

ENHANCED OIL RECOVERY

Xerox Corporation

Initial Bidding Guidance: Low 6 Figures

This portfolio is directed to methods using sonic sources to improve waterflooding operations to enhance oil recovery from subterranean oil reservoirs. One or more sonic or ultrasonic sources transmit sound waves to a percolation path where solid particles are to be separated from liquid particles. The one or more sonic or ultrasonic sources operate at a frequency determined by the rock permeability and fluid density and viscosity to excite a second sound mode in which the porous rock oscillates out of phase with the fluids in the pores of the permeable rock. The rock frame moves one direction and the pore fluid moves the other direction. This process moves oil contained in pores adjacent to an operating percolation path into the flow path, thus recovering oil that might otherwise be unrecoverable. The one or more sonic sources can operate out of phase with each other to create interference patterns, which allow the location of the second sound within the solid to be precisely controlled and located.

Forward Citing Companies: Aker Subsea, Baker Hughes, Coriba Technologies, Escanaba Holdings, Exxon Mobil, Halliburton Company, Hydroacoustic Inc, Petrosonics LLC, Royal Dutch Shell, Schlumberger, Sonoplus Ltd, Technology Research Corporation

Priority Date: 10-30-2000

Representative Claim: US 7,628,202 – Claim #1

A method comprising: controlling at least one sonic source to generate sound waves relative to an item, wherein said item comprises at least one percolation path that comprises a combination of liquid particles and solid particles, wherein said controlling transmits said sound waves to said percolation path; regulating frequency of said sound waves such that said liquid particles oscillate out of phase with said solid particles; and regulating phases of said sound waves generated by said sonic source so as to control locations within said percolation path where said liquid particles oscillate out of phase with said solid particles to close an active percolation path and open a non-active percolation path to obtain said liquid particles from said non-active percolation path.

Contact:

For more information on the assets available for sale in this portfolio, contact Paul Greco.

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TECHNOLOGY

OIL RECOVERY

NOVELTY

IMPROVED WATERFLOODING OPERATIONS INVOLVING THE USE OF SONIC SOURCES TO IMPROVE OIL RECOVERY FROM SUBTERRANEAN OIL RESERVOIRS

IMPORTANCE

A VALUABLE PORTFOLIO FOR OIL AND GAS COMPANIES AND OILFIELD SERVICE PROVIDERS

NUMBER OF ASSETS

2

US PATENTS (2)

6,405,796
7,628,202