

Title (en)

METHOD FOR EXTRACTING PETROLEUM FROM UNDERGROUND DEPOSITS HAVING HIGH TEMPERATURE AND SALINITY

Title (de)

VERFAHREN ZUR ERDÖLFÖRDERUNG UNTERIRDISCHER VORKOMMEN MIT HOHER TEMPERATUR UND SALINITÄT

Title (fr)

PROCÉDÉ À HAUTE TEMPÉRATURE ET À HAUTE SALINITÉ POUR L'EXPLOITATION PÉTROLIÈRE DE GISEMENTS SOUTERRAINS

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Application

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Abstract (en)

[origin: WO2018219654A1] The invention relates to a method for extracting petroleum from underground oil reservoirs, wherein an aqueous, salt-containing surfactant formulation comprising a surfactant mixture for lowering the interfacial tension between oil and water to < 0.1 mN/m is pressed into an oil reservoir through at least one injection well and crude oil is removed from the reservoir through at least one production well, wherein the oil reservoir has a temperature of $\geq 90^{\circ}\text{C}$ and a formation water having a salinity of ≥ 30000 ppm of dissolved salts and wherein the surfactant mixture contains at least one ionic surfactant (A) of general formula (I): $(\text{R1})_k\text{-N}^+(\text{R2})(3-k)\text{R3 (X}^-)\text{I}$ and at least one anionic surfactant (B) of general formula (II): $\text{R4-O-(CH}_2\text{C(R5)HO)}_m\text{-(CH}_2\text{C(CH}_3\text{)HO)}_n\text{-(CH}_2\text{CH}_2\text{O)}_o\text{-(CH}_2\text{)}_p\text{-Y-M}^+$, wherein, during injection, there is a molar ratio of ionic surfactant (A) to anionic surfactant (B) of 90 : 10 to 10 : 90 in the surfactant mixture and wherein R1 to R5, k, l, m, n, o, p, X, Y and M have the meaning indicated in the claims and in the description. The invention further relates to a concentrate containing surfactant (A), surfactant (B), or the surfactant mixture.

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