

An LDI Training Course

MULTI-STAGE FRACTURING (MSF) TECHNOLOGY

by
Rachmat Sudjana, ST

Introduction

Pertamina recently has been successfully completed in increasing the production of oil well in ONWJ by triple from the existing. They use the Multi-Stage Fracturing (MSF) Technology.

This Multi-Stage Fracturing (MSF) Technology training course provides the Audience to understand the basic method and possibly put in practice in the production improvement program in the oil field.

The Aims

This 3-day seminar on Multi-Stage Fracturing (MSF) Technology for Enhanced Oil Recovery, tailored for technical professionals in Southeast Asia. It blends technical depth, visual learning, and scenario-based engagement—ready for development.

Course Contents

Day 1: Foundations & Fundamentals

Session 1: Introduction to MSF Technology

- Evolution of hydraulic fracturing and horizontal drilling
- MSF vs. single-stage fracturing: strategic advantages
- Reservoir types suitable for MSF (tight sands, shale, carbonates)

Session 2: MSF System Components

- Open-hole packers, sliding sleeves, ball-drop systems
- Cemented vs. open-hole completions
- Proppants, fluids, and pressure control systems

Session 3: Reservoir Characterization for MSF

- Geo-mechanical modeling and fracture propagation
- Stress profiling and stage spacing optimization
- Visual mapping of reservoir heterogeneity

Day 2: Design, Execution & Optimization

Session 4: MSF Design & Planning

- Stage count, spacing, and sequencing strategies
- Fracture modeling software and simulation tools
- Risk mitigation: borehole stability, mud weight, HPHT challenges

Session 5: Execution Best Practices

- Pressure monitoring, fluid injection, and flowback protocols
- Contractor coordination and real-time decision-making
- Safety and environmental considerations

Session 6: Case Studies from Global Operators

- Gazprom Neft: MSF in sidetracks and horizontal wells
- Saudi Aramco: 15K psi MSF in HPHT formations
- Schlumberger: MSF in unstable carbonates

Day 3: Evaluation & Integration

Session 7: Post-Fracturing Evaluation

- Production logging and flowback analysis
- Fracture effectiveness and reservoir response
- Audit checklist for MSF performance review

Who Should Attend

- Reservoir Engineers,
- Completion Specialists,
- Drilling Supervisors,
- Technical Trainers
- Other Related Engineers/Staffs

Your Course Leader

Rachmat Sudjana, ST

Education: University of Indonesia, Industrial Engineering AKAMIGAS, Mechanical Engineering

Qualification: Instructor for Oil and Gas Industries and Pulp & Paper Mills

Other Qualifications: Lecturer and Mentor for Graduate Engineering Trainee –
Engineering Manager - Senior Staff Pipeline/Facility Engineer –
Pipeline Material Selection Specialist

He was a retired Oil & Gas Industry practitioner, who is willing to share his knowledge and experience to the next engineer's generation who need them.

He has a lot of experiences in the Oil & Gas Industries domestic and abroad in the World Class Oil Companies, such as working in the oil field in the north edge of Sahara Desert, Africa next the south shore line of the Mediterranean Sea. As soon as he retired, he had a particular assignment as a Company Engineer in Foster Wheeler, Reading, next to London, UK.

He completed the assignment and get a lot more experience after the completion of the project. A long with his engineering tasks, he was also mentored the engineer's new hired in the company to facilitate them for their future to hold more responsibility. He is willing to improve the knowledge by sharing them to others. He also presented some of technical papers in the national and international forums.

Methodology of the Training

This training will be conducted in Bahasa Indonesia and will be carried out using in the method of presentation, discussions and case studies to suit the needs of the participants.

Training Confirmation

LDI Training will provide a Confirmation Letter after we receive registration according to the required quota.

For registration and more information please contact

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