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NEW TECTO-SEISMITE MICROZONING IN THE ZAGROS FOLDED-THRUST BELT (Iranian part of the east Alpaides segment) SHIRAZ AREA

On the basis of new investigations into the structural, seismotectonics and depth geophysical aspects two microzone have been divided in the Zagros folded-thrust belt. For this aim the countour-structure, seismotectonic and depth geophysical maps have been prepared for selected area (51,30- 53,30 & 29,00-30,00). The especial viewpoint of the active tectonics are present in these preparations.The area of the maps includes Bamu (Intermediate) and Sabzpush-an (Transitional) structural-stratigraphic zones.The lateral transitional boundary between the two zones shows the stratigraphic changes from Foredeep to Fold-Belt in the lower-Middle Cretaceous to the middle Quaternary in the mapped area and around. The concept of change in basement depth that has been computed by the *adding up* method, shows that the sub-continental part is shallower in the north andnorth-eastern parts of the map. The aeromagnetic and other geophysical-synthetic data, support this change in the depth of the subcontinental part but there are also large lithostratigraphic changes at the base of the continental-crust (semiplastic and incompetent Hormoz Formation). These stratigraphic changes in the Intermediate and the Transitional zones are the operative factors for causing the quantitative and qualitative structural differences between the two zones. In the Intermediate (Bamu) and Transitional (Sabzpushan) zones , feature-form faults are easily recognized on the surface, in aerial photographs and in satellite imagery. In the Intermediate zone, feature-form faults are not capable in the *causative* format and have no large movements at least from 0.6 million years ago to the Recent. On the other hand, field geology tectonics and morpho-, neo- and seismotectonic data showes that feature-form faults are *causative and* are *capable* in the Transitional zone.Therefore, the seismogenic faults and moderate to large magnitude earthquake events are concentrated in the Transitional zone. In other words, the Sabzpushan zone is a *mesoseismal region.* In the mesoseismal region, the branches of the N-S causative dextral faults, are feature-unform capable-affected faults.The *affected faults* have a right-lateral movement mechanism along with a thrusting component. These faults in the Sabzpushan zone are usually recognized with difficalty on the surface, in satellite imagery and on aerial photographs. Deformations in blocks that have been seperated by *N-S causative dextral strike-slip faults,* are distinguished by a change in the movement mechanism along these faults. The change in the movement mechanism is related to some geometric parameters. These changes in the N-S causative dextral faults , range from strike-slip to rotational, and finally to thrusting, as one comes down N to S along the fault. Changes in directions of vergence for folded structures have been controlled by geometric factors (especially dip-direction) of the feature-form faults and of feature-unform affected faults in the Intermediate and Transitional zones respectivily. The Bamu overturned anticline is a frontal asymmetric folded structure (verging southwest) has some structural and morphological features which indicate the boundary between the mesoseismal and the inactive region in the NE and SW part of the map area. The structural depression formed by the compressive component of the stress field, can be seen in some parts of the map area. These areas have a negative polarity in most of the seismic events. Doubly plunging anticlines and faulting parallel the to axis of some folded structures (longitudinal normal faults) are controlled by the mechanism of movements in the capable causative faults and subsequently by the movements in lateral affected faults. The tectonic stress field in the Shiraz area includes two major compressive components. The first component with an azimuth of 31 (NE to SW) is an effectual factor for displacements in the eastern blocks that have been separeted by capable causative dextral faults. The second component with azimuth of 31 (NW to SE) changes the axis of folded structures and develops longitudinal normal faults. This component also controls the shortening parallel to the folded structures and the formation of grabens resulting from this shortening.