

(21) Application No: 2103742.9  
 (22) Date of Filing: 31.12.2018  
 Date Lodged: 17.03.2021  
 (86) International Application Data:  
 PCT/US2018/068159 En 31.12.2018  
 (87) International Publication Data:  
 WO2020/142073 En 09.07.2020

(51) INT CL:  
 E21B 21/06 (2006.01) E21B 41/00 (2006.01)  
 E21B 49/00 (2006.01)  
 (56) Documents Cited:  
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 US 4941951 A US 4833915 A  
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 (58) Field of Search:  
 INT CL E21B, G06F  
 Other: eKOMPASS (KIPO internal)

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(54) Title of the Invention: **Modeling efficiency of solids removal during wellbore fluids displacements**  
 Abstract Title: **Modeling efficiency of solids removal during wellbore fluids displacements**

(57) Determining the efficiency of solids removal from a wellbore during a wellbore displacement operation may prevent the unnecessary consumption of resources at a well site and enhance the performance of subsequent wellbore operations. The efficiency of solids removal may be based, at least in part, on one or more expected masses of one or more return fluids returned to the surface from a wellbore displacement operation, wherein the determining the expected masses comprises using one or more properties of one or more wellbore servicing fluids before the wellbore servicing fluids are used in the wellbore displacement operation. The expected masses may be compared to actual masses of wellbore fluids returned to the surface, wherein the actual masses are determined from samples of the wellbore fluids obtained from a return line of the wellbore. To improve operational decision making at a well site, operators or automated processes may modify the wellbore displacement operation based, at least in part, on the comparison between the expected masses and the actual masses.

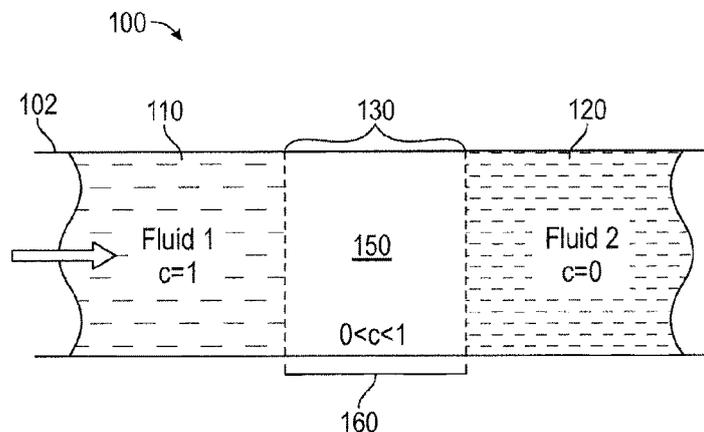


FIG. 1

This international application has entered the national phase early