عنوان مقاله:
Type Curve Development by Using Computer Programming

نویسندگان:

Morteza Dejam - *Department of Chemical & Petroleum Engineering, Sharif U of Tech, Tehran, Iran*

Hasan Shojaei - *Department of Chemical & Petroleum Engineering, Sharif U of Tech, Tehran, Iran*

Abbas Helalizadeh - *Department of Petroleum Engineering, Petroleum U of Tech, Ahwaz, Iran*

خلاصه مقاله:

Type Curve Development is an application of computer programming in well testing as a common problem in oil industry. In this work, Diffusivity Equation with specified boundary and initial conditions were first solved using Laplace transformation. A numerical method, Stehfest Algorithm, was used to find inverse Laplace transformation. VISUAL FORTRAN programming software and EXCEL software were used to generate a beneficial program for one of the major well testing designers, type curve match process. Programming aimed to develop new precise and easy to use type curve for calculation of reservoir properties from well testing data. The type curve developed in this work was used to obtain reservoir parameters for an actual data set of pressure build up test from one of Iranian reservoirs. The same parameters were obtained using PANSYS SOFTWARE. The results were then compared to check the accuracy of type curve just developed. The results exhibited a satisfactory agreement with the results of PANSYS SOFTWARE.

کلمات کلیدی:
Laplace transform, PANSYS, Stehfest algorithm, Type curve, VISUAL FORTRAN

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