

عنوان مقاله:

Experimental investigation of free and forced gravity drainage in petroleum fractured reservoirs

محل انتشار:

هفتمین کنگره ملی مهندسی شیمی (سال: 1390)

تعداد صفحات اصل مقاله: 6

نویسندگان:

mohammad amin Ariana - department of petroleum Engineering, gachsaran branch islamic azad university gachsaran
iran

Rouhollah taaghizadeh - department of petroleum Engineering, gachsaran branch islamic azad university gachsaran
iran

خلاصه مقاله:

Gas/oil gravity drainage takes place in the secondary gas cap, where the matrix is filled with oil and surrounded by gas-filled fractures. Oil will be produced into the fractures by gravity forces at a rate mainly governed by the density difference $\Delta\rho$ between oil and gas, matrix permeability k , the oil viscosity μ_o , the oil relative permeability k_{ro} , and the height of the gas/oil capillary transition zone H relative to the height H of draining oil column. The main goal of these experiments is qualitative and quantitative investigation of oil recovery by free gravity drainage and gas injection in various rates and the effect of block height on oil recovery. In free fall gravity drainage, oil is produced just by gravity forces, while after the gas injection, the pressure difference between two permeable zones, provides essential forces for displacing fluid into the low permeable zone and produce the remaining oil. All the experiments have been done using glass etched micromodel and the pictures have been recorded by camera.

کلمات کلیدی:

Gas-oil gravity drainage, Micromodel, Gas injection, Fracture, Matrix

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/341379>

