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A COMPARISON BETWEEN FOAMED AND LIGHTWEIGHT CEMENTS

D. M. Dusterhoft, Trican Well Service Ltd.

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ABSTRACT

A number of wells in western Canada have been drilled into lower pressure, lost circulation reservoirs, which has increased the use of foamed and lightweight cements. This paper compares the properties of foamed and lightweight cements and makes recommendations regarding the most appropriate situations in which each should be used. Specific emphasis is placed on the equivalent circulating density (ECD) variation between foamed and lightweight cement which demonstrates the high ECD's experienced when pumping foamed cement. A cost comparison between lightweight and foamed cements was also completed and demonstrated a 39% reduction in costs when lightweight cement was utilized. Finally, a case history in which 54 wells were switched from foamed to lightweight cement is presented along with the associated success rate and cost savings.

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