

# SPG Mumbai Chapter Organises One day technical workshop (DISC 2013) Jointly with SEG

Society of Petroleum Geophysicists SPG (India) and Society of Exploration Geophysicists (SEG) jointly organised DISC 2013 one day workshop “Making a difference with 4D, Practical applications of time lapse” at Hotel Parle International, Vile Parle, Mumbai on 6th Dec'2013.

The DISC course was delivered by former SEG secretary Dr. David H. Johnston. Dr. Johnston, Alumni of the very prestigious Massachusetts Institute of Technology (MIT) completed his Ph.D. in Geophysics in 1978 from MIT and at present he is working as Global Geophysics Co-ordinator to Exxon Mobil, Houston. Dr. Johnston is a renowned Reservoir Geophysicist with great experience in the hydrocarbon industry, especially in 4D Seismic.

Time Lapse seismic is a reservoir engineering tool. The 4D time lapse seismic data provides an insight on dynamic reservoir properties such as fluid saturation, pressure and temperature. Changes in these properties during hydrocarbon production are identified and quantified by 4D analysis and used to identify areas of bypassed and un-drained pay to refine the geological/engineering models.

The session started with a brief introduction of 4D seismic technology, and the narration went through all the aspects related to 4D, like reservoir engineering fundamentals, petro-physical basis, 4D seismic modelling, feasibility studies, acquisition & repeatability, 4D seismic processing, data analysis and QC, Interpretation and data integration for geophysical monitoring.

During his talk, Dr. Johnston discussed about different injection mechanisms of various fields like Hoover field in Mexico, Dikanza in Ankola. He highlighted the importance of repeatability study to compare the NRMS values in North Sea shallow waters and West Africa. He also



Dr Johnston during his talk

elaborated the necessity of Rock Physics model before doing 4D seismic.

The technical session started with the welcome address by Mrs Lata S. Pandurangi, GM (Geoph) ONGC. The session was quite interactive with the active participation of members from different work centres of ONGC, CGG and IIT Mumbai. Mr. Chaman Singh, GGM (Geophy) ONGC also interacted with the speaker and the participants.

During the concluding session, Mr. S. Chandrasekhar, GM (Geoph) ONGC and Vice President, SPG Mumbai chapter briefed the session and analysed the usefulness of the subject chosen.

For SPG Mumbai, organising this program also marked the beginning of an era. While most of the behind the screen jobs were managed by the executive members, the actual execution of the program was done by the young members of SPG Mumbai Chapter: Subhash Sharma, Jose Anthony, Pratibha Shrivastava and Eswar Rao.



The Audience



Sh. S. Chandrasekhar presenting a memento