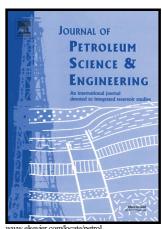
Author's Accepted Manuscript

Updated Criterion Select Particle Size to Distribution of Lost Circulation Materials for an **Effective Fracture Sealing**

Mortadha Alsaba, Mohammed F. Al Dushaishi, Runar Nygaard, Olav-Magnar Nes, Arild Saasen



PII: S0920-4105(16)30721-5

DOI: http://dx.doi.org/10.1016/j.petrol.2016.10.027

PETROL3687 Reference:

To appear in: Journal of Petroleum Science and Engineering

Received date: 4 January 2016 Revised date: 9 October 2016 Accepted date: 17 October 2016

Cite this article as: Mortadha Alsaba, Mohammed F. Al Dushaishi, Runai Nygaard, Olav-Magnar Nes and Arild Saasen, Updated Criterion to Selec Particle Size Distribution of Lost Circulation Materials for an Effective Fractur Sealing, Journal Science of Petroleum and Engineering http://dx.doi.org/10.1016/j.petrol.2016.10.027

This is a PDF file of an unedited manuscript that has been accepted fo publication. As a service to our customers we are providing this early version o the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain

ACCEPTED MANUSCRIPT

Updated Criterion to Select Particle Size Distribution of Lost Circulation Materials for an Effective Fracture Sealing

Mortadha Alsaba^{a*1}, Mohammed F. Al Dushaishi^b, Runar Nygaard^{c1}, Olav-Magnar Nes^d, and Arild Saasen^d

* Corresponding author. m.alsaba@ack.edu.kw

Abstract

This paper presents a new criterion to select particle size distribution (PSD) for an effective fracture sealing. The method was developed based on a comprehensive laboratory investigation that was conducted to determine the relationship between effectiveness of different lost circulation material (LCM) treatments in terms of the sealing efficiency and PSD. The results were compared with the current selection methods, which were developed to enhance the bridging capabilities for drill-in fluid, to investigate their applicability in designing effective treatments for fracture sealing. A statistical investigation was carried out to develop new criteria that suggest PSD based on the expected fracture width for an effective fracture sealing. The criteria suggest that both D50 and D90 should be equal or greater than 3/10 and 6/5 the fracture width, respectively. The suggested method showed a 90% match between the actual and predicted seal quality.

_

^a Australian College of Kuwait

^b Missouri University of Science and Technology

^c Oklahoma State University

^d Aker BP, Formerly known as Det Norske Oljeselskap ASA

¹ Formerly at Missouri University of Science and Technology

Download English Version:

https://daneshyari.com/en/article/5484502

Download Persian Version:

https://daneshyari.com/article/5484502

<u>Daneshyari.com</u>