

incorporation in the wedge. These fairly simple features produce a quite stringent set of predictions with which the geological record can be compared:

- a) A lateral shift of areas of comparable subsidence from one formation to the other. The most diagnostic point is the site of pinch-out against the foreland bulge. In the foredeep model, the pinch-out position must move away from the foreland bulge going in deeper (older) formations of the basin fill.
- b) The geometry of the basin, that is, its width and the dip of its substratum must remain constant through time.
- c) Subsidence must take place during thrusting. Although the foredeep model is very widely applied, the thorough analysis of the data often indicates that most predictions are not fulfilled. A "correct" behaviour seems to apply during the initial stages of subduction, although this might be associated with the inferior quality of the record.

In a second stage changes are observed which are basically related to the increased difficulty of subducting the lower plate lithosphere and,

therefore, with an increased mechanical coupling between upper and lower plates. Such an increased coupling can be due to various phenomena as the introduction into the subduction zone of negatively buoyant lithospheric segments (continental domains) etc. Foredeep basins developing in a retro-wedge position are particularly prone to exhibit coupling and thereby deviate from the normal behaviour because of their upper plate position.

With increased coupling, persisting convergence at the boundaries of the system can be accommodated in various ways such as:

- a) "Exporting" deformation away from the collision zone. Strain will then occur in mechanically well-suited sites such as the external edge of the foredeep basin and, further in the foreland, by pre-existing weakness zones.
- b) Lithospheric buckling.
- c) Steepening of the foredeep base and contraction of the foredeep basins

These changes have a profound influence on the creation and destruction of accommodation space.

Importance of the collision of Iberian plate against African plate in morphostructural evolution and filling of Western Moroccan phosphated basins

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Because of its potential resources in hydrocarbon and phosphates, the Moroccan Atlantic margin raises a lot of interest. It also holds in its Mesetien part one of the largest phosphatic deposit in the world. Here we present the analysis of the tectonosedimentary reactions induced by collisions of the African plate against the Iberian plate in morphostructural evolution of western Moroccan phosphated basins. These investigations are mainly based on field data, data recorded from work done by the OCP (Office Chérifien des Phosphates) group and the interpretation of industrial seismic profiles provided by ONAREP (Office National pour la Recherche

et l'Exploitation du Pétrole). Our aims are devoted to the apprehension of the geometry and the kinematic of these basins which are contemporaneous to the Central Atlantic Rifting, as well as the determination of the list of factors liable to the genesis of these phosphatic basins. Other data of field observations (cartography, study of structural features, etc.) permit to identify the general structure of the prospect. Sedimentation of phosphated deposits is constrained by the presence of two wrench faulting systems oriented N20–30° E to N40–60° E and N100–110° E to N140–160° E.