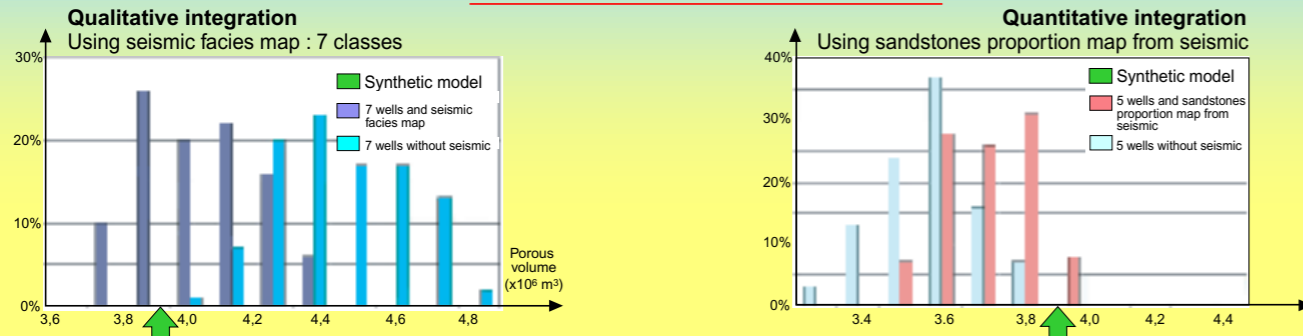
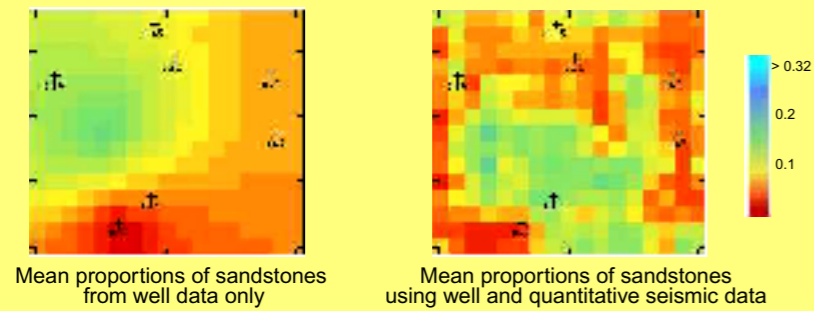


## 4 Evaluation of the impact of seismic constraints

### In terms of global porous volume



### In terms of mapping & heterogeneities



### And in terms of ....

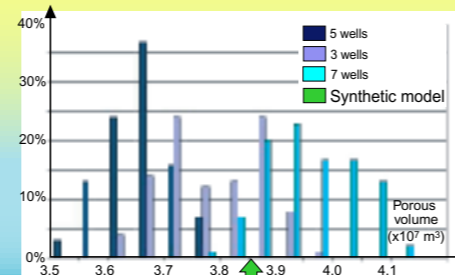
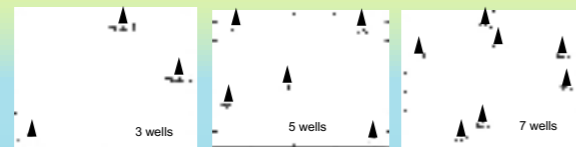
- a) Connectivity
- b) N / G
- c) and dynamic behaviour

## 5 Discussion

### a) Implementation difficulties

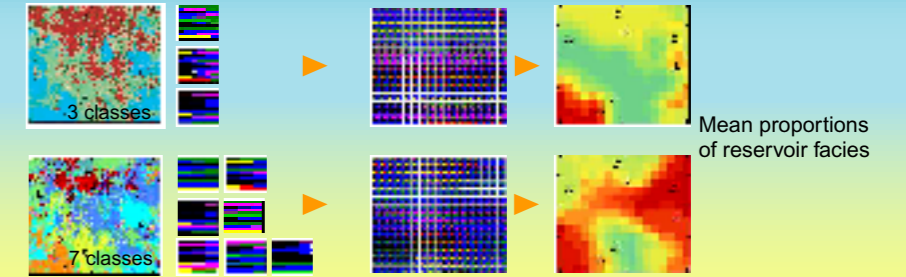
#### Linked to the data

- 1) Wells geological sampling
- 2) Data processing
  - Time to depth matching between wells and seismic at the fine scale
  - Difference of resolution between geology and seismic

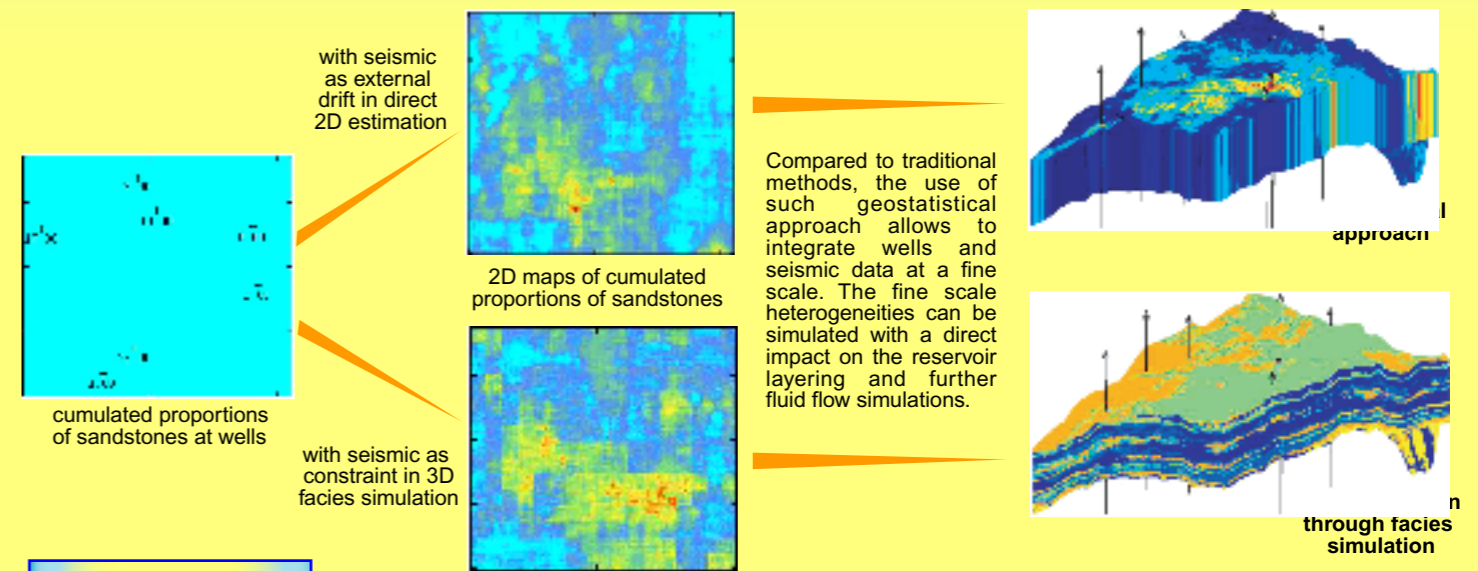


#### Linked to the methodology

- 1) Impact of the segmentation/number of classes
- 2) Quality of the seismic  $\longleftrightarrow$  geology relationship
  - Regression law
  - Association VPC  $\longleftrightarrow$  seismic facies
- 3) Horizontal resampling of the seismic information



### b) Comparison with conventional approach



## 6 Conclusion

We performed extensive tests using this synthetic case, different sets of wells and different kind of seismic constraints. The results lead to some general remarks: First, the representativity of the well set is of primary importance on the results and their analysis as it governs the proportions of facies for the whole reservoir. If the set of wells is a good statistical sampling of the reservoir, it will be sufficient to get a good estimation of the real porous volume of the reservoir. In that case, the additional information given by the seismic derived constraint will mainly be geographic, as the location of barrier for instance. On the contrary, and in most real cases, if the wells are not representative of the mean proportions of facies within the reservoir, additional seismic constraints will be important for a more accurate estimation of the volumes. This work also points out that the volumes should not be the only parameter used to analyze the results and compare different hypotheses. In particular, the seismic derived constraint can strongly modify the locations of heterogeneities, and the connectivity of reservoir bodies in the reservoir.

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