

## SPE-Iran Section Technical Workshop

# Waterflooding Best Practices

By: Prof.Reza Fassihi

#### This course will:

- Provide a solid technical overview on the current state of managing waterfloods (peripheral, pattern, onshore, offshore)
- Increase the knowledge and level of understanding of the impact of waterflooding management on business delivery
- Provide attendees with examples of best waterflood management practice, that will enable them to:
  - o Improve their understanding of tools to optimize production performance
  - o Identify reservoir recovery mechanisms and how to optimize recovery factor
  - Discuss how to assess risk and uncertainty in waterflood reservoir management and how to devise a surveillance plan to mitigate risks

The waterflood Reservoir Management will address key problem areas and offer tools and techniques for optimization.

The target audience should be:

- o "Experienced RE/PE/Geos who have well and reservoir expertise in new or mature waterflood operations or team leaders/managers who influence decisions
- o Multi-discipline subsurface and operations (facilities)
- o Max 25 attendees.

#### **Class structure**

- 50/50 information into room by class leaders and attendees / interaction working session follow up
- o Reinforce good practices positive/negative examples
- o Guidance all attendees must contribute

### **Contents:**

- o Overview
- Performance Metrics
- o Efficiency and incremental Recovery Factor
- o Important Ratios (Mobility, Voidage Replacement, etc.)
- o Deepwater Peripheral Waterflood
- Well Count and Well Performance
- System Capacities
- o Reservoir Characterization
- Operational Considerations
- o IOR Options
- Development Planning
- Performance Forecasting Methods
- Failure Prevention and Remediation Opportunities
- o Reservoir Appraisal Prior to Waterflood
- o Surveillance and Intervention