

# CONTENTS

## Cover Focus

ONGC's strategic move in exploration aims to make the 'Invisible Visible' New frontiers, matured and upcoming basins strategic from hydrocarbon perspective'

Mr. R.K. Srivastava, Director (Exploration), Oil & Natural Gas Corporation Limited (ONGC) spells out ONGC's future exploration strategy aimed at consolidating and systematic expansion of Play Based Exploration across all basins while talking to Arun Kr. Singhal, Chief Editor, DEW Journal



## 12 New ideas New approach

## Special Report

### 74 Harnessing, Hybridization of geothermal energy



Experts discuss potentials of geothermal energy and its hybridisation with solar to increase the efficiency and power generation of both energy systems during the fourth International Geothermal Conference organized by the Centre of Excellence for Geothermal Energy (CEGE), Pandit Deendayal Petroleum University (PDPU)



92



INDIAN ANALYTICAL CONGRESS



Innovations and current trends in analytical sciences discussed

To discuss technical innovations and emerging issues related to the development in analytical sciences and their applications, the Indian Society of Analytical Scientists (ISAS) - Delhi Chapter, a scientific forum of analytical scientists in India, and Federation of Indian Chambers of Commerce and Industry (FICCI) jointly organized an international conference, an assembly of national and international experts and researchers. The event pondered on technical issues and discussed new developments in various fields of analytical sciences related to the present day analytical chemistry. The conference even educated the user of high-tech analytical equipment.

## Technology/Technical Papers

### 29 Effectively interpreting seismic data for voluminous geo-resources

This research determines the unification of an intelligent machine (human brain) with an engineered machine to effectively interpret seismic data used for the exploration of subsurface that engulfs voluminous geo-resources. This is shown through a technological advancement achieved within seismic technology, where different attributes are amalgamated into a hybrid or meta-attribute that aids interpretation of 3D seismic data. We have proposed several workflows, computed seismic meta-attributes, and demonstrated their applications in enhancing the subsurface images of different geologic features in numerous sedimentary basins.

### 37 Fluid influx detection: Piggybacking on vibration data

## Expert View

### 63 Global energy resources and Indian energy security

India needs very robust and comprehensive short- and long-term separate energy security policy that encompasses its all political, international and regional, strategic, geographical, economic, social and environmental concerns. Production from Indian petroleum deposits should be capped but be kept in ready state and they should be used only for defence purposes when global reserve tapers. Absolute reliance on solar and wind power would be misleading for their intermittent nature, these should be blended with conventional power sources for uninterrupted supply, according to Prof Dr. A.K. Biyani, veteran Geologist

### 41 Energy sources: Present and Future

In this paper, the author makes a wide review of the key trends in the up-to-date situation with energy sources. In Section A, he looks into the modern problems in petroleum geology, with respect to his author's theoretical conceptions, and presents the most promising trends in developing oilfields; also, deals with the subject of upstream and midstream risks and uncertainties. In Section B, he considers all the diversity of alternative and renewable energy sources, with a special attention to the diversity of energy sources in India, and examines in detail such a promising trend as geothermal energy.

### 55 Review: Harnessing unconventional hydrocarbon potential in India with particular focus on Shale Gas

In order to explore and exploit these Unconventional resources, a review and reassessment of evaluation is warranted by adopting innovative technologies in seismic data acquisition and interpretation along with specific and critical laboratory investigations with the help of technologically advanced global companies. Some of the suggested methodologies are discussed in this paper.

### 87 Natural Gas: Methane Hydrates-IV

## Plus

8 GEHU launch of two new courses B.Sc. (Hons) Geology and M.Sc. Applied Geology

9 Oil and gas industry needs to step up climate efforts now

10 The fourth UPES AAPG "Crust'20" saw industry-academia interactions scale new highs

99 Management Mantras by Dr. Ashutosh Karnatak

