

DRILL BIT TECHNOLOGY

DRL009

COURSE DESCRIPTION

Decisions on drill bit selection and operating parameters impact not only the rate of penetration during drilling, but also the quality of the wellbore. The course emphasized in various bit types available, criteria for selecting the best bit for a given situation, standard methods for evaluating dull bits, factors affecting bit wear and drilling speed, optimization of bit weight and rotary speed.

COURSE GOAL

To enhance the participants' knowledge, skills, and ability necessary for selecting and operating drilling bits.

COURSE OBJECTIVES

By the end of this course, participant will have covered:

- Select and operate drill bits to meet a variety of drilling challenges.
- Discuss the parameters of drilling that affect bit life and improve borehole quality.
- Perform drill bit dull-grading.

WHO SHOULD ATTEND

- Drilling engineer.
- Drilling supervisors.
- Senior engineers and team leaders in drilling engineers / operations.

COURSE DURATION

5 Working Days

COURSE OUTLINES

- Bit Types.
- Rolling Cutter Bits.
- Polycrystalline Diamond Bits.
- Standard classification of Bits.
- Rock Removal Mechanisms.
- Wedging.
- Scraping & grinding.
- Erosion by fluid Jet Action Crushing or percussion.
- Torsion or twisting.

- Failure Mechanisms of Rolling Cutter Bits.
- Bit Selection and Evaluation.
- Grading Tooth Wear.
- Grading Bearing Wear.
- Abnormal Bit Wear.
- Advanced Drilling Courses.
- Factors Affecting Tooth Wear.
- Effect of Tooth High on Rate of Tooth wear.
- Effect of Rotary speed on Rates of tooth Wear.
- Factors Affecting Bearing Wear.
- Terminating a Bit Run.
- Factors Affecting Penetration Rate Bit Type.
- Formation characteristics.
- Drilling fluid properties.
- Operating Conditions.
- Bit Tooth Wear Bit Hydraulics.
- Penetration rate equation.
- Bit operation.

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