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Addressing Cavern Sealing and Cementing Issues Using Solid Expandable Tubular Technology

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Abstract

Solid Expandable Technology (SET) involves the controlled expansion of solid steel liners in the down hole environment for enhanced drilling, production, completion and remediation operations. This technology is reliable and consistent and offers a maximum internal diameter for the well compared to a conventional casing program. As the expandable technology continues to evolve, so does the realm of applications. When looking at a specific application such as sealing existing storage wells, this technology should be considered when evaluating solutions.

Solid Expandable Tubular Technology utilizes elastomeric sealing components that provide proven isolation that satisfy sealing regulatory challenges during casing repair which includes the ability to cement. The use of an expandable liner provides a technical and economically viable solution to many cavern well sealing issues.

This paper will address the application of Solid Expandable Tubular Technology for sealing and repairing corroded or damaged casing during the lifecycle of cavern wells. Applying this technology in existing storage wells allows for maintaining the largest internal diameter possible while ensuring sufficient throughput capacity. This can be important in meeting the goal of extending the life of the well and doing so in regulatory compliance while maintaining maximum ID possible. Meeting throughput requirements is key to optimizing customer delivery of stored products. The use of this proven SET technology to repair sections of casing in existing cavern wells enables the operator to economically address any sealing issues that exist and to extend the life of the asset.

Key words: Expandable, Liner, Cementing, Remediation, Throughput, Open-Hole, Cased-Hole

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