Volume 53, Number 19
May 11, 2013
Abstract Nos. 1,151,720—1,152,419
PETROLEUM ABSTRACTS®
Electronic Edition

EARTH MODEL 1,151,769
SHARED EARTH MODELING: KNOWLEDGE DRIVEN SOLUTIONS FOR BUILDING AND MANAGING SUBSURFACE 3D GEOLOGICAL MODELS
M.Perrin and J.F.Rainaud (MINES ParisTech; IFP Energies Nouvelles). Editions Technip, Paris, 2013.
(ISBN 978-2-7108-1002-5; 424 pp)

Over the last two decades, earth modeling has become a major investigative tool for evaluating the potential of hydrocarbon reservoirs. Earth modelling must now face new challenges since petroleum exploration no longer consists in only investigating newly identified resources, but also in re-evaluating the potential of previously investigated reservoirs in the light of new prospecting data and of revised interpretations. Earth models incorporate a variety of different interpretations made on various types of data at successive steps of the modeling process. However, current modeling procedures provide no way to link a range of data and interpretations with a final earth model. For this reason, sharing and exchanging information about the model building process is at present a major difficulty. Recently, the term "Shared Earth Modeling" has been used for expressing the idea that earth models should be built in such a way that experts and end users can have access, at any time, to all the information incorporated into the model. This information does not only concern the data, but also the knowledge that geoscientists produce by interpreting these data. Accordingly, practical solutions must be studied for operating a knowledge-driven approach of Shared Earth Modeling. This is the goal of this book. Relying on recent progress in various fields of computer sciences, the authors present innovative solutions for solving the critical issue of knowledge exchange at key steps of the modeling process.
.....