WITHDRAWN: Solving the inverse problem of tracer fluw using a hybrid optimization method[1] OSCAR VALDIVIEZO-MIJANGOS, JETZABETH RAMíREZ-SABAG, MANUEL CORONADO, Instituto Mexicano del Petröleo — A new application for genetic algorithms and direct search optimization methods for solve the inverse problem in tracers test in oil reservoirs is presented in this work. A hybrid method is used to attain a better fit for tracer response curves in producer well with data got from field tests. As it is well known, the tracer tests are used to determinate system rock-fluid properties which are found by nonlinear regression. The properties can be porosity, dispersion coefficient, fracture width, etc. Until now direct search methods have been utilized, which have the inconvenience that they required close initial value of parameters to be optimized to begin iterations. In many practical cases, it is not possible account with this information due at the complexity of the reservoir. Here, we presented a hybrid method which consists on: first use an algorithm genetic which does need any starting point to get the optimal, then we use direct search methods with this initial value for each parameter. We use field data with a mathematical model that describe the flux of tracer between wells and we get excellent results.

[1]Field case

Oscar Valdiviezo-Mijangos
Instituto Mexicano del Petróleo

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