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(54) Method for electromagnetic stimulation of downhole area during hydrocarbon production

(57) The present invention relates to oil industry and can be used in order to increase the volume of pumped-out fluid, oil recovery efficiency, and oil production rate, as well as to reduce natural hydrated and hydrated hydrocarbonaceous deposits on the downhole area elements.

The method comprises the positioning of a device with a radiator and a controlled generator at the base of the electric immersible electromotor of the electric centrifugal pumping plant in order to create an electromagnetic wave field in the downhole area, in which the electromagnetic wave field radiation is provided at the resonant frequency for the downhole area and predetermined by available experience, modelled results, or test results, where the testing is carried out at the selected frequency and the generator is operated in resonant frequency mode between two tests, the resonant frequency being determined during testing, for formation of standing electromagnetic waves by the radiator, the standing electromagnetic waves dispersing wave energy throughout the downhole area.

The method according to the present invention provides resonant wave stimulation of the fluid and the downhole area and allows wells to be revived and significantly extends the life of oil fields with low flow rate, flooded areas, low-gravity oil, etc., due to the increase in oil recovery efficiency, oil quality and rheological properties. Moreover, the method provides protection of the downhole area elements from harmful deposits.

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EUROPEAN SEARCH REPORT

Application Number
EP 13 00 3802

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	19 February 2014	Schneiderbauer, K

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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