

Title (en)  
MACHINE, PROGRAM PRODUCT, AND COMPUTER-IMPLEMENTED METHOD TO SIMULATE RESERVOIRS AS 2.5D UNSTRUCTURED GRIDS

Title (de)  
MASCHINE, PROGRAMMPRODUKT UND COMPUTERIMPLEMENTIERTES VERFAHREN ZUR SIMULIERUNG VON RESERVOIRS ALS UNSTRUKTURIERTE 2,5D-GITTER

Title (fr)  
MACHINE, PRODUIT-PROGRAMME ET PROCÉDÉ MIS EN ŒUVRE PAR ORDINATEUR POUR SIMULER DES RÉSERVOIRS EN TANT QUE GRILLES NON STRUCTURÉES 2.5D

Publication  
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Application  
**EP 11741334 A 20110621**

Priority  

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Abstract (en)  
 [origin: CA2803144A1] Example embodiments utilize machines to model reservoir geometry having geological layers as 2.5D unstructured grids. Example embodiments include program products to simulate a reservoir by generating a reservoir data system, performing a numerical fluid flow simulation, and visualizing the simulation. Data system embodiments include data structures to model a reservoir geometry as laterally unstructured two-dimensional (2D) grids and associated layer depths defining z-lines to thereby define a 2.5D unstructured grid, including datasets for: vertices of the grid cells for the future grid top and bottom surfaces, a number and listing of vertices for each grid cell, cell center coordinates, and vertex adjacency information using a compressed sparse row format. Computer-implemented methods include projecting external and internal boundaries onto a future grid surface; generating 2D unstructured, e.g., Voronoi, grids, for the top and bottom surfaces; and generating z-lines of depths corresponding to reservoir layers to thereby generate 2.5D unstructured grids.

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Citation (search report)  
See references of WO 2011163166A2

Citation (examination)  

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