



Fig. 1 - Geomorphological map of Estremadura (from D.B. FERREIRA, 1981)

HYPSOMETRY: 1 - Spot height in meters, 2 - Approached altitude of planation surface in decameters.
HYDROGRAPHY: 3 - River system, 4 - Resurgence, point of emergence, 5 - Gaping hole, 6 - Littoral current.
LITHOLOGY: A - Sedimentary sheet of the hercynian basement (secondary, tertiary and quaternary) - 7 - Calcareous rocks, 8 - Marl sometimes with detrital intercalations, 9 - Detrital sediments; B - Post-hercynian magmatic rocks - 10 - Subvolcanic dome (granites, syenites, gabbros...), 11 - Basaltic complex (lava flows and pyroclasts); C - Continental shelf - 12 - Silt and mud, 13 - Sandstones, conglomerates, 14 - Detrital complex, 15 - Detrital deposits with calcareous intercalations, 16 - Calcareous rocks, 17 - Subvolcanic dome of Sintra. **TECTONIC:** 18 - Dip-slip fault, presumed, 19 - Flexure, 20 - Anticline. **LANDFORMS:** A - Structural forms - 21 - Fault-scarp, 22 - Diapiric valley-side, 23 - Overthrust front, 24 - Fault-flexure slope, 25 - Cornice in monoclinial relief feature, 26 - Others slopes with cornice, 27 - Anticline dome; B - Fluvial forms - 28 - Alluvial valley floor, 29 - Fluvial terraces, 30 - Entrenched valley; C - Forms and formations of slopes and interfluves - 31 - Down-slope, 32 - Erosion edge, 33 - Well conserved planation surface, degraded, 34 - Rañas and plateau-pebbles, 35 - Residual hill, 36 - Planation surfaces inclination, 37 - Major closed karstic depressions, 38 - Well conserved planed karstic surface, degraded; D - Littoral and submarine forms - 39 - Beach, 40 - Sand, mud, slikke, 41 - Coastal dunes, plain areas with eolian accumulation, 42 - Active sea-cliff, 43 - Relict cliff, 44 - Scarp, 45 - Head of canyon, 46 - Submarine valley, 47 - Ravines, 48 - Head of silted up valley, 49 - Foredeltaic front, 50 - Submarine alluvial fan.

logical expression in the northern side; however, in the south, diapiric accidents are responsible for a relief inversion - the small Alcabrichel depression.

2.4. The structure of north of Lisbon area is characterized by a monocline disposition, with inclinations towards South and South-East (5° to 25°), to Tagus estuary. The most important fact concerning the lithology is the alternation between layers of different hardness, permeability and plasticity (limestones, basalts and very consolidated conglomerates, on the one hand; marls, clays and badly consolidated sandstones, on the other hand), dated from Jurassic to upper Miocene. The structural and lithological conditions make possible the development of monocline reliefs, like Lousa - Bucelas and