



## Formation Damage: Causes, Prevention, and Remediation - FD

### COURSE

#### About the Course

Formation damage seems to be inevitable and it is costing your company money! Whether formation damage can be prevented, removed economically, or must be accepted as the price for drilling and producing a well will depend upon many factors. Concerns for formation damage have been with our industry from the early days. These concerns become more prevalent as we embark on more challenging reservoirs utilizing even more challenging drilling, completion, and production methods. Additional concerns relate to the common lost production or injectivity following workovers in these challenging environments.

These subjects and many more are addressed in this fast-paced, informative course covering all aspects of formation damage. Examples, case histories, and class team exercises are used throughout the course to emphasize key points on this important industry subject. This subject is briefly covered in the PetroSkills Production Operations 1 course (Foundation Level) as well as in the Well Stimulation: Practical and Applied (Basic Level) course. However, this course is more concentrated, detailed, and applied in the subject matter than either of the other courses.

*"Liked acidizing and details on clays. Knew about clay swelling as potential problem. Did not know about migrating clays."* - Production Engineer, United States

#### Target Audience

Production, completion, reservoir, and drilling engineers; geologists concerned with well performance and production enhancement; field supervisors, production foremen, engineering technicians, production and exploration managers; those involved in vertical, horizontal, and multilateral wells, conventional and unconventional reservoirs.

#### You Will Learn

Participants will learn how to:

- Recognize formation damage and damage mechanisms in carbonates, sandstones, and shales
- Prevent and overcome damage, when it exists, through the application of non-acid approaches, acidizing, and small fracturing treatments

#### Course Content

- Geological/depositional environment, reservoir properties review
- Properties influencing formation damage
- Damaging sandstones, shales and carbonates, clay mineralogy
- Damage mechanisms and causes of damage: fluids and polymers, during drilling, running pipe and cementing, from perforating, during well completions, during production (fines migration, paraffin, scale, etc.), during workovers, and damage to injection wells
- Evaluating damage potential: laboratory testing
- Evaluating wells that may be damaged: production performance, pressure analysis, production logging
- Damage removal: non-acid approaches, acidizing, and bypassing damage with hydraulic fracturing

## Product Details

Categories: [Upstream](#)

Disciplines: [Production and Completions Engineering](#)

Levels: [Intermediate](#)

Product Type: [Course](#)

Formats Available: [In-Classroom](#)

Instructors: [PetroSkills Specialist](#) [Ali Ghalambor](#) [Steve Metcalf](#)

## In-Classroom Format

30 Sep '24	4 Oct '24	-	Course	In-Classroom (in Kuala Lumpur)	\$5,685.00
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18 Nov '24	22 Nov '24	-	Course	In-Classroom (in Houston)	\$4,810.00
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