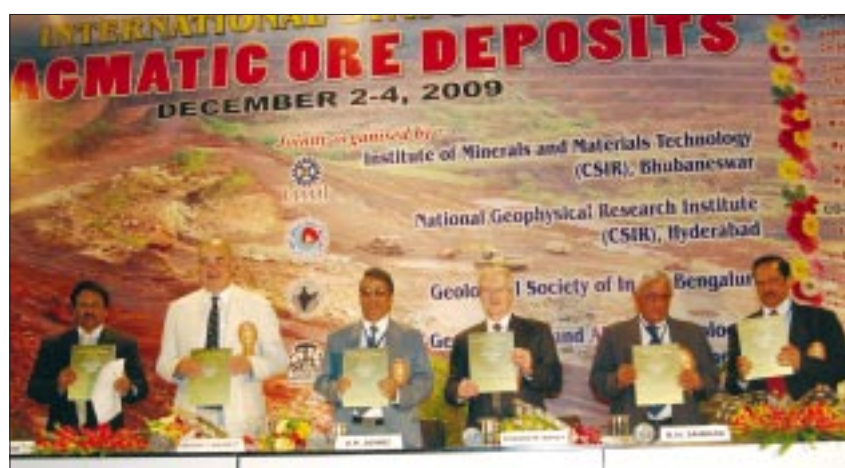
The conference was inaugurated by Dr. V.P. Dimri, Director, NGRI who welcomed the efforts of the conveners to bring scientists from academics, research institutions and mining companies from India and abroad to discuss about the magmatic ore deposits in general and PGE deposits in particular. Dr. G.V. Rao, Scientist-G, IMMT, welcomed the delegates.

Prof. Anthony Naldrett, who was also the chief guest on that occasion spoke about the IGCP Projects and the international conferences and field trips related to PGE research which happened so far around the world in the last 30 years. He hoped that the meeting would provide the required impetus for the future nickel and PGE research and much wanted mining of these valuable minerals in this country, as India has got very good potential. Prof. Edward Ripley from the Indiana University who carried out pioneering research studies related to PGE exploration in different parts of the world including US, is also of the opinion that India has got very good potential for Ni, Cr, Cu and PGE resources.

The feature of the symposium is a one-day Short Course entitled “New

Developments in Magmatic Ni-Cu-PGE Deposits” conducted by Prof. Tony Naldrett and Prof. Edward Ripley. Topics of talks ranged from komatiite-related deposits to anorthosite-related Cu-Ni occurrences to PGE-enriched chromitites. Various aspects of economic geology and exploration geochemistry of magmatic Ni-Cu-PGE deposits related to the evolution of mantle-derived mafic-ultramafic magmas, were also taught by these two international experts to more than 40 young researchers from different R&D Organizations/Universities across the country.

After the symposium a one day field visit was organized to the Boula-Nausahi igneous complex near Boula in Keonjhar District, Orissa, which is about 100 km from Bhubaneswar. About 60 delegates



Release of Abstract Volume of the Symposium. From left Dr. G.V.Rao, Scientist-G, IMMT; Prof. Tony Naldrett, University of Witwatersrand, South Africa; Dr. V.P. Dimri, Director, NGRI; Prof. Edward M. Ripley, Indiana University, US; Mr. R.H. Sawkar, Hon. Secretary, Geological Society of India, Bangalore and Dr. V. Balaram, Scientist-G, NGRI.

participated. The open cast mine of IMFA Pvt. Ltd. where prominent incidence of PGE was recorded over a strike length of 1.5 km by airborne mineral survey studies of GSI, was shown to the delegates. This field trip helped particularly the young scientists to have discussions with pioneering scientists from India and abroad regarding the concepts related to the magmatic and hydrothermal Ni-Cu-PGE deposits.

The following recommendations were made at the conclusion of the International Symposium: (i) India has got great deal of expertise in chromite and with respect to Ni and PGE there is a lot to be understood

in India. (ii) In view of the recent large increase in the prices of Ni and PGE, and because of their increased applications coupled with the current pace of industrialization in India, it is essential to intensify our research efforts on the topic of magmatic sulfide deposits. (iii) Encouragement and support from local government was essential for fostering interest in exploration by private companies and that fast action and total transparency are required in granting mining leases by the local state governments, if international mining companies are to be attracted to India. (iv) Specialized short courses and

workshops should be held each year on different topics related to magmatic Ni-Cu-PGE deposits and other allied aspects to benefit young scientists in India; (v) Industry and government should come together and support exchange of information to facilitate discovery and development of new resources in India, and finally, (vi) Only a concerted and integrated effort towards a conceptual understanding of the nature of the inter-relationship between the magmatic sulfides and their host rocks will facilitate the discovery of hidden Ni and PGE resources that occur within India.