**THE BARAZA SLIDE; DEFINING ITS DYNAMIC** (NORTHERN ALBORAN SEA)

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**INTRODUCTION**

**ORPHOLOGY**

Morphology. Two main elements define the plan-view morphology of the Baraza landslide: headscarp and mass-flow sediments. The headscarp is expressed as a seafloor scarp with gradients higher (5º) than the surrounding slope (2º to 3.5º). It has a variable relief, from 5 to 53 m, and decreases toward the east. The headscarp has total wide of about 14.6 km, and comprises at least two smaller curvatures (hereinafter named headscarps 1 and 2) that would represent headscarps of minor scales.

Further downslope of the headscarp, there is an irregular area of about 116 km², where 2 stacked sediment lobes may be outlined (A and B, from younger to older respectively). These lobes represent mass-flow sediments.

**FACIES & SEDIMENTARY STRUCTURE**

The study of the seismic records has revealed that a large sector of the scar and the sediment lobes are not modern. In fact they are covered by recent sediments (Pleistocene-Holocene) that mimic their morphology.

The slide scar is a high-reflective, shaded area, whereas the transition to the sea floor shows a complex of echolayers both on the headscarps and in the slope foot. At headscarps 1, the scar sources appear affected by a chaotic topography. At the headscarps 2, the scar sources appear affected by a chaotic topography.

The mass-flow sediments represent the thickest mass-flow wedge in the studied basin, but the seismic profiles do not allow to differentiate the lobes A and B. Hypothesically, the mass-flow sediments are about 50 m thick (average) and mostly defined by chaotic facies that laterally changes to transparent facies at the terminations. The upper surface appears to be a highly deformed level of about 10 ms thick, formed by discontinuities, isolated hyperbolae, and outflowing acoustic features.

The overlying post-mass-flow sediments are acoustically defined by the alternation of stratified facies of high and low amplitudes that form a level of about 80 ms maximum thick. They are affected by outflowing and strata deformation (gentle anticline folds and faults).

**DEFINING ITS DYNAMIC**

Defining its dynamic. The Baraza landslide is a Pleistocene-Holocene sedimentary instability complex, that includes a predominance of mass-flow failure. The complex is formed by a mass-flow system probably mud flows that change to a slide system with time. Additionally, this study reveals that the western sector of this landslide still remains active.