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A NEW GENERATION OF LIGHTWEIGHT CEMENT

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ABSTRACT

As oil and gas reservoirs are depleted, the need to apply less pressure when drilling and cementing wells in these reservoirs increases. The regulatory board in western Alberta requires that the cement placed up to 100 m above the uppermost hydrocarbon bearing zone achieves a minimum of 3.5 MPa (500 psi) compressive strength within 48 hours. In order to attain these strengths with a cement density of 1300 kg/m^3 or lower at shallow depths (i.e. low temperatures), previous technology required that the cement either be foamed or contain expensive glass or ceramic beads. This paper will discuss a new lightweight cement technology that enables Board-required strengths to be met at lower temperatures without the use of these or other relatively expensive methods.

For information on ordering the full paper, please contact the Canadian Association of Drilling Engineers at info@cadecanada.com.

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