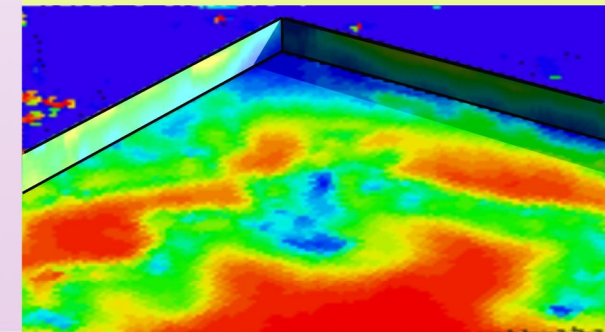
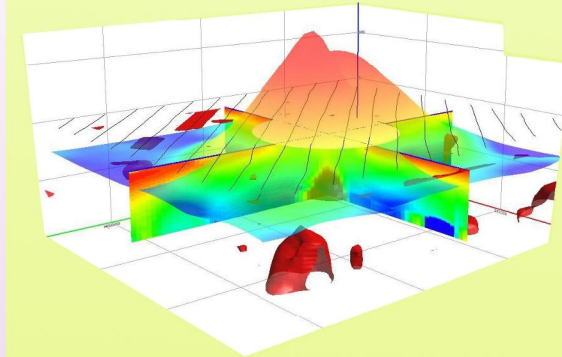




**WORKSHOP ON RECENT ADVANCES
IN GROUND AND AIRBORNE ELECTROMAGNETIC
METHODS - INNOVATIONS IN PROCESSING
AND INVERSION TECHNIQUES**

27-28, September 2011

**DEPARTMENT OF ATOMIC ENERGY AND
COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH
GOVERNMENT OF INDIA**



Organised by
**ATOMIC MINERALS DIRECTORATE
FOR EXPLORATION AND RESEARCH
AND
NATIONAL GEOPHYSICAL RESEARCH INSTITUTE
HYDERABAD, INDIA**



CHIEF PATRON

Dr. S. Banerjee
Chairman, AEC

PATRONS

P. B. Maithani
Director, AMD

Dr. Y. J. Bhaskar Rao
Director, NGRI

CONVENORS

P. S. Parihar
*Additional Director
AMD*

A. K. Chaturvedi
*Head
ASRS & EGP Group
AMD*

Dr. S. K. Verma
*Rajaramanna Fellow
NGRI*

ADVISORY COMMITTEE

Dr. S. K. Jain
G. P. Srivastava
A. Sundaramoorthy
Prof. B. B. Bhattacharya
S. Bhattacharya
S. G. Gaonkar

Dr. A. K. Suri
R. N. Jayaraj
T. M. Mahadevan
Niteesh Dutta
S. A. V. Satyamurthy

ORGANISING COMMITTEE

K. Umamaheswar
Dr. P. V. Ramesh Babu
Dr. Shakeel Ahmed
Dr. D. K. Sinha
K. Jagannadha Rao
R. Mamallan
A. Markandeyulu
Dr. V. Ramesh Babu

Dr. M. K. Roy
Dr. Ch. Rama Rao
A. S. Chawla
R. L. Narasimha Rao
Dr. B. V. S. N. Raju
Abhinav Kumar
B. V. L. Kumar

Address for correspondence:

Shri. A.K. Chaturvedi,
Head, ASRS Group,
Atomic Minerals Directorate for Exploration & Research,
Department of Atomic Energy,
Government of India,
1-10-153-156, AMD Complex,
Begumpet, Hyderabad-500 629.
email: headasrs.amd@gov.in
Fax: +91 - 40-27762940
Phone: +91-40-27767593
www.amd.gov.in

Or

Dr. S. K. Verma
Rajaramanna Fellow
National Geophysical
Research Institute
Uppal Road
Hyderabad 500007
email:skvngri@gmail.com
Fax: 040-23434651
Phone: 040-23434601
www.ngri.org

Mail to: amd_emworkshop@yahoo.com

WORKSHOP ON RECENT ADVANCES IN GROUND AND AIRBORNE ELECTROMAGNETIC METHODS– INNOVATIONS IN PROCESSING AND INVERSION TECHNIQUES

Atomic Minerals Directorate for Exploration and Research (AMD), a constituent of Department of Atomic Energy, Government of India is closely associated with the important phases of nuclear fuel cycle, like exploration for atomic mineral deposits, site selection for nuclear reactors and selection of suitable sites for nuclear waste disposal.

National Geophysical Research Institute (NGRI), a constituent laboratory of CSIR, Government of India, was established in 1961 with the mission to carry out research in multidisciplinary areas of Earth Sciences. The Institute plays a pivotal role in the exploration of Hydrocarbons, Mineral and Groundwater resources in addition to studies in Engineering Geophysics, Seismology, Geo-dynamics and Geo-environment.

AMD with vast experience in undertaking large scale airborne survey operations employing radiometric and magnetic sensors since 1950's, quickly embraced the new technological advancements in airborne geophysical data acquisition, processing and interpretation techniques. AMD is conducting airborne surveys not only for uranium exploration but also in environmental and hydrocarbon exploration activities in collaboration with other national organizations viz., ONGC, NRSA and NPC. For the past few years AMD is conducting high resolution airborne/heliborne magnetic, Gamma Ray Spectrometry and Frequency domain/Time domain EM surveys in different geological environs of the country.

For augmenting uranium resources in the country, AMD is greatly relying on the latest technological advances in earth science with a special emphasis in airborne geophysical data acquisition, processing, visualization and interpretation. High resolution airborne electromagnetic (AEM) surveys are being increasingly employed in geological mapping and in delineation of target areas for uranium exploration. Uranium exploration is a multi-disciplinary endeavor wherein airborne geophysical inputs play a very important role, providing valuable subsurface information. Current emphasis in uranium exploration is to substantiate the classical approach of data gathering with a more multi-disciplinary approach involving geoscientists with complementary expertise and capabilities.

Initially the surface electrical and EM methods of geophysical prospecting were developed with the prime objective to explore for the natural resources like: minerals, water, hydrocarbons, etc. However, their contemporary applications, investigating shallow to moderate depths, include problems such as: sea water incursion in coastal areas, reservoir studies, slurry and waste disposal, mapping of pollution plumes, detection of UXO's, buried archaeological structures, cavity mapping, etc.

Airborne electromagnetic (AEM) surveys are increasingly playing a decisive role in mineral exploration with major developments in sophisticated instrument systems and data processing capabilities for a variety of exploration purposes. In uranium exploration AEM surveys provide a quick assessment of the survey area in terms of its potentiality and helps in understanding of the subsurface tectonic and litho-structural controls of mineralization.

Advanced processing, interpretation and presentation of ground and airborne Electromagnetic data provides the much needed 3D information of subsurface geology. To deal with the vast amount of AEM data, much more automated analysis techniques of processing and interpretation are the need of the hour. Major advances in EM modeling/inversion are

witnessed during the last decades. Despite the major advances in 2D and 3D EM modeling, imaging of EM data using various 2D or 3D algorithms is faced with many pitfalls and limitations. Constrained modeling of ground and airborne Electromagnetic data followed by holistic integration of geological, ground geophysical, geochemical and drilling data is extremely helpful identifying new targets in present day exploration activities.

The main objective of the workshop is to discuss the recent trends in innovations related to acquisition, processing and inversion of ground and airborne electromagnetic data with a special emphasis on its role in uranium exploration by inviting eminent professionals and academicians on to a common platform. The workshop presents an opportunity to show case the strength and effectiveness of AEM surveys as an indispensable airborne geophysical technique for a wide variety of geological problems from uranium exploration to environmental and site selection issues. The workshop intends to deliberate upon the state-of-the-art and advancements in instrumentation and data processing techniques and their applicability to prioritize the target areas in uranium exploration by integrating with ancillary information to build conceptual geological models.

The workshop reflects the challenges facing the geo-scientific community involved in exploration as we strive to operate with ever changing expectations and targets.

Experts and academicians from various national and international organizations who are actively involved in developments of ground and airborne Electromagnetic data will be delivering invited talks followed by presentation of case studies.

Broadly the themes of the workshop include

1. Advances in Airborne EM methods
2. Airborne EM surveys: case histories
3. Integration of ground, AEM and multi-parametric measurements
4. Mapping of pollution zones, waste disposal and other shallow applications

Registration

Those intending to participate /contribute a paper may register on or before September 1, 2011

Participants for poster session should send the title, name(s) of the author (s) and organization and address, including the email ID on or before 7th September 2011. The size of the poster with text (with diagrams and figures) should be A0 size.

Registration Form

WORKSHOP ON RECENT ADVANCES IN GROUND AND AIRBORNE ELECTROMAGNETIC METHODS– INNOVATIONS IN PROCESSING AND INVERSION TECHNIQUES

27-28th September, 2011
Hyderabad

Name in full: _____

Designation : _____

Name of the organisation: _____

Full address for correspondence: _____

Telephone No: _____

Fax No: _____

email ID: _____

I intend to contribute a paper (poster) titled _____

under the theme _____

and participate in the proposed workshop.

Accommodation required: _____ Yes / No

Any other request: _____

Place:

Date:

Signature