



## Reducing Exploration and Development Risk Using Gas Geochemistry

### Brisbane Seminar

**Date:** Monday, 14 March 2016

**Time:** 3:30 pm to 4:30 pm

**Registration:** Please register online at <https://fesaus.org/>  
**Numbers are limited so book early to avoid disappointment!**

**Place:**  
Geological Survey of Queensland - Department of Natural Resources and Mines  
Bowen Basin room at Level 12, 61 Mary St, Brisbane  
*Sign in at reception security desk (contact Justin Gorton) proceed to Level 12*

**Cost:** **FESQ Members and Student Members free**  
**Social drinks to follow. First round sponsored by Weatherford Labs.**

**Presented by: Dr. Mark A. McCaffrey, Ph.D. Weatherford Laboratories**  
**Geoscience Manager – Interpretive Services / Senior Technical Advisor**

**Abstract:**

The primary applications of gas fingerprinting to exploration and development of petroleum in unconventional oil and gas reservoirs are:

- Determination of reservoir thermal maturity (constraining the likelihood of associated hydrocarbon liquids).
- Assessment as to whether or not induced fractures have propagated out of the intended zone and into either an overlying or underlying zone causing the unintended commingling of production from multiple intervals.
- Quantitative allocation of the contribution of individual pay zones to commingled gas production.
- Assessing the origin of hydrocarbon gas in aquifers to determine if such gas is, or is not, related to petroleum development activity in an area.

**About the presenter:**

Dr. McCaffrey received his B.A. (1985) from Harvard University, magna cum laude with highest honors in geological sciences, and his Ph.D. (1990) in chemical oceanography (in the area of organic geochemistry) from the Massachusetts Institute of Technology/ Woods Hole Oceanographic Institution Joint Program. Mark spent 10 years at Chevron and Arco as a petroleum geochemist, then founded OilTracers LLC. After 10 years, OilTracers was acquired by Weatherford.

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