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Updated methodology for evaluating lost circulation control of cement slurry for double lost channels

Yuanguang Yang, Bin Yuan, Yongqing Wang



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1 Updated methodology for evaluating lost circulation 2 control of cement slurry for double lost channels

3 Yuanguang Yang, Bin Yuan^{*}, Yongqing Wang^{*}

4 *State Key Laboratory of Oil and Gas Reservoir Geology and Exploitation, Southwest Petroleum*
5 *University, Chengdu 610500, China.*

6 Abstract

7 This paper presents an evaluation method for evaluating the sealing
8 capacity of cement slurry with lost circulation control for effective lost
9 channel sealing during cementing operations. The method was developed
10 based on a lost device and an evaluation model that we developed
11 ourselves. This evaluation model includes three critical evaluation
12 indexes: the loss time, loss weight, and maximum sealing pressure. In
13 addition, it can be used to quantitatively evaluate the effective sealing
14 capability of cement slurry with lost circulation control. This method is
15 aimed at evaluating the sealing capacity of cement slurry as a way to
16 investigate its applicability in designing effective treatments for the
17 sealing of multiple lost channels. The results suggest the particle lost
18 circulation materials (LCM) can improve the bridging capacity of fiber
19 cement slurry. The loss capacity of a fracture-pore double lost channel is
20 not equal to that of a fracture and a channel superposition. Moreover, the
21 lost channel method can avoid an excessive or overly low evaluation of

*Corresponding author. Tel: +86-28-83032901.

E-mail address: swpiwyq@163.com (Y. Wang), yuanbin19880118@126.com (B. Yuan).

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