Horizontal Well Technology.

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Introduction:

Horizontal well application has been proven successful worldwide. Horizontal wells have also applied for well stimulation and enhanced oil recovery processes the main objectives of this course are to provide attendants with all aspects of horizontal well technology and make them capable to make decisions and calculations of horizontal wells. The course includes different aspects and practical engineering issues of horizontal well technology.

The topics include definition and reasons to drill a horizontal wells, geologic aspects and considerations for horizontal wells, different types, limitations, screening, and cost of horizontal wells. The course also covers geological modeling and engineering reservoir characterization techniques. In addition, drilling and well completion techniques with considerations for horizontal wells will also be presented. The application of enhanced recovery methods using horizontal wells will be presented.

Objectives:

Be presented. The application of enhanced recovery methods using horizontal wells will be presented.

After completion of the course, the attendants will be familiar with concepts and applications of horizontal wells and capable to do the followings;

1. Understanding different applications, advantages and limitations of horizontal wells.
2. Identifying different reservoir heterogeneity scales and calculating heterogeneity index
3. Identifying and applying different reservoir characterization techniques
4. Learning different drilling and completion methods for horizontal wells
5. Capability to calculate for horizontal well productivity and comparing it with vertical well.
6. Evaluating and applying different flow equations for horizontal wells
7. Knowing oil and gas coning problems and the uses of horizontal wells to solve them
8. Applying horizontal wells for better enhanced oil recovery (EOR)

Who should attend?

Fresh engineers, petroleum reservoir and production engineers, drilling engineers, petrophysicists, workover engineers, mechanical engineers, and other discipline engineers, geologists, geophysicists, multi-disciplinary team members, and others need to know about horizontal wells.

Methodology:

This interactive Training will be highly interactive, with opportunities to advance your opinions and ideas and will include;

- Lectures
- Workshop & Work Presentation
- Case Studies and Practical Exercise
- Videos and General Discussions

Certificate:

BTS attendance certificate will be issued to all attendees completing minimum of 80% of the total course duration

Course Outline:

The course outline includes;

- Definition of and reasons to drill horizontal wells?
- Geologic aspects, considerations, and applications of horizontal wells
- Types, uses, limitations, and cost of horizontal wells
- Different multilateral well configurations
- Calculation of maximum length of horizontal well
- Screening for horizontal wells applications

- Scales, types and calculation of reservoir heterogeneity
- Detailed and required reservoir rock and fluid properties
- Geological modeling and engineering reservoir characterization techniques

- Drilling techniques for horizontal wells
- Completion techniques/considerations for horizontal wells
- Different equations and complications in calculating horizontal well productivity
- Gas and water coning problems and proposed solution using horizontal wells
- Enhanced Oil recovery (EOR) applications using horizontal wells.