Abstract :

In this research work, we are interested in minimizing losses, existing when drilling an oil well. This would essentially improve the load losses by acting on the rheological parameters of the hydraulic anddrilling mud. For this, rheological tests were performed using a six-speed rotary viscometer (FANN 35). We used several rheological models to accurately describe the actual rheological behavior of drillingmud oil-based, according to the Pearson's coefficient and to the standard deviation. To model the problem, we established a system of equations that describe the essential to highlight purpose and various constraints that allow for achieving this goal. To solve the problem, we developed a computerprogram that solves the obtained equations in Visual Basic language system. Hydraulic and rheological calculation was made for in situ application. This allowed us to estimate the distribution of losses in the well.