AMERICAN GLOBAL INSTITUTE FOR PRIVATE TRAINING

External Training Course

Formation Damage and Matrix Acidizing

From 06 Oct. To 10 Oct. 2025
From 03 Nov. To 07 Nov. 2025
From 08 Dec. To 12 Dec. 2025

W Rome Hotel, Roma, Italy

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External Training Course:

Formation Damage and Matrix Acidizing

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Course Overview:

This intensive 5-day training program is designed to equip petroleum engineers, production engineers, and field personnel with in-depth knowledge of formation damage mechanisms and matrix acidizing techniques. The course covers the causes, evaluation, prevention, and remediation strategies for formation damage, with a strong emphasis on matrix acidizing applications to enhance well productivity.

Objectives:

By the end of this training course, you will be able to:

- Illustrate the impact of formation damage upon production.
- Explain the wide variety of reasons, sources, depositional environments, and routine operations' activities that result in production limitations.
- Assess formation damage "skin" values.
- Calculate production rates with various levels of formation damage as well as no formation damage.
- Describe how TFD is recognized and how PD is recognized and present the characteristics and elements of each.
- Illustrate clay stabilization through the use of positively charged cation exchange to stabilize negatively charged clays to limit clay migration, hydration, and other damaging mechanisms.

Training Methodology:

Classroom Lectures – Delivered by experienced industry professionals.
Case Studies – Real-world scenarios and lessons learned.
Interactive Discussions – Open floor for participant engagement.
Hands-on Exercises – Practical applications and calculations.
Assessments – Knowledge checks and final evaluation.

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Course Outline:

Day 1: Introduction to Formation Damage

- Definition and impact of formation damage on well performance.
- Common causes of formation damage:
  - Drilling-induced damage.
  - Completion-induced damage.
  - Production-related damage.
  - Workover and stimulation damage.
- Formation damage assessment techniques.
- Laboratory and field diagnosis of formation damage.

Day 2: Formation Damage Prevention and Remediation

- Strategies for minimizing formation damage during drilling, completion, and production.
- Damage control measures in sandstone and carbonate formations.
- Laboratory techniques for formation damage evaluation.
- Wellbore cleaning and perforation techniques.
- Case studies on formation damage prevention.

Day 3: Introduction to Matrix Acidizing

- Fundamentals of acidizing treatments.
- Differences between sandstone and carbonate acidizing.
- Selection criteria for acidizing treatments.
- Acid types and additives used in matrix acidizing.
- Compatibility and reaction mechanisms of acids with formation minerals.

Day 4: Acidizing Design, Execution, and Monitoring

- Step-by-step design of matrix acidizing treatments.
- Acid placement techniques (bullheading, coiled tubing, diversion methods).
- Fluid loss control and diverter applications.
- Real-time monitoring and performance evaluation.
- Troubleshooting common acidizing issues.

Day 5: Case Studies and Practical Applications

- Review of successful acidizing jobs and field applications.
- Economic evaluation of matrix acidizing treatments.
- Best practices for optimizing acidizing treatments.
- Group exercises and interactive discussions.
- Final assessment and Q&A session.

Program Agenda::

(1st Day) Agenda

8.30	9.00	Opening Remarks (30 Min.).
9.00	11.30	DISCUSS COURSE OBJECTIVES: • Introduction to Formation Damage. • Formation Damage Prevention and Remediation. • Introduction to Matrix Acidizing. • Acidizing Design, Execution, and Monitoring. • Case Studies and Practical Applications.
11.30	12.00	Coffee Break

12.00	14.00	Introduction to Formation Damage:
		• Definition and impact of formation damage on well performance.
		• Common causes of formation damage:
		  ○ Drilling-induced damage.
		  ○ Completion-induced damage.
		  ○ Production-related damage.
		  ○ Workover and stimulation damage.
		• Formation damage assessment techniques.
		• Laboratory and field diagnosis of formation damage.

14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(2nd Day) Agenda

9.00	11.30	Formation Damage Prevention and Remediation: • Strategies for minimizing formation damage during drilling, completion, and production. • Damage control measures in sandstone and carbonate formations. • Laboratory techniques for formation damage evaluation.
11.30	12.00	Coffee Break
12.00	14.00	Formation Damage Prevention and Remediation: • Wellbore cleaning and perforation techniques. • Case studies on formation damage prevention.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(3rd Day) Agenda

9.00	11.30	Introduction to Matrix Acidizing: • Fundamentals of acidizing treatments. • Differences between sandstone and carbonate acidizing. • Selection criteria for acidizing treatments.
11.30	12.00	Coffee Break
12.00	14.00	Introduction to Matrix Acidizing: • Acid types and additives used in matrix acidizing. • Compatibility and reaction mechanisms of acids with formation minerals.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(4th Day) Agenda

9.00	11.30	Acidizing Design, Execution, and Monitoring: • Step-by-step design of matrix acidizing treatments. • Acid placement techniques (bullheading, coiled tubing, diversion methods).
11.30	12.00	Coffee Break
12.00	14.00	Acidizing Design, Execution, and Monitoring: • Fluid loss control and diverter applications. • Real-time monitoring and performance evaluation. • Troubleshooting common acidizing issues.
14.00	14.30	Questions and Discussion
14.30		Buffet Lunch

(5th Day) Agenda

9.00	11.30	Case Studies and Practical Applications: • Review of successful acidizing jobs and field applications. • Economic evaluation of matrix acidizing treatments. • Best practices for optimizing acidizing treatments.
11.30	12.00	Coffee Break
12.00	14.00	Case Studies and Practical Applications: • Group exercises and interactive discussions. • Final assessment and Q&A session.
14.00	14.30	Questions, Discussion & Conclusion Training Course.
14.30		Buffet Lunch