

## NEWS AND NOTES

### **A Report on the International Field Workshop on Gold Metallogeny in India**

The Department of Geology, University of Delhi, and the National Geophysical Research Institute (NGRI), Hyderabad, jointly organized an International Field Workshop on 'Gold Metallogeny in India' from December 3-13, 2008. A total of 40 research scientists and students representing 11 academic and research institutions, two government geological surveys (GSI and USGS), and six exploration companies from India and abroad (Ivanhoe Mines Ltd., Pebble Creek, MSPL, Indo Gold Resources, Metal Mining India Ltd., Caracal Gold ) actively participated in the 10 days Conference-cum-Field-Workshop. The foreign participants came from USA, Canada, Australia, and the Russian Federation. The workshop format featured a two-day Opening Conference on 3<sup>rd</sup> and 4<sup>th</sup> December at NGRI, Hyderabad, followed by field trips to the Hutti Gold Mines and Kolar Gold Field in Karnataka, both in a Precambrian greenstone belt setting, and to the carbonate hosted Bhukia Gold Prospect in Rajasthan. The workshop ended on 13<sup>th</sup> December with a one-day Concluding Seminar at the University of Delhi.

The Seminar at Hyderabad was inaugurated by Shri Shantanu, Consul, Secretary to the Ministry of Mines, Government of India. Dr.V.P. Dimri, Director of NGRI, Ms. V. Manjula, Managing Director of Hutti Gold Mines Ltd. as well as the two conveners, Prof. M. Deb and Dr. V. Balaram gave their comments on the workshop.

In the inaugural session at Hyderabad, foreign participants presented papers dealing with gold perspective on orogenic gold mineralization, sediment hosted gold deposits, polymict conglomerates as indicators of gold mineralization, IOCG in Australia and auriferous vein formation in Nova Scotia and Sierra Foothills province of central California. The Indian participants made presentations on the initiatives taken in recent years to use geochemical

constraints in gold exploration in the country, followed by a brief overview of gold metallogeny in India. Papers discussing the overall geological and/or geochronological aspects of gold mineralization in Dharwar craton and Aravalli craton and metallogeny of individual gold deposits were also presented.

The concluding session at the University of Delhi included presentation of papers on gold metallogeny in the Eastern and Central Indian cratons and on a few additional deposits within the schist belts of the Dharwar craton. This was followed by the valedictory session that involved discussions on the geological, as well as some of the policy issues that emanated during the course of the workshop. The conveners, Prof. Mihir Deb and Dr. V. Balaram, spearheaded the discussion on the geological and analytical aspects respectively.

The field visits started with the visit to the deepest level of the greenstone-hosted Hutti lode gold deposit, and to the small satellite open pit mine at Uti. The participants also got the rare opportunity to visit the gold refinery in Hutti where they witnessed the processes related to the extraction of gold from ore and smelting of gold into conical shaped blocks weighing around 3 kg each. The next part of the field trip included a visit to the famous Kolar Gold Field (KGF). Because there is no current mining activity at KGF, the entire day was spent viewing the surface expression of the mafic volcanic rock stratigraphy that hosted the world-class gold and sulfide-rich quartz lodes, some of which were mined to a depth of more than 10,000 ft. The eastern margin of the KGF, which is marked by the Champion Gneiss with lesser polymictic conglomerate and the BIF-dominated western margin, were also examined. The final part of the field program included a visit to the structurally controlled gold-sulfide ore bodies hosted within the carbonate rocks, associated with syn-kinematic granites at Bhukia in Rajasthan.

Following recommendations emerged from the workshop: (i) Despite the good deposit-scale information available for

many ore deposits, it was important to look at the ores in a more regional context by understanding the regional structures and their kinematic history, and by obtaining better geophysical data; (ii) Evaluation of both metamorphic and magmatic fluids, which may have been active in ore formation, and developing robust geochronologic databases; (iii) Granulite metamorphic facies terranes should also be explored for gold; (iv) Create better geochronological and other state-of-the-art analytical facilities for advanced geochemical studies supported by government financial aid; (v) 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; (vi) Government agencies should not be competing with the private companies in areas where newly discovered resources are under lease; (vii) Industry and government should come together and support exchange of information, such as the present endeavor, to facilitate discovery and development of new resources in India; (viii) Advanced field and laboratory-oriented courses in the curriculum to reverse the trend of the general lack of interest in economic geology; (ix) Specialized short courses and workshops should be held on different topics each year to aid young scientists in India; and finally (x) A specialized institute to focus on the study of all aspects of gold geology should be developed through government and industry collaboration. International scientists with expertise in different metallogeny could be invited to such an institute on a regular basis to facilitate interaction between leading Indian and international scientists.

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