flexdecomp

FLEXURAL BACKSTRIPPING OF RIFT BASINS & PASSIVE MARGINS

FlexDecomp 2D is a reverse modelling program which takes present-day cross-sections through a basin and backstrips them through their post-rift history by progressively removing and decompacting the post-rift stratigraphy. It is very quick and easy to apply.

FlexDecomp 2D produces a sequence, back through time, of balanced palinspastic restorations, with the final restoration being the syn-rift geometry of the basin. The model invoked includes whole-lithosphere temperature calculations and 2D flexural isostasy.

If a series of sections are backstripped then maps, back through time, of bathymetry, topography, beta factor, heat-flow etc. can be produced from the results.

FlexDecomp 2D is used to:

> Model the structural and stratigraphic development of extensional basins and passive margins
> Predict palaeobathymetry and palaeotopography
> Identify sediment depocentres and quantify their depth and location through time
> Place precise constraints on estimates of basin extension (beta factor). Estimating beta allows heat-flow in the basin to be quantified.
> Produce burial-history plots at any location.
> QC seismic interpretations by assessing whether the interpretation maintains a valid geometry as it is restored