Drilling Process

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The most important consideration in selecting a perforator is choosing a gun system that matches the requirements dictated by the completion. Bullet gun, abrasive, water jets, and shaped charges are perforating methods used to initiate a hole from the wellbore through the casing and any cement sheath into the producing zone.

**Risk Analysis in Well Drilling**

Risk connotes the possibility of loss and the chance probability of that loss. Modern risk analysis utilizes principles of statistics, probability theory and utility theory. In oil exploration there are many aspects of risk. Risk and uncertainty are associated with drilling operations, with field development and with production.

Because of probabilistic nature associated with the time of drilling completion operations, to estimate the necessary time to rent all the required rigs, is considered a complex task. The scenario where the analyst takes decisions is full of uncertainties for nearly every action. Therefore, several of them are risky decisions.

One of the most traditional techniques to deal with decision and risk analysis under uncertainty is modeling and simulation using the Monte Carlo method. Considering the assumption that the analyst can associate a theoretical random distribution describes every operation in the process.

Drilling machines are one of the most dangerous hand operated pieces of equipment in the shop area. Following safety procedures during drilling operations will help eliminate accidents, loss of time, and materials. Listed below are safety procedures common to most types of drilling machines found in the machine shop:

- Never make any adjustment while the machine is operating.
- Never clean away chips with your hand. Use a brush.
- Never place tools or equipment on the drilling tables.
- Keep all guards in place while operating.