

Title (en)
PHYSICALLY-BASED ANALYSIS APPARATUS AND RELATED METHODS

Title (de)
PHYSIKALISCHE ANALYSEVORRICHTUNG UND ZUGEHÖRIGE VERFAHREN

Title (fr)
APPAREIL D'ANALYSE À BASE PHYSIQUE ET PROCÉDÉS ASSOCIÉS

Publication
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Application
EP 14775121 A 20140313

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Abstract (en)
[origin: WO2014160348A2] Methods and apparatus for modeling well production. Such methods comprise modeling a production of a well (perhaps an open universe, generative model). Methods also comprise determining probability distributions for physical parameters associated with the well by training the model with historic well production data (perhaps using sparse sampling). Such methods also comprise determining a posterior distribution for the model by sampling probability distributions for the parameters. Some methods further comprise determining a posterior distribution for the well's production using the model's posterior distribution. Non-Gaussian (Laplacian) noise can be added to the model. Methods can comprise financially modeling the well. Some methods comprise using MCMC sampling to converge the parameter posterior distribution for the well's production. AnEUR for the well can be determined along with an uncertainty associated with the posterior distribution for the production. If desired, some methods comprise modeling multi-phase flow in the well.

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