

Challenges and Solutions to Running Tools Through Older Well Completions Containing Significant Paraffin and Asphaltene Buildup
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Abstract

Scarcity of petroleum supply is causing an industry emphasis on recompletions as well as drilling. This paper will address recompletion efforts in older wells, those drilled before 1998. In such wells, buildup of asphaltenes and paraffins presents a challenge that causes significant losses of rig time, production and revenue both onshore and offshore. A particularly difficult situation arises when trying to run tools through older completions' tubing and casing in which significant buildup is found. Though not fully predictable, the composition and causes of these buildups have already been the subject of many industry publications. This paper uses case studies from fields located in and around the Gulf of Mexico to illustrate the difficulties of using modern tools on these older well completions. Once the failure conditions under which each job was performed are established, it is shown that everything from malfunction of the equipment to not being able to run the equipment at all can be directly attributed to the presence of accumulated substances. Conversely, it is shown that the success of a job can at least in part be attributed to having produced a "clean" well condition in an older well prior to running the job. These experiences in the field serve as a means to suggest the use of different types of tools to account for the presence or absence of buildup, as well as how tools can be run to depth when there is buildup in the well.

[Complete paper](#)