

Technical workshop 2010

“Exploration and exploitation of Hydrocarbon from shale”

The Society of Petroleum Geophysicists, India (SPG) organized a Technical workshop during 27th and 28th November 2010 at Nehru Auditorium ONGC Academy Dehradun. This special workshop was organized to raise the awareness of technological advances in exploration and exploitation of hydrocarbon from shale.



Fig.1. Chief Guest Shri D K Pande, Director(Exploration) and patron SPG India, was welcomed by Shri Apurba Saha, President SPG-India.

Though, the shale play is new for India but rapidly gaining attention of E&P companies, Government agencies, business leaders, service providers, and geoscientist.

This workshop intended to showcase the shale resource play as a game changer in the global energy market. Present technology and engineering innovation has driven shale resource play to reset the resource base for many countries, especially for USA, Canada, and China.



Fig.2. Chief Guest Mr. D K Pande inaugurating the workshop by lighting of lamp in Indian lighting of lamp in Indian



Fig.3. A Sarawati Vandana presented by girls from Gurukul school.

Welcoming the distinguished guests and delegates Mr. Saha, President , SPG-India gave a brief overview of the workshop and emphasized the significance of the theme for India and role of workshop in understanding the issues and challenges in exploration and exploitation of shale resources in India for hydrocarbon.

A Saraswati vandana presented by girls from gurukul school as goddess Saraswati is known as deity presiding over all forms of knowledge. She symbolized the showering of knowledge and education.



Fig.4. President , SPG- India welcoming the delegates in the workshop.



Fig.5 Dr. Tarun Chakravarti, President SPE North India Chapter.

Dr.Tarun chakravarti in the inaugural session addressing the gathering on role of unconventional resources and brought out the key points for successful strategy to harness the vast resources of hydrocarbon from shale.

The workshop was inaugurated by the Mr. D K Pande, Director(Exploration), ONGC and Patron of the society.

In his inaugural speech he has updated the gathering on ONGC 's efforts to explore and exploit the potential of shale for hydrocarbon in Indian basins. He has also appreciated role of SPG in providing networking for geo-scientific communities and organizing the workshop on topic of wide interest.



Fig.6. Chief guest Shri D K Pande addressing the delegates



Fig.7. The delegates are listening the inaugural address by Chief Guest

Mr. K M Shukla offered vote of thanks on behalf of SPG-India to over 200 delegates and speakers from fifteen companies and academic institutes in the workshop.



Fig.8. Mr. K M Shukla, Secretary SPG-India, delivering the vote of thanks.

TECHNICAL SESSION-1



Fig.9. Dr. Michel Denis moderating the technical session-1

Mr. Manish Shukla, ONGC Ltd. coordinated the Technical session -1. He has invited Dr. Michel Denis from CGG Vritas to moderate the technical session-

Technical talk was presented in the session by Mr. S C Sharma, Head Shale Gas from DGH, on Shale Gas- A world of Opportunities in India,



Fig.10. Speakers on the dais before starting of their presentation.



Fig.11. Mr. Satish Sharma from DGH, delivering the presentation.



Fig.12. Mr. Amit Sharma, Halliburton delivering the talk.

Mr. Amit Sharma, Halliburton Houston, Mr. Ravi Mishra on "Shale: The new found gas reservoirs" and "A Discussion on shale gas development" by Mr. Trevor Davison, Global Geophysical Services Inc.

Mr. Michel Denis has appreciated the speakers for their concern on challenges and hope on opportunities. He has also been impressed by their approach to find the solution and sharing the efforts for benefits of all.



Fig.13.Mr. Trevor J. Davison from GGS Inc. speaking on his presentation.



Fig.14. Mr.Ravi mishra, ONGC. Ltd. presenting the talk.



Fig.15. Dr. Michel presenting mementos to Mr. Trevor J Davison.



Fig. 16. The delegates are interacting with the speaker

TECHNICAL SESSION-2



Fig.17. Speakers on the dais before starting of their presentation.

Mr. Rajeev Paul of ONGC Ltd. coordinated the technical session-2. He has invited speakers to the dais.



Fig.18. Dr satish Sinha delivering the talk.

The first technical presentation was delivered by Dr. Satish Sinha, RGIPT on role of Full wavefield in shale gas exploration using stress information for fracture extraction.



Fig.19. Dr. Teck kean Lim from Schlumberger speaking on micro-seismic to monitor hydro-fracturing.

The second talk was delivered by Dr. Teck kean Lim from Schlumberger CGG Veritas on monitoring of hydro-fracturing using micro-seismic as a tool in shale gas exploitation.



Fig.20. Dr. Michel Denis, CGG Veritas addressing the issue of principal stress estimation from 3D seismic data.



Fig.21. Mr. Brent E. Smith, GCA delivering the talk in second session.



Fig.22 Dr. C H Mehta, consultant imaging and inversion presented the mementos to the speakers in technical session-2.



Fig.23. A delegates interacting with the speaker during technical session-2.

Dr. Michel Denis, CGG Veritas in the second technical session presented the role and significance of 3D seismic data for principal stress estimation in shale plays using 3D Seismic.

Mr. Brent E. Smith, GCA presented overview of current stimulation Techniques Used in tight Shale Gas developments

Technical Session-3



Fig.24. Mr. manish Shukla coordinating the technical session-3.



Fig.26. Dr. Rajiv Sagar, Schlumberger delivering the talk.



Fig.25. Speakers on the dais during technical Session-3

Dr. Tarun Chakravarti chaired the technical session-3, as moderator. he has invited to Dr. Rajiv Sagar, Schlumberger for his presentation on "Exploring the Damodar Valley Basin for Shale Gas Potential".

Dr. Satish K Sinha from RGIPT, presented the second talk of the technical session -3, on "Mapping of Hydraulic Induced Frature Network Using Microseismic in anistropic velocity field"



Fig.27. Dr. Satish K Sinha from RGIPT delivering the presentation.



Fig.28. Prasanna Kumar Tellapaneni presenting his talk.

A senior reservoir engineer from Schlumberger, Mr. Prasanna Kumar Tellapaneni, presented a talk on " Application of Modular Formation Dynamics Tester (MDT) for In-Situ stress measurements in Shale Gas Reservoirs".

At the end of technical session-3, Mr. Ravi Misra presnted a theme talk on "Unconventional Hydrocarbon Resources In India – Their exploration and exploitation"



Delegates have shown the keen interest in discussing out their ideas and understanding with speakers freely. speaker have appreciated and clarified their point.



Fig.29. A Graduate trainee and senior geoscientist in discussion with the speaker Prasanna Kumar Tellapaneni on key issues for shale gas reservoir.

The moderator of the technical session -3 Dr. tarun chakravarti has presented the memntos to the speakers at the end as token of thanks for their willing to share their knowledge through invovement in the workshop.

Panel Discussion

A panel discussion was organised after technical session to discuss the key issues emerged out during the technical workshop.

The panel discussion was headed by Shri P K Chandra, Ex. Vice Chairmen of ONGC Ltd. the other key speakers on the dais were, mr. Apurba Saha, Dr. tarun Chakravarti, mr. Brent Smith, P.E. and Mr. Amit Sharma from Haiburton, Houston, USA.

Mr. A K Arya summed up the technical sessions organised during the workshop. He has elaborated on the key points speakers



Fig.30. Technical panelist on the dais for discussion.



Fig.31. Mr. A K Arya, Vice president

emphasized during their talk in the technical session.

Mr. P K Chandra invited Mr. Amit Sharma to start the panel discussion. He made his comment on the upcoming issues in shale resource exploration and exploitation.

Mr. Brent Smith, P. E also talked about his experience and observation and emphasized to cut short the learning curve for harnessing the shale resources.

Dr. Tarun Chakraborti during his talk emphasized on importance of such workshop in reducing the time from concept to realization. More workshop and technical discussion can speedup the technical understanding and solution for indian geoscientist. He wished that SPE and SPG can together organise such workshop in future.

Mr. Apurba Saha speaks on road map for hydrocarbon from shale and importance for continuing learning through technical

summing up the issues emerged from the technical talks during the workshop.



Fig.32. panelist delivering their comments on outcome of workshop



Fig.33. Mr. P K Chandra sharing his observation on outcome of workshop and roadmap ahead.

workshop.

He wished to organise such workshop frequently on burning topics pertaining to exploration and exploitation of hydrocarbon.

Finally chairmen of panel Mr. P K Chandra in his brief talk discussed on the requirement of clear road map for early success.

Before closing the workshop Mr. C B Yadava, Joint Secretary of SPG-India, offered the vote of thank to all.

Mr. Apurba Saha presented a memento as token of appreciation to Mrs. Deepa for his flawless comperring during inaugural session and panel discussion.



Fig.34. Mr. C B Yadav delivering vote of thanks for help to conduct the workshop successfully.



Fig.35. Mr. A. Saha presenting the mementos to Mrs. Deepa.