

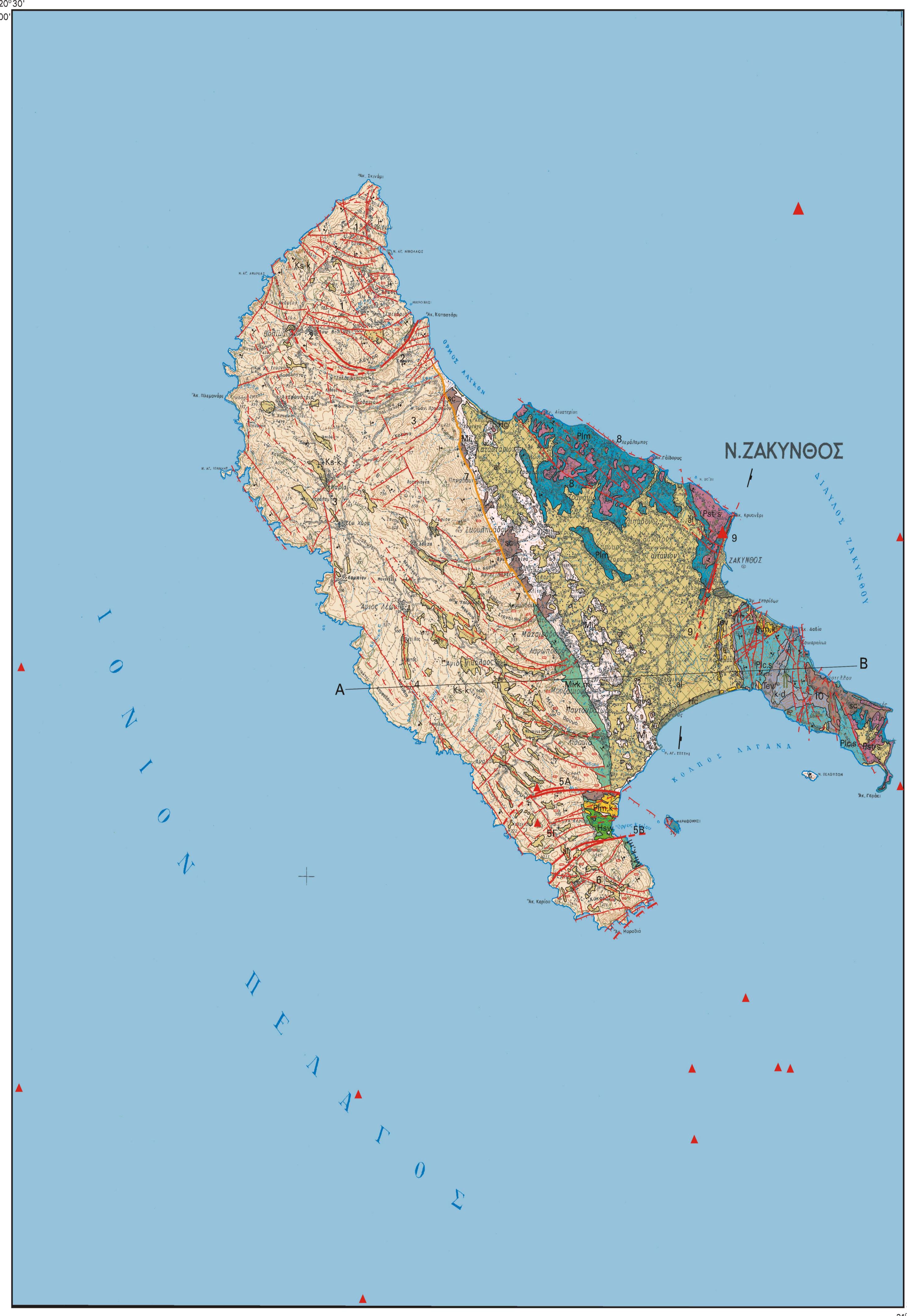
ΝΕΟΤΕΚΤΟΝΙΚΟΣ ΧΑΡΤΗΣ ΤΗΣ ΕΛΛΑΔΑΣ

Φύλλο ΖΑΚΥΝΘΟΣ

ΚΛΙΜΑΚΑ . 1/100.000

Η Γεωλογική Χαρτογράφηση έγινε από ερευνητική ομάδα του ΠΑΝΕΠΙΣΤΗΜΙΟΥ ΑΘΗΝΩΝ, κατά τα έτη 1993-1995, με Επιστημονικό Υπεύθυνο τον Αναπληρωτή Καθηγητή ΕΥΘ. ΛΕΚΚΑΣ.

Geological mapping was conducted by a research group of the UNIVERSITY OF ATHENS, during 1993-1995, under the Leadership of Assoc. Professor E. LEKKAS.



Ανάπτυξη Συστήματος Γεωγραφικών Πληροφοριών (W/S Arc/info, ver.7.1.2), στην
Ερευνητική Μονάδα Εφαρμογών Ανανεωτικής και Τεκτονικής Γεωλογίας του Πανεπιστημίου
Αθηνών, από τον Γεωλόγο: Η. ΑΝΤΩΝΙΟΥ
Επιμέλεια έκδοσης Δρ. Χ. ΚΡΑΝΗΣ

G.I.S Development (W/S Arc/info, ver.7.1.2) at the Research Unit on
Applications of Dynamic and Tectonic Geology at the University of Athens,
by the Geologist: I. ANTONIOU
Publication coordinator Dr. H. KRANIS

ΥΠΟΜΝΗΜΑ - LEGEND

Α. ΓΕΩΛΟΓΙΚΟΙ ΣΧΗΜΑΤΙΣΜΟΙ - GEOLOGICAL FORMATIONS

POSTALPINE FORMATIONS

SC

Slope: Recent and older slope-wash material, comprising carbonate and evaporite clasts, deposited on the feet of steep or moderately-dipping slopes. They are subject to frequent slides and their thickness is limited.

Hc

Coastal Deposits. Loose fine and coarse material (silt, sand and pebbles) deposited along the coast. Their largest occurrence is at the Bay of Laganas, and their maximum thickness is south of the town of Zakynthos.

Hsw

Recent Marsh Deposits. Sediments deposited in marshy environment, mostly along the coastal zone, and particularly at Alykes. They comprise clay, silt and sand, including floral remnants. Their thickness rarely exceeds 5 m. and their extent is limited.

al

Alluvial - Fluvial formations. The former cover the most of the plain area. They consist of loose clay, silt, sand and pebbles (rarely gravel) and usually contain floral remnants and lignite seams. Their thickness, according to drillhole data, is less than 10-15 m. The latter are formed through weathering of the underlying rocks. They are usually loose and fine-grained and their composition varies locally, reflecting the underlying lithology. Their thickness does not exceed 5 m. and their occurrences are mainly found on Mt Vrachionas, Cape Gerakas and at the plain. In most cases they are indistinguishable from the alluvials (especially at the plain).

Pst-s

Gerakas Formation. High-energy sediments, mainly calcitic sandstones, siltstones, argillites and a few intercalations of blue marl. They contain abundant shallow marine macrofauna fossils. Their main occurrence is at the town of Zakynthos (west-southwest), east of the cape Gerakas. They are distinguished into three successive members, corresponding to transgressions and regressions. Thickness: a few ten of m. Age: Pleistocene.

Pim

Kastro Formation. It consists of gray, bluish and brown clayish beds with sandstone and sandy intercalations. The formation contains rich micro- and macro-fauna and its visible thickness is over 200 m. However, according to geophysical investigations in the Ionian Sea, its total thickness is much greater. Age: Middle-Upper Pliocene.

Pim,k

Marly Limestones - Clayish Marls of Keri. It comprises clayish marls and marly limestones of Lower Pliocene age. Its thickness is a few tens of m. Along the coast of Ker-Agios Sostis, its unconformable deposition over the Agios Sostis formation is clearly visible. At eastern Zakynthos (Agia Dynati), the formation also includes marly limestones and marls.

Plc.s

Dafni Formation. It corresponds and is isochronous to the Agios Sostis formation of the Pali Unit. However, for the inland terrains, this formation is a post-alpine one. It crops out around Mt Skopos, where its lithological characters are significantly different from those of the Agios Sostis formation. Locally, it contains basal conglomerates, sandstones, marl and siltstones in frequent alternations, as well as gypsum layers. The visible thickness is more than 300 m, but the overall is much greater, according to geophysical investigations.

IONIAN UNIT

IONIAN UNIT

Skopos Limestones - Dolomites. Medium-bedded to massive, gray to black limestones and dolomites, usually highly fractured. They are frequently accompanied by dark, cohesive massive breccia with clay matrix. They must have been affected by diapiric movements and their thickness reaches 200 m.

Tev

Skopos Evaporites. Dark-coloured and locally whitish anhydrite and gypsum, usually fractured. Their age is possibly Triassic. They have been subjected to intense diapiric movements.

PAXI UNIT

Mi

Agius Sostis Formation. It comprises basal conglomerates with marly matrix (thickness: approx. 3 m.), which overlie unconformably the Lagopodo formation. Over the basal conglomerates the formation comprises: (i) marly limestones and sandstones; (ii) 60 m. of sandstones and marls; (iii) 100 m. of alternations of sandstones and brown marls; (iv) 180 m. of sandstones, sands, marls and clay with frequent synsedimentary folds; (v) 50 cm. of sandstones with bitumens; (vi) over 150 m. of sandy-marly beds with gypsum; and (vii) many limestones. Its age is Middle-Upper Miocene and its overall thickness is about 500 m. It outcrops at the central part of Zakynthos.

Σχηματισμός Λαγόποδος. Περιλαμβάνει μαργαϊκούς ασβεστολίθους στη βάση στρώμα πάχους 1 μέτρου περίπου, οι οποίοι εξελίσσονται σε εναλλαγές μαργάρινων και μαργαϊκών ασβεστολίθων ανικότερους καρφώμενος καλτολίθους από σινέργαση πετρώματος. Στη συνέχεια περιλαμβάνει διατομές πάχους 30 μέτρων, εναλλαγές ασβεστολίθων και μαργάρινων πάχους 100 μέτρων. Η ακολούθια κλείνει με μεσοστρωματόδειξη μαργαϊκούς ασβεστολίθους πάχους 40 μέτρων. Η ηλικία του σχηματισμού είναι Κατάτερο-Μέσο Μεσόκαινο, ανά πιθανότατα περιλαμβάνει και Ολογόναν στη βάση.

Lagopodo Formation. It comprises a 1-m. thick of basal layer marly limestones, which evolve into alternations of light brown marls and marly limestones that contain abundant clasts of carbonate rocks. Upwards, it contains diatomites (thickness: approx. 40 m.), cohesive conglomerates (thickness: 30 m.) and 100 m. of alternations of limestones and marls. The formation ends with medium-bedded marly limestones (thickness: 40 m.). Its age is Lower-Middle Miocene, possibly extending to Oligocene (for the basal part).

E-K

Keri Limestones. Whitish to white thick bedded (at the top) and medium-bedded (at the base) limestones. It contains rudist fragments and foraminifera, echinoids, corals and bryozoans. It age, as confirmed by the abundance of Nummulites, is Paleocene-Eocene. The boundary between this formation and the Vrachionas Limestones is not always clear, mostly because of lithophacies similarities. The visible thickness is up to 300 m.

Ks-k

Vrachionas Limestones. White, usually massive and locally layered limestones, which are rarely sub-lithographic. Usually they are chalky and become easily weatherable. They contain rudist fragments and other fossils of the Upper Cretaceous. The formation occupies the largest part of Mt Vrachionas and its thickness is more than 600 m.

B. ΤΕΚΤΟΝΙΚΑ ΣΤΟΙΧΕΙΑ - TECTONIC ELEMENTS

Κύρια ρήγματα με άλμα συνήθως > 300 p.m.

1. ορατά, 2. πιθανά κατανύμενα.

Main faults (throw>300 m.)
1. visible, 2. inferred.

Δευτερεύοντα ρήγματα.

1. ορατά, 2. πιθανά κατανύμενα.

Secondary faults.
1. visible, 2. inferred.

Κανονικά ρήγματα ή πλανητοκονικά (οδοντωτά δεξιά το κατερχόμενο σκέλος)

Dip-slip, oblique-slip faults
Hachure on the down thrown block

Αριθμητη ρήγματα (βλέπε επειγμηματικό τεύχος).

Index numbering of faults.

Διεύθυνση και φορά κλίσης στρωμάτων

Strike and dip direction of bedding.

Υποβαλάσσιο όριο τεκτονικών ενοτήτων

Thrust boundary of tectonic units (offshore)

Τα χρώματα αντιτοιχούν στις κατηγορίες ρήγμάτων σύμφωνα με τις προδιαγραφές του ΟΑΣΠ (1986)

Color-coding of the faults, according to the EPPO specifications (1986)

Ενεργό ρήγμα

Active fault

Πιθανά ενεργό ρήγμα

Probably active fault

Γ. ΓΕΩΜΟΡΦΟΛΟΓΙΚΑ ΣΤΟΙΧΕΙΑ - GEOMORPHOLOGICAL ELEMENT

Μορφολογικές ασυνέχειες και ζώνες κατά βάθος διάβρωσης

Morphological discontinuity and stream incision.

Ανύψωση λόγω διαπιρισμού

Uplift caused by diapirism

Επιφάνειας επιπέδωσης.

Planation surfaces.

Κεκλιμένες επιφάνειες επιπέδωσης.

Inclined planation surfaces.

Δ. ΣΕΙΣΜΟΛΟΓΙΚΑ ΔΕΔΟΜΕΝΑ - SEISMOLOGICAL DATA

Επίκεντρα οσιών και αντίστοιχα μεγέθη

Earthquake foci and corresponding magnitude

▲ 5.0 ≤ Ms < 6.0

▲ Ms ≥ 6.0

ΚΛΙΜΑΚΑ - SCALE

1/100.000

ισοδύναμη 40m contour interval

Το τοπογραφικό υπόβαθρο προέρχεται από τον Τοπογραφικό Χάρτη της Γεωργοφυλικής Υπηρεσίας Διεύθυνσης Ι.Γ.Σ., έκδοση 1972, έκπτωση της πληνεπικής της δικτύωσης - Έγκριση Φ.17157.880672.1624/218-96/ΕΤ/2-ΕΓ/3, Αρ.Σύντομης: 119.0-10.96 - Διεύρυνσης διώρου

The topographic base map is from the Topographic Map of the Hellenic Military Geographical Service (H.M.G.S.), 1972 edition

Προβολικό Σύστημα Χώρας UTM. Projection

ΓΕΩΛΟΓΙΚΗ ΤΟΜΗ - GEOLOGICAL SECTION

ΥΠΟΜΝΗΜΑ ΓΕΩΛΟΓΙΚΗΣ ΤΟΜΗΣ KEY TO GEOLOGICAL SECTION

