Dynamic X-ray 3D imaging of fluid flow in Stevns Klint chalk

Rasmussen, Peter Winkel; Dahl, Anders Bjorholm; Sørensen, Henning Osholm; Christensen, Anders Nymark

Publication date:
2021

Document Version
Publisher's PDF, also known as Version of record

Dynamic X-ray 3D imaging of fluid flow in Stevns Klint chalk

Peter Winkel Rasmussen, Anders Bjorholm Dahl, Henning Osholm Sørensen, Anders Nymark Christensen

X-ray computed tomography (CT) is frequently used to provide detailed 3D images of rock microstructures. Imaging static samples have until recently been the only possibility in laboratory CT scanners, however, novel reconstruction methods lead to reduced scanning times and thereby enable dynamic measurements. Therefore, using these new techniques we have initiated a series of studies where we study the flow in side core plugs of chalk directly.

We have performed the first proof of concept experiment where a core plug was imaged dynamically in 3D during single phase flow.