NEWS AND NOTES

Proceedings of the Mining Exploration Convention – D.V. Pichamuthu and R.H. Sawkar
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The Mining Exploration Convention was held during 5-7 September 2001 at Bangalore. The convention was divided into an opening session, seven technical sessions and the valedictory session.

Opening Session

The session opened with the welcome address by P.K. Mukherjee, President, FIMI. He highlighted the importance of exploration, as 0.60 million sq km of the Indian land mass has been identified as having “Obvious Geological Mineral Potential”. Our exploration spending has been abysmal averaging $ 15/sq km compared to $124 and $118 for Australia and Canada respectively. Following the traditional lighting of the lamps, the Chief Guest, Smt. Galla Arunakumari, Hon’ble Minister of Mines, Government of Andhra Pradesh, delivered the Inaugural Address. She praised the role of FIMI in furthering the interest of the industry while also playing a prominent role in working with the Central and State Governments. She commended FIMI for organising the Mining Exploration Convention & Trade Show and spoke about the mineral resources of Andhra Pradesh and the efforts made in conservation like beneficiation, and utilisation of waste products. Scott Jobin-Bevans, President, PDAC, spoke on behalf of its 10,000 members. PDAC promotes the Exploration and Development Industry within Canada and other countries. PDAC holds its annual convention in March 2012 in Toronto. He said that many Canadian companies have a great desire to discover and develop Indian mineral resources. He hoped that the proposed MMDR Act 2011 will be conducive for attracting foreign investment. He also mentioned that the Governments of India and Canada have signed a MoU in June 2010. He made a special mention of the collaboration between PDAC and FIMI. Mr Anjani Agarwal, National Leader – Mining & Metals Sector, Ernst & Young made a brief presentation of the publication, “Exploring India: Mining the opportunities”. The publication was released by the Chief Guest. She also released a CD “Investment Opportunities in Andhra Pradesh” and a brochure, “Initiatives taken by Andhra Pradesh Government to welcome investment”.

Policy Initiatives in Mineral Exploration and Development

Mr Scott Jobin-Bevans, President, PDAC, spoke on “Countries willing to foster mineral exploration with supportive policies reap benefits over the long term”. He touched on different countries which have had such policies and who had benefited. Canada is one of the most attractive countries followed by Australia. Accordingly they are attracting the maximum investments. Patra of GSI spoke on the major thrust areas of GSI in mineral exploration. Apart from the usual minerals, GSI is exploring for coal bed methane and shale gas. V. N. Vasudev of Geo-Mysore Exploration Services, presented his paper “India can produce 100 tonnes of gold by 2027. How?” He showed, by facts and figures, how this can be achieved provided certain steps are taken by the Government, notably fast and transparent procedures to clear applications for mineral concessions. He also spoke on the need for the creation of a “Precious Metals Authority of India”.

Investment and Financing Mineral Exploration

P. Balakrishnan, CEO of Anglo-American, spoke on “Can India lure private investment in mineral exploration and production?” He mentioned various constraints that are inhibiting private investments. He cited the example of the cancellation of licences to mine 24 coal blocks due to various procedural road blocks and lack of clarity. Aaron Rosland, Counsellor (Commercial) and Head, Ontario International Marketing Centre in India, jointly with Mr Biswas, presented a paper on “Investment Opportunities in Ontario’s Mining Sector”. Ontario is one of the most promising provinces for investment in exploration and mining. Sanjeev Jain, Executive Director, Ernst & Young, presented a paper on “Direct Tax Code and Mining Companies”. The Direct Tax Code will subsume many of the existing tax laws and therefore tax treatment will be drastically changed. He highlighted how some of the changes would affect mining companies. N.K. Kavdia, General Manager and G Karunakar, Associate General Manager of the HZL, spoke on “Exploration Practices of HZL”. HZL has in-mine, near mine and green-field exploration. They have high speed drills capable of drilling down to a depth of 1400 m. They have also acquired devices to check deviation of bore holes. The greatest hindrance they have found is in obtaining clearances from the Government.

Investment Potential in India

Tony Hardy, Exploration Manager, Rio Tinto, spoke on “Emerging markets and investment potential in India – Rio Tinto Perspective”. In spite of many setbacks, Rio Tinto is still optimistic about the prospects in India but other emerging markets are moving ahead. Rio Tinto believes in sustainable mining and does its own exploration. They also believe that community development is integral to their operations. P. Selvam, NMDC spoke about the exploration activities of NMDC. NMDC is producing over 30 mt of iron ore and by their exploration have added 90 mt to their resources. Apart from iron ore, their exploration activities encompass limestone in Arki (HP), magnesite and sapphire (J&K). They have opened a Global Exploration Centre at Raipur and have taken up work in Tanzania. NMDC has entered into joint ventures with the Governments of Andhra
Pradesh and Jharkhand for exploration. Sitaram Kennamanu, Exploration Manager of Vale India (Pvt) Ltd., spoke about “Resource Acquisition in India”.

**Presentation by State Governments**

S.K. Srivastava, Additional Secretary, Ministry of Mines, Government of India chaired the session. He gave his introductory remarks and stressed on the importance of the mineral sector. He spoke on the various issues before us, viz., balance between domestic requirement vis-a-vis exports, value addition, reservation of areas, exploration etc. He hoped that with the passing of the MMDR Act 2011, many of these issues will be resolved. Presentations were made by the representatives of the following governments.

**Jharkhand:** Arun Kumar, Geologist, spoke about the rich resources of Jharkhand. Gua has a huge stock of iron ore fines. Apart from iron ore, Jharkhand has rich resources of limestone, bauxite, graphite and base metals. 70% of the State is covered with granite.

**Chattisgarh:** J.K. Pashine, Joint Director, spoke about the rich coal, iron ore and bauxite deposits. 13% by value of total mineral wealth of the country is in the State. Considerable reserves of limestone and dolomite are also there. It is the only State where tin occurs.

**Gujarat:** D.U. Vyas, General Manager, GMDC mentioned that the diamond processing industry is the largest in the world. Salt and soda ash industries are also large. It is one of the three States where lignite occurs. Marble and granite industries are also well developed.

**Andhra Pradesh:** K.C.L. Narasimha Reddy, Joint Director of Mines and Geology, spoke about the mineral resources. Coal is the most important mineral followed by limestone and bauxite. Occurrences of gold and diamond have been proved.

**Karnataka:** D.R. Veerana, Additional Director, Department of Mines and Geology, made a good presentation of the mineral resources. Karnataka has the only working mine producing gold. It has the largest resources of magnetite and good deposits of haematite. Limestone is a very important mineral. Occurrences of bauxite, dolomite, magnesite etc make it one of the most important mineral producing States.

There was a very interesting interactive session with very good audience participation.

The Chairman, Sri S K Srivastava very able summed up the discussions.

**Mineral investment climate and exploration investment opportunities in Australia**

The session was chaired by Mr. Devis Smedley, Counsellor, Dept of Resources, Energy & Tourism, Australian High Commission, New Delhi. Mr. Smedley spoke briefly about the policies of the Australian Government in encouraging investments in exploration and mining. James Johnson, Chief, Onshore Energy and Mineral Division, Geoscience Australia, gave an overview on “Investing in Australian mineral resources: opportunities across the continent”. He spoke about the abundance of resources and the investment-friendly procedures which have enabled Australia to become one of the leading mineral countries of the world. Mr. Michael Smith, Principal Project Officer, Primary Industries and Resources SA, Government of South Australia spoke about the mineral resources in South Australia. Though not as well known as West Australia, there are considerable mineral resources in the State and investors can take advantage of the same. Mr. Richard Sellers, Director General, Geological Survey of Western Australia presented a paper on the mineral resources of West Australia. Mr. Bradford John, Director, EA, Geological Survey of Queensland highlighted the fact that coal is the chief mineral and the State accounts for 80% of Australia’s coal exports. There are other minerals as well.

**Geological Society of India**

The Session was chaired by Mr. R.H. Sawkar, Secretary, Geological Society of India, Bangalore. Mr. Sawkar spoke briefly about the favourable geological environment of metals in India such as uranium and rare earth PGE base metals and gold. The high risk and size of the capital required to convert resources into reserves being not available in India, the deposits worked so far are chance discoveries based on ancient workings at KGF and Huttu Gold; Malanjkhand, Ghatsilpa, Chitradurga (copper), and Jaduguda (uranium). Sanjay Rana, Director Parson Overseas (P) Ltd., explained how different types ofgeo-physical techniques help to solve cost and time in exploration with Indian example.

K.T. Vidyadharan, Former Deputy Director General, explained the geological settings of PGE prospects of the world with special reference to Indian prospects in Karnataka, Maharashtra, Orissa, Jharkhand, Kerala, Manipur Nagaland, Madhya Pradesh, Uttar Pradesh, Meghalaya with scope for exploration and development of nickel-copper-PGE deposits in 8000 sq km area.

A.K. Rai, Regional Director, Atomic Minerals Directorate, Government of India, spoke on the classification of uranium and rare earth elements, geological criteria, geochemical parameters and stages in the exploration and development depending on the type of deposits. He explained the exploration methods adopted in Dharmpuri riftzone, Cuddapah, Bhima and Kaladgi, Singhbhum, Mahadele, Aravalli, Vindhyan and Siwaliks. He indicated possible resources to produce 15,000 mw of power for 40 years. S. Ravi of the Geological Survey of India gave a historical aspects of diamond mining in India and recent efforts in Indian diamond exploration and its status. Core technical issues involved in the discovery of Kimberlite pipes and diamond deposits at Bandar Project in M.P. was explained. Dr. J.N. Das, Director, GSI explained the details of IIC 2012 to be held in India from 6th February to 12th February 2012 at Bangalore followed by field visit. He informed that more than 400 foreign delegates are expected to attend the conference. R.H. Sawkar, Secretary, Geological Society of India, explained the India’s position in world gold industries, rising prices, lack of conversion of resources into reserves, relation between scale of operation, grade of ore, price of gold, method of mining, capital cost, and breakeven point. He explained the similar geological conditions in Indian shield areas for gold prospects as compared to South Africa, Canada, China and Australia. He explained the feasibility of establishing large number of mines distributed all over shield areas of India by creating Gold Authority of India as suggested by B.P. Radhakrishna.
Mr. Johanson representative of Prinoth explained Gotract vehicles filtered with exploration drills used for short hole drilling and deep exploration drills for minerals for inaccessible and extremely difficult terrains. Prinoth Bearer is used for clearing forest line maintenance, right of way creation, seismic line maintenance for all exploration activities. A movie of different types of vehicles used in exploration was shown.

**FIMI Sustainable Mining Derivatives**

K.P. Nyati, CEO, FIMI – Sustainable Mining Initiative, gave a very interesting talk on sustainable mining. The concept compared the triple bottom line to a three-legged stool where the three legs represent economic, social and environmental factors. There can be no sustainable enterprise if any one leg is missing and therefore each of them is equally important.

**Valedictory Session**

After the welcome address by H. Noor Ahmed, Vice-President, FIMI, D.V. Pichamuthu, Director, FIMI South, summed up the entire proceedings. The convention came to a close with the customary vote of thanks by P.K. Mukherjee, President, FIMI.

**International Ground Water Conference: IGWC-2011 – P.S. Navaraj, Yadava College, Madurai (Email: navaraj2k1@yahoo.co.uk)**

The Fourth International Ground Water Conference held at Yadava College during 27th to 30th Sep 2011 was organised by PG Research Centre Department of Geology, Madurai in collaboration with International Groundwater Congress (India) and Water Technology Centre (TNAU) Coimbatore. This event was sponsored by Department of Science and Technology, Department of Atomic Energy, Mumbai, Ministry of Earth Science, NABARD, CSIR, INSA, NGRI, TNSCST. Two hundred delegates including twenty foreign delegates (US, Japan, Australia, Moroak, Bangladesh, and France) attended and presented papers on themes such as Water Resource management, Application of RS & GIS in water Resource Assessment, Recharge Process and Artificial Recharge Mechanism, Groundwater modelling in the assessment and management of groundwater resources, Groundwater pollution assessment and management. Groundwater management issues/option and policies. C.J. Samathanam, DST Advisor, in his inaugural address said that fresh water constitutes only 2.5% of the water available in the world in the form of ice as well as water sources above and below the ground. The major share on the fresh water is used for food production. Samathanam complimented the State Government of Tamil Nadu for making rain-water harvesting mandatory for building plan approval. It is the need to create awareness about global warming and groundwater conservation.

In the keynote address Dr. S.N. Ramasamy, Vice Chancellor, Gandhigram Rural Deemed University, pointed out the occurrence of heading through ice melting due to climatic changes. In another ten to fifteen years, the globe may get pooled. People are not compensating the extraction of water source from the ground. The dryness of the land leads to water leakage, drought, developing a high pressure in the land plate as well as sucking of water by the plants has been identified. C. Mayilsamy, Secretary for the Scientific Session explained about the various sessions being conducted in the conference. K.P. Navenneetha Krishnan, Secretary and correspondent of the College said that the conference was organised as a part of its social obligation and to involve the general public in groundwater conservation. An abstract volume was released at the meeting.

The impact of Climate change on groundwater resource was deliberated with special reference to hard rock terrain. Significant role of remote sensing in groundwater management, the success story of artificial recharge, the use of current technology in water management and impact of urbanisation and water sources are the topics that were discussed in length and breadth. Twenty five progressive farmers and twenty-five school children were invited to discuss with the experts of water management.

Prof. Vijay Prakash Singh from Texas University, US spoke on the future challenges in assessment and management of water resources in the monsoon climatic countries like India due to climatic variance. Dr. Singh analysed comparatively the management techniques being taken up both in the developed and developing countries. The strengthening of weather forecasting, the introduction of highly sophisticated software’s and installation of decision supporting tools, management of natural hazards are the areas where India should concentrate. He told the future challenges like improper rainfall pattern, fluctuating wind level, uncontrolled industrial exploitation, excess usage of agriculture chemicals, conversion of water bodies in to land sites ought to be streamlined.

Dr. Noaaki Shibasaki, Professor, Fukushima University, Japan presented an interesting paper on 3D-groundwater simulation model. He evaluated sustainability of Akaki well field near Addis Abaka, Ethiopia.

An interesting interactive session of scientists with a group of students was organised. The students raised inquisitive questions like how to stop the ration queue in getting water in future, whether Acacia is a boon or bane in terms of water management, how to effectively communicate water resource among public, how youngsters can enter into groundwater management field, whether water business has any environmental ethics. The progressive farmers and self-help women groups had a similar interaction. Farmers enquired about toxic free pesticides, low cost methodology to recharge the aquifer, drought resistance plant, less water stressed crops, water calculators. Scientists were pleased to answer all the queries.

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