From the Editor's Desk

Dear Readers,

Wish you a very happy leap year!

Global demand of oil is projected to reach 91 mb/d by 2014, demand for fossil fuels peaks by 2020 and by 2030 zero-carbon fuels make up a third of the world's primary sources of energy demand as reported by international energy agency (IEA). Hydrocarbons will continue to play a major role in primary energy demand at least for couple of decades to come, if not more. Geophysicists must deliver their best in technology part of the whole gamut of energy security in the present scenario. We must now step beyond conventional wisdom that we were used to till today. Historical predictions of the end of oil have been wrong because they underestimated both the size of the world's oil resources and the degree to which technology could expand the resource base. Oil resources are not a fixed quantity, but a variable that depends on the states of earth science and technology. As knowledge of the earth's crust increases, the comprehensiveness and precision with which hydrocarbon occurrences can be characterized increases. Geohorizons, along with other Geophysical society journal, is putting its relentless effort to add value in this activity.

This issue of "GEHORIZONS" is special on two counts; first it is an issue on the eve of IXth Biennial International Conference and expositions "Hyderabad 2012" during Feb 16-18, 2012, secondly it has a guest editor Mr. Mrinal Sen who has edited five papers pertaining to shale gas plays. Besides, there are six papers brought out in this issue focus on recent state of art technologies in seismic imaging and reservoir characterization. Two papers deal with imaging issues and rest of the papers primarily discuss on concepts and case histories on interpretation and litho-fluid characterization.

Advantage of OBC duel sensor data can be fully achieved in respect of de-ghosting and high resolution only when the conditioning/pre-processing of geophone and hydrophone data is proper before summation. The paper entitled "Image enhancement through conditioning of vertical component data in OBC survey-A case study" by S.Basu et. al. demonstrate how noise free, ghost free, high resolution data is obtained after separately pre-processing both the data.

Sub Basalt imaging have been a challenge for hydrocarbon exploration for quite some time now. Long offset seismic is one of the recommended approach to achieve this objective. Little unconventional workflow adopted to process long offset data of Kerala Konkan offshore basin by Mr. Brajesh Das et al., resulted in better imaging as discussed in their paper "A unique methodology for Sub Basalt imaging-case study".

Pore fluid and Lithology prediction are the two key objectives of seismic reservoir characterization. The paper "Application of advanced tools for Reservoir Characterization-EEI and Poisson's Impedance: A case study" by Ms. Puja Prakash et.al. demonstrates how effectively these objectives are achieved by proper integration of results from several advanced techniques like Extended Elastic impedance and Poisson's impedance inversion applied on offshore data from East Coat of India.

"Mass Transport Complexes in deep water of Andaman Fore arc Basin" by Pinaki Basu et.al. shows how the conceptual model for deposition of Mass Transport Complexes (MTC) has been incorporated in interpretation of data from Andaman offshore Basin. The case history illustrates how multiple episodes of MTC have been identified within the zone of interest.

The paper "Time-Lapse Seismic - Concept, Technology & Interpretation" by Hemant Kumar Dixit et.al. narrates the Concept, technology and interpretation workflow of Time Lapse (4D) seismic data with special emphasis to 4D Global Inversion approach and its advantage over conventional inversion approach. They also discuss about the Bayesian classification tool to effectively interpret the 4D inversion results.

Gas hydrates is a possible future energy resource for countries like India. The present status of Gas hydrate exploration is presented by K M Shukla , et al in their paper "Geophysical studies for Natural gas Hydrate in East seacoast of India". Paper also presents the process of identifying gas hydrate bearing sands in KG offshore area through various geophysical indicators for BSR and channel-levee system
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Hope this edition of Geohorizons will provide much needed geophysical techniques and encourage geoscientists to contribute in future.

(Shyam Mohan)