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# 3-D geologic modelling and tectonic control on stratigraphic architecture in the Tremp basin (south-central Pyrenees, Spain)

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The geometry of two depositional sequences onlapping the western termination of the Sant Corneli anticline (Tremp basin, southern Pyrenees) has been reconstructed in three dimensions (3-D). Surface observations only are not able to explain the relationships between the different systems tracts and the factors controlling their settings. A new methodology has been developed allowing the calculation of a 3-D geological model. It is based on the combination of an accurate mapping from analysis of surface data (Digital Elevation Model and mosaic of aerial orthophotos), bedding dip and strike, balanced cross-sections and feedback of the model by restoration. Such a 3-D model displays the geometry and the relationships between the different systems tracts, which are therefore understandable at a first glance. The 3-D map reveals the structural control at different scales of the lateral propagation of a fault-propagating fold (Sant Corneli anticline) on the stratigraphic architecture.