

The Value of Solid Expandable Tubulars in Cased-hole Environments

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Abstract

Since its inception in the late nineties, solid expandable tubular technology has saved major and independent operators significant capital whether used in drilling operations or in workover projects. In drilling operations, these systems are used as a contingency string and as a primary casing string planned into the base well design. Incorporating these systems into the initial wellbore plan has reduced the overall costs of some wells by up to 30%. For workover projects, solid expandable tubulars are used to repair and/or reinforce existing casing while minimizing loss of hole size. This feature enables use of the same completion.

Solid expandable technology involves the controlled expansion of solid metal liners in the down hole environment for enhanced drilling, production, completion and remedial operations. As the technology matures, application realms continue to broaden to include the installation of multiple systems in a single wellbore, expansion through milled windows, and use in high-pressure & temperature conditions. In addition, these systems have provided the momentum for operations that result in compelling returns on production-enhancement projects for old/new wells and fields.

This paper will illustrate how the latest solid expandable liners have been applied in existing cavern wells to repair corroded sections of casing while providing the largest internal diameter possible in order to maintain sufficient throughput capacity. Thus, enabling the operator to continue servicing their clients in a timely manner, as well as, extending the life of the asset and saving the cost of drilling a replacement well.

Key words: Caverns for Storage, Remediation, Throughput, Open-Hole, Cased-Hole, Liner