Permeability Multiplier Reservoir Simulator
PMRS project

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Abstract

This document contains details about the implementation and formulations for a novel upscaling approach to consider permeability variations in conventional reservoir simulations.

1 Introduction

2 Fundamentals

2.1 sec:fundamentals

3 Upscaling process for permeability considering geomechanic effects

3.1 sec:upscaling

4 Programming and neopz implementation

PMRS uses plastic materials already implemented inside *neopz* library. Souza Neto, Peri, and Owen 2008

4.1 About the custom memory materials

5 Verifications

5.1 2D simulations

5.2 3D simulations

6 Results

7 References

References

Souza Neto, E. A. de, D. Peri, and D. R. J. Owen (2008). *Computational Methods for Plasticity*. John Wiley & Sons, Ltd. DOI: 10.1002/9780470694626. URL: https://doi.org/10.1002/9780470694626.