Advanced - Tight Gas Reservoirs TGR:

Short Course

The course will review Tight Gas Reservoirs, field experiences, best practices, well applications and interpretations from Tight Gas Field developments worldwide. The course is hands on and very practical in nature. The objective of the course is to take experienced Petroleum Geoscientists and other disciplines involved in field development, and get them to hone in on the important issues of Tight Gas Reservoirs. Many working examples from actual producing fields are used to demonstrate the complex issues and best practices worldwide.

The workshop should help the participants understand and build the tool kits needed for optimal Tight Gas Reservoir development, well planning in complex settings and possible applications for effective Reservoir Management. The examples reviewed and conclusions assembled will help to build personal exposure and lateral learning. This understanding will help to facilitate future work programs, infill drilling and maximize ultimate recovery via 'Excellence in Tight Gas Reservoirs'.

The objectives are:

1. To hone in on key issues in TGR.
2. To review important themes and issues in TGR well applications.
3. To review well planning importance and proper execution.
4. Management of uncertainty and assessment of TGR.
5. TGR well interpretations, skills and toolkits.

The participants will come out with an understanding of the tools and methodologies applicable in their specific reservoirs. By sharing examples of successful and unsuccessful TGR well applications and interpretations the development community can increase its production and reduce costs.

Need to bring enthusiasm, a calculator and an open mind.

Throughout the workshop, participants are expected to critically review the results and present their conclusions on a regular basis.

Who should attend:

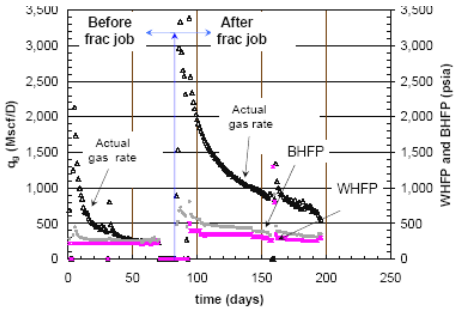
The course is designed for Geoscientists working on new and mature fields: Petrophysicists, Petroleum Engineers, Reservoir Engineers, Production Technologists, Facilities Engineers, Commercial Engineers, Asset leaders, and other disciplines, who are involved in field appraisal, volumetric review, reserves assessment, development planning and economics. This is the team which evaluates, screens and matures TGR field production development and exploitation opportunities.

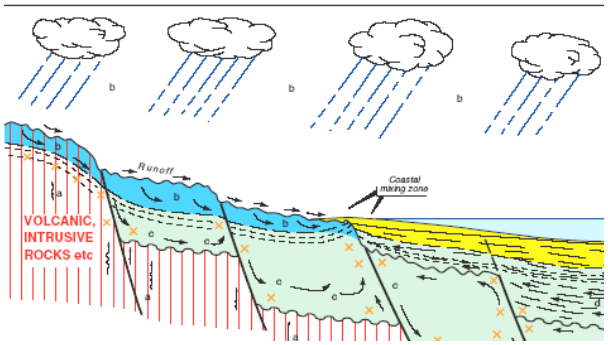
The workshop of some 15 people will be separated into teams of 3-4 people, with each team doing the exercises together, reviewing and summarizing them, taking them apart, assessing the future potential and then comparing the results and the learning.

Advanced TGR Tight Gas Reservoirs:

Short Course Content

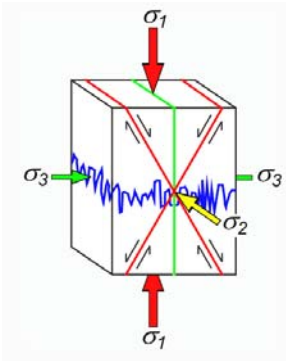
Definition – **Poor rocks, Low Permeability - 0.1 to 0.5 md Strong initial decline**
Many zones per well, Moderate gas rates, Long Life – Low Decline



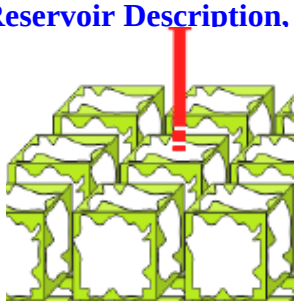


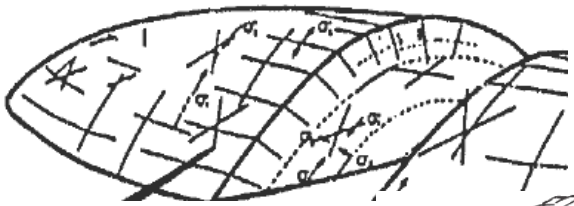
Issues

- **Structural and Stratigraphic controls**
- **Fractures - open closed, shape size length orientation communication**
- **Diagenetic impact - control, hydrodynamic history**
- **Interpretation - Logs, core, basin structures, drilling data, production data**
- **Stimulation – near well bore, away from well, damage removal**
- **Well and Field performance – true drainage, well contribution**

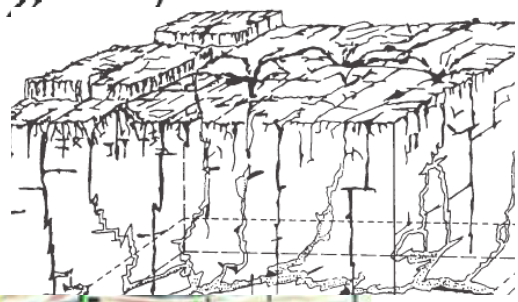


Reservoir Description, Fractures, Diagenetic





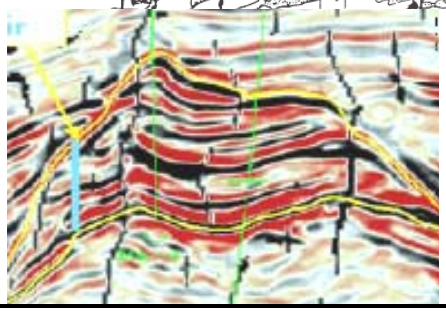
Interpretation of Fracture and Diagenetic controls
from Drilling, OH and CH and Production data



Understanding Flow and Drainage area

Reserves – **Giip, RF, Drainage length shape height**

Best Practices



Learning's

Seismic interpretations are 'crude' ----
World is much more complicated then we interpret
New technology – yes - Embryonic