

Title (en)
AQUEOUS DISPLACEMENT FLUID INJECTION FOR ENHANCING OIL RECOVERY FROM A LIMESTONE OR DOLOMITE FORMATION

Title (de)
WÄSSRIGE VERDRÄNGUNGSFLÜSSIGKEIT ZUR INJIZIERUNG IM ZUGE DER VERSTÄRKTEN ÖLFÖRDERUNG AUS KALKSTEIN- ODER DOLOMITFORMATION

Title (fr)
INJECTION DE FLUIDE AQUEUX DE DÉPLACEMENT POUR AMÉLIORER LA RÉCUPÉRATION DE PÉTROLE À PARTIR D'UNE FORMATION CALCAIRE OU DE DOLOMITE

Publication
EP 2396383 A1 20111221 (EN)

Application
EP 10703469 A 20100211

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- EP 10703469 A 20100211

Abstract (en)
[origin: WO2010092095A1] A method for enhancing oil recovery (EOR) from a limestone or dolomite formation containing crude oil and connate water comprises: -determining a $\text{SO}_4^{2-} / \text{Ca}^{2+}$ ratio (Mol/Mol) in the connate water; and -injecting into the formation pore spaces an aqueous displacement fluid with a $\text{SO}_4^{2-} / \text{Ca}^{2+}$ molar ratio (Mol/Mol) above 1 and a higher $\text{SO}_4^{2-} / \text{Ca}^{2+}$ molar ratio (Mol/Mol) than the connate water. The method modifies the wettability of the limestone or dolomite formation such that its oil wettability is reduced and its water wettability is increased. Figure 17 shows that only brines LS2 and LS3 will be effective in wettability modification. In Table 5 it is shown that these brines have a $\text{SO}_4^{2-} / \text{Ca}^{2+}$ ratio (Mol/Mol) above 1 and a higher $\text{SO}_4^{2-} / \text{Ca}^{2+}$ ratio (Mol/Mol) than the connate water.

IPC 8 full level
C09K 8/58 (2006.01)

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