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THE DEVELOPMENT OF A NEW GENERATION OF GAS CONTROL CEMENTS

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ABSTRACT

Controlling gas migration through cement is a serious problem faced by most operators in Western Canada. Many techniques have been used over the years with little universal success. This paper discusses the mechanism of gas migration and reviews the various theories that have been used to control it. The paper discusses the past failures of some of these theories and then outlines the development of a new low permeability gas control cement. Laboratory tests are presented which show the effectiveness of this new blend in lowering the permeability of cement to gas. A comprehensive field study is presented which chronologically outlines the failures of past techniques, the steps taken to develop the new low permeability blend, and demonstrates the success of the new blend in controlling gas migration in the field.

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