



Society of Petroleum Engineers

22–24 June 2010 | Regency Tunis Hotel | Tunis, Tunisia

**Early bird Registration
Deadline 22 April 2010**

SPE Applied Technology Workshop Tracer Technology for Reservoir Management



Engineers, geologists, researchers, supervisors and managers who are involved in reservoir management operations will benefit from an improved understanding of the power of tracer technology. If you are interested in learning where tracer technologies stand today, or willing to share your experiences with tracers, this workshop is for you!

This workshop is designed to enhance communication between tracer test developers and customers, operation engineers and supervisors, and geologists and engineers, by showing methods of improving the reservoir description, fluid inflow, and oil recovery through the use of tracer technology.

Committee Members

Co-chairperson:
Ahmad Muhammadi
Saudi Aramco

Co-chairperson:
Anne Dalager Dyrli
RESMAN

Co-chairperson:
G. Michael Shook
Chevron

Alex Alexandrou
ProTechnics

Dick McReddie
Tracerco

Hugues Preudhomme
University of Pau

Ibrahim Kocabas
American University of Sharjah

Mahmoud Asadi
ProTechnics

Murtaza Ziauddin
Schlumberger

Nigel Roberts
Chevron

Olaf Huseby
IFE

Oyvind Dugstad
IFE

Randi Valestrand
IRIS

Rasheed Al Hassan
ADCO

Raymond Lovie
Tracerco

Robert Szafranski
ExxonMobil

Workshop Description

As a follow-up to the very successful 2008 Tracer ATW in Dubai, we invite you to attend the 2010 Tracer ATW in Tunisia! This workshop is intended to facilitate communication on novel tracer technology for improved reservoir management. Oilfield applications of tracer technology include reservoir characterisation, numerical modelling, evaluation of well stimulation efficacy, inflow performance and many others; practitioners of the varied tracer applications are invited to attend and share their knowledge and best practices with colleagues from around the globe.

Sessions are planned to cover the many applications of tracer technology in detail. Tracer practitioners will share their experiences and lessons learned on designing and deploying tracers for field use and laboratory experiments. Panel discussions will cover new interpretation methods, and the session on Case Histories will identify the difficulties – and rewards – associated with deploying tracers under field conditions. The workshop will conclude with general discussions on the current status of the tracer technologies and the need for future development methods.

Workshop Objectives

Tracer methods offer a relatively inexpensive means of describing reservoir and secondary or enhanced flood properties, inflow performance and stimulation results and various other aspects of oilfield operations. A primary objective of this workshop is to bring together tracer practitioners in operating and service companies, academia and government research facilities to discuss new methods for deploying or interpreting tracer results. Sharing experiences will identify successful methods, as well as identifying what properties can be estimated from tracers. Specific examples of improved oil recovery, better description of fluid inflow performance, stimulation and characterisation methods will be solicited from worldwide experts and shared at the workshop. Presentations describing the use of liquid phase, gas phase and natural tracers will emphasise the rich diversity of tracer applications.

A second objective of the workshop is to identify tracer technology strengths and weaknesses and to provide a better understanding of the methods to the petroleum industry as a whole, so deployment methods can be made more standard, success rates for data interpretation improve and the full potential of tracers can be realised.

www.spe.org/events/10atun

WORKSHOP

Tracer Technology for Reservoir Management

Sponsorship Support

Sponsorship support helps offset the cost of producing workshops and allows SPE to keep the attendance price within reach of operations-level individuals, those who benefit most from these technical workshops.

Sponsors benefit both directly and indirectly by having their names associated with a specific workshop.

While SPE prohibits any type of commercialism within the conference hall itself, the society recognises that sponsoring companies offer valuable information to attendees outside the technical sessions.

Sponsorship Categories

Sponsorships are offered on a first come basis. Please contact SPE to verify the availability of a particular sponsorship. Existing sponsors have the opportunity to renew the same level of sponsorship for annual workshops.

The Available Sponsorship Packages are:

Gold
Silver
Bronze

Welcome Reception and Dinner
Workshop Coffee Break—Per Day
Luncheon—Per Day
Audio—Visual Equipment

Sponsorship Benefits

In addition to onsite recognition; SPE will recognise sponsors on the SPE website and in all printed material for the workshop. Based on the sponsorship selected, sponsoring companies also receive logo visibility on promotional workshop items; a half-page, full-color ad in the workshop technical programme; and up to two delegate passes to the workshop.

For More Information

For a detailed list of available sponsorships, including benefits and pricing, contact Deepa Makhija, at dmakhija@spe.org.

**Advance Registration by
22 May 2010**

Workshop Sponsors



Silver Sponsor

RESMAN

Bronze Sponsor



Institute for Energy Technology

Coffee Break Sponsor
(All Days)



Audio-Visual Sponsor

Schedule

Tuesday, 22 June 2010

Session 1: Tracers in the Laboratory

This session will bring to the workshop an overview of laboratory methods used in tracer technology. One of the challenges faced is to develop improved methods and increase confidence levels in analytical techniques used for measuring tracer concentrations. The relationship between the concentration, kinetics and partition coefficients is not well understood. A general lack of standards for sampling and analysis introduces error in tracer datasets, and therefore tracer test interpretation.

The presentations in this session will discuss tracer selection criteria and testing, analytical procedures used, and the need for standardisation to instil confidence in tracer interpretation. Discussion leaders will review data quality issues and its impact on reservoir management. Speakers will discuss a variety of methods to reduce tracer costs and promote the use of tracers in the oilfield. We will also solicit discussions on the use of tracers in laboratory-scale experiments.

Session 2: Numerical Modelling of Tracer Tests

Simulation of tracers can play an important role in designing a tracer project, interpreting the data collected and utilising results to condition static models. This session will focus on incorporating tracers into different types of numerical models for a range of applications. Discussion leaders will share their experience in developing numerical tracer models, predicting tracer behaviour and history-matching observed tracer data.

This session is intended to facilitate discussions about a variety of combinations of tracers, numerical models and applications of tracer simulation including:

- Modelling conservative tracers, partitioning tracers, reactive tracers and natural tracers
- Finite-difference and streamline simulators, dedicated tracer simulators and analytic models
- Planning, assessing uncertainty and interpreting tracer applications
- Simulating different scales of tracer utilisation from laboratory to single-well to field

Wednesday, 23 June 2010

Session 3: Applications in Reservoir Characterisation and Flood Evaluation

Inter-well tracer studies yield important information about well connections and fluid flow patterns in oil reservoirs and can be used to improve reservoir model characteristics with respect to flow. In the past, tracer data have been underutilised and mostly used to confirm communication between well pairs. Future applications of tracer data are likely to be more integrated with contemporary assisted history matching work-flows as well as with geo-modelling work-flows. In this session we will have active discussion on themes such as:

- Evaluation of communication, flow paths and sweep efficiency using tracer curve analysis as well as reservoir simulation
- Mapping of residual oil saturation through partitioning inter-well tracer test (PITT) application and interpretation
- Comparison of tracer data and time-lapse seismic data
- Geo and reservoir model updating by assimilation of tracer data
- Modelling of waterflooding and miscible/chemical flooding tracer return profiles

Session 4: The Role of Tracers in Enhancing Production Management

The use of oilfield tracers has traditionally involved evaluating the connectivity between producer/injector and determining residual oil saturation. Recent advances in tracer technology and interpretation have enabled oilfield tracers to be used in a number of different applications, adding value by improving reservoir management and enhancing production.

This session will facilitate discussion on the challenges and critical success factors associated with new applications of tracers to improve reservoir management and production performance. Leading industry experts from operating companies, research groups and oilfield service companies will act as discussion leaders to showcase these recent technology advances. Some of the topics to be covered include wireless tracers, stimulation flowback evaluation, radioactive tracers and natural tracers.

Thursday, 24 June 2010

Session 5: Case Studies of Tracer Applications

This session will bring to the workshop real case histories of tracer applications in reservoir management. One of the bigger challenges to a reservoir engineer considering a tracer program, is to convince himself and those around him of the value that can be obtained from such an endeavour. The presentations in this session will attempt to provide evidence of value created through the application of tracers and, where possible, a measurement of this value or demonstration of the enhancement of the reservoir recovery potential. The discussion leaders will present a set of case histories that will examine the whole spectrum of tracer project activities and then review the value of the information obtained to establish the real benefits of the study. In addition to the lessons learnt from such examples, it is hoped that the case studies presented will provide evidence of better understanding of reservoir fluid movements, injection well optimisation and sweep efficiency.

Session 6: New Developments in Tracer Technology

Demand for the application of tracers in the petroleum industry is rising. This is due to the fact that a tracer survey can immensely benefit a variety of areas such as reservoir management, formation characterisation evaluation, flood effectiveness control, production enhancement, and in an array of downstream applications. Today's limited tracer types with their limited physical and chemical characteristics, has forced the research institutes to explore different types of tracers to improve the current applications and also to advance current utilisation. This session explores upcoming trends in developing of new tracers and their applications in various areas of the petroleum industry.

Workshop Guidelines

Workshop Venue:

Regency Tunis Hotel
Les Cotes de Carthage
La Marsa 2078
Tunis, Tunisia
Tel: +216.71.91.0900
Fax: +216.71.91.2020
Website: www.regencytunis.com

Format:

Three days of informal discussions prompted by selected keynote presentations and discussions. Workshops maximise the exchange of ideas among attendees and presenters through brief technical presentations followed by extended Q&A periods. Focused topics attract an informed audience eager to discuss issues critical to advancing both technology and best practices. The majority of the presentations are in the form of case studies, highlighting engineering achievements and lessons learned. In order to stimulate frank discussion, no proceedings are published and the press is not invited to attend.

Documentation:

- Proceedings will not be published; therefore, formal papers and handouts are not expected from speakers.
- Work in progress new ideas, and interesting projects are sought.
- Professionally-prepared visual aids are not required; handwritten view graphs are entirely acceptable.
- Note-taking by participants is encouraged.

Poster Sessions:

The Steering Committee encourages registrations from professionals who are able to prepare and present a poster on a relevant project. For further details kindly contact Deepa Makhija, event manager at dmakhija@spe.org.

Attendance:

Registrations will be accepted on a first-come first-serve basis. The Steering Committee encourages attendance from those who can contribute to the workshop most effectively either in discussions or with posters. A mix of attendees in terms of geographic origin, companies and disciplines will be encouraged.

Workshop Deliverables:

- The Steering Committee will appoint a "scribe" to record the discussions and to produce the full Workshop Report for SPE.
- This report will be circulated to all attendees as the Workshop deliverable within 4–6 weeks following the Workshop. The copyright of the report is with SPE.
- PowerPoint presentation materials will be posted on a specific SPE URL address after the workshop. Provision of the materials by the speakers will signify their permission for SPE to do so.

Commercialism:

In keeping with ATW objectives and the SPE mission, commercialism in posters or presentations will not be permitted. Company logos must be limited to the title slide and used only to indicate the affiliation of the presenter and others involved in the work.

Attendance Certificate:

All attendees will receive an attendance certificate attesting to their participation in the workshop. This certificate will be provided in exchange for a completed Workshop Questionnaire.

Continuing Education Units:

Attendees at this workshop qualify for SPE Continuing Education Units (CEU) at the rate of 0.1 CEU per hour of the workshop.

Registration Information:

The fee includes the following:

- All workshop sessions
- Daily coffee breaks and luncheons
- Workshop workbook

Note: Registration fee does NOT include hotel accommodation for attendees.

Workshop Registration Fee:

Early bird by 22 April 2010:	USD 1,450 for SPE Members	USD 1,550 for Nonmembers
Advance by 22 May 2010:	USD 1,850 for SPE Members	USD 1,950 for Nonmembers

Registration Policy:

- Registration fee MUST be paid in advance for attending the Applied Technology Workshop.
- Full fixed fee is charged regardless of the length of time that the registrant attends the workshop.
- Fixed fee cannot be prorated or reduced for anyone (Co-chairpersons, committee members, speakers, discussion leaders, students and registrants).
- Attendees are expected to attend all workshop sessions and are not permitted to attend on a partial basis.

Cancellation and Refund Policy:

- a) A processing fee of USD 100 will be charged for cancellations received before the registration deadline 22 May 2010.
- b) For cancellations received after the registration deadline, 22 May 2010, 25% refund will be made to the registrant.
- c) No refund on cancellations received within seven (7) days prior to the workshop date, i.e. on or after 15 June 2010.
- d) No refund will be issued if a registrant fails to attend the workshop.

