



Casing Section Rotation Method and Apparatus

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Summary: An apparatus and method improve the cement seal at the bottom of surface casing during drilling operations

Description: It is well known in the industry that moving casing during cement provides improved cement jobs during drilling operations. There are two ways to move the casing during cementing: reciprocation and rotation. Both reciprocation and rotation of casing relies upon the use of the rig at the surface to rotate or reciprocate the entire casing string, which may be undesirable for operational or safety considerations. Achieving an improved cement seal in the annulus of the surface casing may prevent migration, which can result in contamination of surface aquifers. Improving the seal around intermediate casing strings will enhance the ability of the cement to prevent annular flow during well control events. Improving the seal across the production casing will improve the isolation of the productive interval and prevent undesirable water production. This invention consists of an apparatus and method to rotate a section of the casing without the use of surface rotation. This is accomplished by imparting torque to a tool connected at the bottom, or within the section of casing to be rotated. This rotation is imparted hydraulically by the use of a rotary mechanical device that extracts energy from a fluid flow and converts it into useful work, which causes the section of casing to rotate in response to a fluid being pumped through, such as cement, spacers and drilling fluids.

Main Advantages of this Invention

- Improves cement seal through downhole rotation
- Method is effective for deep wells, workovers, and cleanouts

Potential Areas of Application

- Oil and Gas
- Cement Service Companies

ID number: 15015

Intellectual Property Status: US provisional application filed (62/095,319).

Opportunity: We are seeking an exclusive or non-exclusive licensee for marketing, manufacturing, and sale of this technology.

For more information contact:

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