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Finding the Question is Often More Important than Finding the Answer

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ABSTRACT

Decision Based Modelling is a planning methodology that links field decisions to the integrated reservoir modelling process that helps teams analyze, validate, and evaluate options to make optimal decisions. The construction of idealized representations that capture important aspects of our subsurface assets is a vital part of our routine scientific and engineering analysis. The most that can be expected from any model is that it can supply a useful approximation to reality, e.g., "all models are wrong, some models are useful" (Box, 2005). While a model can never be "truth", a model might be ranked from very useful, to useful, to somewhat useful to, finally, essentially useless (Burnham, 2002).

As practitioners, we must not forget that the aim is to understand something about the real world, in order to predict, to forecast, to choose an action, make a decision, summarize evidence, and so on, but always on the real world. Modelling implies simplification and idealization. Our models are not the reality, but they must be applicable for the specific purpose which is to be investigated. Appropriate planning and decision framing is a key element of integrated modelling to ensure that key uncertainties and decisions are addressed without overelaboration. Detailed questions are not as exciting as brilliant answers, but without them, even the most robust integrated models can be "essentially useless".