## NOTES

## RECENT DEVELOPMENTS AND OPPORTUNITIES IN EXPLORATION GEOLOGY AND GEOINFORMATICS

National seminar on "Recent Developments and Opportunities in Exploration Geology and Geoinformatics: An Industry and Academia Meet" (ExploreG<sup>2</sup> 2007) was organized by the Department of Geology, Periyar University, Salem from 7th to 9th March 2007 at Salem and Yercaud. Dr. Fareeduddin, Editor & Secretary, Geological Society of India inaugurated the seminar, released the abstract volume and delivered keynote address on "Exploration for Iron, Gold and Diamond in India: Retrospect and Prospect". Prof. T. Balakrishnan, Vice chancellor, Periyar University presided over the inaugural function. He highlighted the importance of geology in overall development of the nation. About 90 scientists from 42 organizations participated and presented papers under five major themes viz., Mineral Exploration including fossil fuels and radioactive minerals, mining and planning, recent developments in geoinformatics, geoinformatics applications, exploration and management of water resources.

The first day of the seminar (7<sup>th</sup> March) devoted to first two themes. Dr. K. Ayyasami, GSI, Hyderabad has presented the invited talk on "Oil Prospects in the Cretaceous India" and Dr. Dhanaraju Ex. Director, AMD presented a paper on "Value addition in creation of wealth from waste in mineral exploration/ exploitation – examples from uranium, mineral sand, diamond. The other papers presented are 'Salem Steel Plant and its National Importance' by T. Muthukumar, "Beach mineral deposits in Tamil Nadu prospects and problems" by G.V. Rajamanickam, "Fluid inclusion studies in mineral exploration" by Dr. Rajesh Sharma, and "Sand mining" by Thiruvikramji. On 8<sup>th</sup> March, S/shri R. Rengarajan, N.Vijay Kumar and

V. Thirukumaran led the delegates for field excursion between Salem and Yercaud. At Yercaud, the morning session was devoted to the theme "Recent developments in Geoinformatics". The important topics covered include "Developments in GIS" by Prevish Kumar, "Remote sensing and GIS visualization of impacts on sea level rise" by Saravanavel, "Simulations of Lunar X-ray fluorescence spectrum" by Shyama Narendranath and Sreekumar and "Spectral reflectance studies of lunar analog rocks and minerals" by Arivazhagan. A field visit to Bauxite mine was made in Shevroy Hill. On 9th March 2007, Prof. SM. Ramasamy and S. Adiga delivered invited talks on "Geomatics vistas in Geoexploration" and 'Recent Developments in Geoinformatics' respectively. The other topics covered are natural disaster mitigation, water resource information system, Groundwater flow patterns, Crystal stress and well collapse etc.

Dr. G. Gunasekaran, Registrar i/c, Periyar University has presided over the Valedictory function and Prof. SM. Ramasamy, Director, Centre for Remote Sensing Bharathidasan University has delivered the valedictory address. Shri. PM. Balasubramaniyan, Executive Director, Salem Steel Plant (SAIL) offered felicitation The ExploreG<sup>2</sup> – 2007 seminar has opened up a new chapter for industry – academia collaboration in this region and gave exposure to young students and scholars in the field of Exploration Geology & Geoinformatics.

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## GAS HYDRATES – A POTENTIAL SOURCE OF ENERGY

The National Seminar "Gas Hydrates – A Potential Source of Energy", held at NIOT Campus, Chennai during 4-5<sup>th</sup> February, 2007 was jointly organized by NGRI, Hyderabad and NIOT (MoES). Scientists and researchers from several institutes (NGRI, NIO, NIOT and NCAOR), industries (ONGC, DGH) and universities (Osmania,

Andhra, Pondichery, ISM, BHU and IITs (Kharagpur and Roorkee) participated in this seminar. Four Russian scientists also participated in the seminar. As gas-hydrates are considered as future potential energy resource of India, it was aimed to bring scientists and technologists together at one platform for discussion and sharing expertise on

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gas-hydrates with a view to exploring and exploiting this natural resource from the India offshore

Dr PS Goel, Secretary, Ministry of Earth Sciences inaugurated and chaired the inaugural function Prof Harsh Gupta, Former Secretary, Department of Ocean Development and Raja Ramanna Fellow, NGRI delivered the keynote address and was the Chief Guest Dr N Satya Nandan, Secretary General, International Seabed

Authority (ISBA) was the Guest of Honor Dr S Kathiroli, Director, NIOT welcome the dignitaries and delegates and Dr VP Dimiri, Director, NGRI gave an overview of the seminar

Gas Hydrate Project NGRI Hyderabad KALACHAND SAIN

## INTERNATIONAL WORKSHOP ON R&D CHALLENGES IN CARBON CAPTURE AND STORAGE TECHNOLOGY FOR SUSTAINABLE ENERGY FUTURE

As an attempt towards India's Carbon abatement effort, an International Workshop on R&D Challenges in Carbon Capture & Storage Technology for Sustainable Energy Future (IWCCS-07) was organized jointly by the National Geophysical Research Institute (NGRI), Hyderabad and the Department of Science and Technology (DST), New Delhi on January 12-13, 2007 at NGRI, Hyderabad The Workshop was inaugurated by Hon'ble Secretary, Ministry of Power, Shri R V Shahi Dr B Kumar, Convener and Organizing Secretary, IWCCS-07 mentioned that the two-day deliberations would help us in meeting the R&D challenges in CCS Technology for Sustainable Energy future Dr VP Dimri, Director, NGRI & Chairperson of IWCCS-07 welcoming the invited dignitaries, speakers and the delegates to the workshop said that India should soon adopt the CCS technology for tackling the adverse climate effects and also for enhanced oil recovery to meet the growing energy demands. The Welcome address was followed by the addresses of Dr Malti Goel, Co-Chair of IWCCS-07 and 'Senior Scientist' DST, Dr Pete McGrail, Chief Scientist, Battelle Pacific Northwest National Laboratory, USA, Dr Deborah Petterson, First Secretary, British High Commission and Dr R R Sonde, Executive Director, National Thermal Power Corporation (NTPC)

Prof Harsh K Gupta, Raja Ramana Fellow, NGRI and Guest of Honour for IWCCS-07 released the abstract volume and address the Workshop participants He talked about India's energy demand, energy security and CO<sub>2</sub> mitigation Dr Gupta also mentioned about the shrinking of glaciers at Antarctica as one of the detrimental effects of the climate change and appreciated the joint efforts of NGRI and DST for providing a platform for international collaboration on CCS technology

In the inaugural address, Hon'ble Secretary, Ministry

of Power, Shri R V Shahi spoke about India's goal of sustained economic growth at 8 to 9% and to meet the future energy demands, he focused attention on harnessing of the hydroelectric potential which is estimated to be of about 1,50,000 MW He laid stress on generation of international consensus for the same He also highlighted India's position on climate change broadly by following the United Nations Convention Treaty on Climate Change and Kyoto Protocol

The Workshop included six invited talks, 24 oral presentations and three presentations in special UK session. The six invited talks by Drs. Mrs. Malti Goel (DST, New Delhi), R R Sonde (NTPC, Noida). Pete Mcgrail, (PNNL, USA), VP Dimri, (NGRI, Hyderabad). Dag Nummedal (Colorado School of Mines, USA) and Christian Fouillac (BRGM, France). mainly focused on R&D of CCS technologies in India, USA and France.

The session on Carbon Capture Research in India had the presentations by Drs Sadhana Rayulu (NEERI, Nagpur), Asha Masohan & A N Goswami (IIP, Dehradun) and G Parthasarathy (NGRI, Hyderabad) The Special Session on Sharing Experience with experts from UK on Carbon Capture comprised of presentations by Drs Tim Dixon (DTI, UK), Jon Gibbins (Imperial College, London) and Sam Holloway (BGS, UK)

The technical session on Geological Storage Technology for CO<sub>2</sub> comprised of an invited talk by Prof K V Subba Rao (University of Hyderabad) and presentations by Drs B Kumar & P S R Prasad (NGRI, Hyderabad), Anil Bhandari (GHS, New Delhi), A Mondal (GSI, Kolkata) and Ms Laura Chiaramonte (Stanford University, USA) The session on Geological Storage Technology for CO<sub>2</sub> (Oil & Gas) had presentations by Mr Kuldeep Chandra (KDMIPE, Dehradun), M Suresh Kumar (ONGC, Ahmedabad) and Drs A K Singh & V A Mendhe (CMRI,