L E G E N D

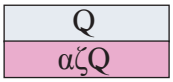
of the Geological map of

Georgia

Scale 1:500 000

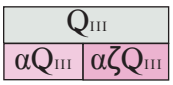
Author: G.E. Gudjabidze Editor: I.P. Gamkrelidze

2003

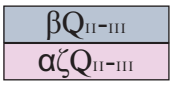


Q-Quaternary system (undismembered). Genetic types of deposits: a-alluvial, m-marine, am-alluvial-marine, l-lacustrine, la-lacustrine-alluvial, lm-lacustrine-marine, ap-alluvial-proluvial, pd-proluvial-talus deposits: coarse gravels, blocks, gravels, sands, conglomerates, clays, loams; g-glacial; apg-alluvial-proluvial-glacial (fluvioglacial) deposits: boulder-coarse gravel accumulations, loams, sands; αζ-subaerial calc-alkalic andesites, dacites, andesite-dacites

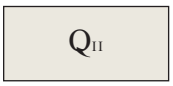
Q_{IV}-contemporaneous deposites: a-alluvial, am-alluvial-marine, m-marine, lm-lacustrine-marine, p-proluvial, ap-alluvial-proluvial, lp-lacustrine-proluvial deposits: coarse gravels, sands, clays, sometimes peat bogs



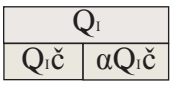
Q_{III}-Upper Quaternary deposites: a-alluvial, am-alluvial-marine, m-marine, lm-lacustrine-marine, p-proluvial, ap-alluvial-proluvial, apg-alluvial-proluvial-glacial (fluvioglacial) deposits: coars gravels, loams, boulders, sandstones, clays; calc-alkalic andesites-α; andesites and andesite-dacites- αζ



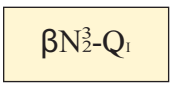
Q_{II-III}-Middle-Upper Quaternary deposites: subarial calc-akalic olivine dolerites- β; andesites and andesidacites-αζ



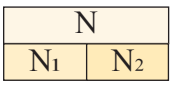
Q_{II}-Middle Quaternary deposites: a-alluvial, m-marine, am-alluvial-marine deposits: conglomerates, boulder-coarse gravels, gravels, sands, clays



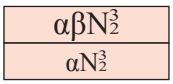
Q_I -Lover Quaternary deposites: a-alluvial, am-alluvial-marine, l-lacustrine, lp-lacustrine-proluvial deposits: coarse gravels, conglomerates, loams, clays.
Q_Ič- Chauda (Baku) horizon: Shallow-water-marine clays, sandstones, conglomerates, sands.
αQIč - alluvial deposits (analogous to Chauda horizon): weathered red-brown conglomerates, loams, clays



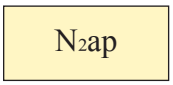
Upper Pliocene-Lower Quaternary deposites. Lesser-Caucasian foldsystem: continental subalkalic basalts, dolerites and andesite-basalts, andesites, lacustrine conglomerates, sands, sandstones, clays (Tsalka-Akhalkalaki suite)



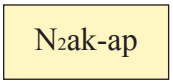
Neogene system (N_1-Miocene, N_2-Pliocene in the geologic section): sandstone, clays, conglomerates



Upper Pliocene. Artvin-Bolnisi zone: subareal calc-alcalic andesite-basalts-αβ, andesites-α



Apsheron stage. Caspian Sea province. Continental and marine molasse: sands, loams, clays, sandstones



Aghchagil and Apsheron stages. Caspian Sea province. Continental and marine molasse: conglomerates, sandstones, clays, loams, volcanic tuff intercalations

N_2ak

Aghchagil stage. Caspian Sea province. Continental and marine molasse: conglomerates, sandstones, sands, clays, volcanic ash intercalations

N_2gr

Guria beds. Black Sea province. Marine molasse: clays, sands, sandstones, conglomerates

N_2k_+kl

Cimmerian and Cujalnic stages. Black Sea province. Marine molasse: clays, sandstones, conglomerates, marls, sands

N_2k

Cimmerian stage. Black Sea province. Marine molasse: clays, sandstones, conglomerates

N_2p

Pontian stage. Marine and continental molasse: clays, sandstones, sandy clays, argillaceous sandstones, conglomerates, sands

$\alpha\zeta\lambda N_2^1$

Lower Pliocene. Calc-alkalic andesites, andesite-dacites, dacites and rhyolites (upper-lava part of the Goderdzi suite)

$N_{\bar{i}_+}^3N_2^1$

Upper Miocene and Lower Pliocene. Continental deposits: tuffs, volcanic breccias, conglomerates, tuff-diatomites, diatomites, calc-alkalic andesitic and basaltic sheets (lower part of the Goderdzi suite)

Nm_+p

Meotian and Pontian stages. Marine and continental molasse: conglomerates,sandstones, clays

N_1m

Meotian stage. Marine and continental molasse: conglomerates, clays, sandstones, sands

N_1s

Sarmatian stage. Marine and continental molasse: sandstones, clays, conglomerates, sometimes marls

N_1s_3

Upper Sarmatian. Marine and continental molasse: sandstones, clays, conglomerates, sometimes marls

N_1s_{1+2}

Lower and Middle Sarmatian. Marine molasse: clays, sandstones, conglomerates, marls and limestones

$N_{\bar{i}}^2$

Middle Miocene. Marine molasse: clays, sandstones, conglomerates (sometimes basal conglomerates), marls, oolitic and aranaceous limestones

$E_{3+}N_{\bar{i}}^1$

Oligocene and Lower Miocene (Maikop series). Mestia-Tianeti zone. Marine molasse: sandstones, gritstones, weakly carbonaceous clays with marls intercalations, sometimes

gypsiferous clays and sandstones.
Georgian Block and Gagra-Djava zone: carbonaceous clays (Khadum horizon), gypsiferous clays with thin coating of jarosite, fish scales and septaria, intercalations of quartz-micaceous sandstones. On the Dzirula massif-sandstone-spongolite strata with beds of manganese ore.
Adjara-Trialetian and Artvin-Bolnisi zones. Marine molasse: carbonaceous clays (Khadum horizon), gypsiferous clays with thin coating of jarosite, fish scales and septaria, intercalations and lenses of conglomerates. In upper part sometimes thick beds and strata of course-graind quartz-arkose sandstones

E_3

Oligocene. Adjara-Trialetian zone.Coastal-marine deposits: sandstones, clays, conglomerates, sillstones, marls, strata of brown coal

$E_{2^+}^3 E_3$

Upper Eocene and Oligocene. Mestia-Tianeti zone: conglomerates,sandstones, sillstones, gypsiferous clays, olistostromes (Kinta suite). West-Abkhasian subzone of Gagra-Djava zone. Shalow water deposits: foraminiferal marls,clays,sandstones,conglomerates, conglomerate-breccias (Matsesta suite)

E_2^3

Upper Eocene.Mestia-Tianeti zone. Sandstone-sillstone flycsh: sandstone, gritstone and siltstone turbidites, pelagic marls and clays, olistostromes with intercalations of schistose clays, sandstones, gritstones and conglomerates.
Gagra-Djava zone: shallow-marine conglomerates, gritstones, olistostromes, arenaceous limestones, carbonaceous and clayey sandstones.
Adjara-Trialetian zone: foraminiferal marls, course-grained-quartz-arkose and greywacke sandstones, clays(carbonaceous, bituminous, schistose), intercalations of conglomerates, conglomerate-breccias, rarely marls and limestones, lavas and volcanic tuffs of subalkalic basalts,andesite-basalts and trachytes.
Artvin-Bolnisi zone:carbonaceous bituminous and gypsiferous clays with thin intercalations of marls and sandstones, in upper part of section in places - conglomerates

E_2^2

Middle Eocene. Gagra-Djava zone:basal conglomerates, arenaceous limestones, limestones, sandstones, marls, clays.
Adjara-Trialetian zone: tufogenic sandstones, tuffs, argillites, rarely marls. On the eastern subsidence of zone in upper part of section--olistostrome strata, volcanic breccias and sheets of subabkaline basalts and dacites.
Lock-Karabakh zone: basal conglomerates, tufogenic sandstones, lenses of nummulitic limestones, calc-alkalic basalts, andesites, rhyolites and their volcanic tuffs

E_2^{2b}

Upper part of the Middle Eocene. Adjara-Trialetian zone:massive,thick-bedded heteroclastic volcanic breccias,tuffs and lava sheets of subabkalic, alkalic and calc-alkalic basaltoids, rarely andesite-basalts, andesites, dellenites and trachytes, tuff conglomerates, olistostromes, tephro-and sandstone-siltstone turbidites. In upper part rarely tuffites, gritstones, tufogenic sandstones,marls(Chidila and Dviri suites)

E_2^{2a}

Lower part of the Middle Eocene. Adjara-Trialetian zone:alternation of bedded particoloured heteroclastic tuffs, mainly of basaltic, rarely trachytic composition, argillites, limestones and marls with rare sheets of subalkalic basaltoids, trachytes and in upper

beds--dellenites(Likani and Kvabiskhevi suites)

$E_{2+}^{1}E_{2}^{2}$	Lower and Middle Eocene. Gagra-Djava zone: marls, argillites, quartzy sandstones, limestones, clayey-and arenaceous limestones, rarely siltstones, gritstones and conglomerates
E_{2}^{1}	Lower Eocene. Artvin-Bolnisi zone: Shallow-marine deposits:carbonaceous clays, sandstones, conglomerates, dacitic lava breccias
$E_{1+}E_{2}$	Paleocene and Eocene. Georgian block and Gagra-Djava zone: shallow water marine limestones (pelitomorphic, crystalline, brecciated, lithothamnious), rarely interlayers of hornblende-biotite and andesitic tuffs
$E_{1+}E_{2}^{2}$	Paleocene, Lower and Middle Eocene. Mestia-Tianeti zone. Sandstone-siltstone flysch: sandstone,siltstone turbidites, pelagic argillites and marls, limestones, cherty argillites, phthanites, in places--basal conglomerates, conglomerate-breccias, sandstones and arenaceous limestones. West Abkasian subzone of Gagra-Djava zone: multycoloured marls and marly limestones with thin intercalations of limestones and non-carbonate clays
E_{1}-E_{2}^{1}	Paleocene and Lower Eocene. Adjara-Trialetian zone: pelitomorplic and crystalline limestones, marls (Danian). Sandstone-siltstone and clastic limestone flysch: sandstone, siltstone and clastic limestone turbidites, tephro-turbidites, pelagic argillites and marls, in places-partycoloured marls, clays and sandstones
E_{1}	Paleocene. Artvin-Bolnisi zone. Shallow water-marine deposits: limestones, brecciated limestones, partycoloured marls, clays, sandstones, lenses of gritstones and limestones
K_{2}	Upper Cretaceous (undismembered). Mestia-Tianeti zone: sandstone- sillstone (in lower part) and clastic limestone (in upper part) flysch: siltstone, sandstone, gritstone and clastic limestone turbidites, olistostromes, pelagic marls, cherty argillites, phthanites, in places--alternation of pelitomorphic limestones and marls. Georgian block and Gagra-Djava zone.Shallow water marine deposits: glauconitic sandstones, bedded limestones (pelitomorplic, lithographic, crystalline, brecciated), marly limestones, marls, in places--sheets and volcanic tuffs of alkalic basaltoids, trachyandesites, trachytes and phonolites with intercalations and lenses of limestones and marls (Mtavari suite). Adjara-Trialetian zone: volcanic breccias and lava sheets of calc-alkalic basalts, andesite-basalts, rarely andesites with intercalations and lenses of limestones and calcareous breccias
$K_{2}m$	Maastsichtian stage. Novorosiisk-Tuapse zone: basal conglomerates and gritstines, conglomerate-breccias, limestones and marls
$K_{2}km_{+}m$	Campanian and Maastrichtian stages. Mestia-Tianeti zone. Clastic-limestone flysch: clastic-limestone turbidites, pelagic marls and carbonate clays, in places--clumpy breccias and gritstones.

Adjara-Trialetian zone: limestones, marly and sandy limestones, marls, in places--tuffs and tuffites of dacitic composition.
Artvin-Bolnisi and Lock-Karabakh zones: pelitomorphic limestones and marls, carbonate tuffites with intercalations of tuffs of dacitic composition

K_2t_2-m — Upper substage of Turonian stage, Coniacian, Santonian, Campanian and Maastrichtian stages.
Adjara-Trialetian zone: alternation of clayey and biogenic -detrital limestones and conglomerates, gritstones and sandstones, in places--clumpy breccias of olistostrome type

k_2t-m — Turoian, Coniacian, Santonian, Campanian and Maastrichtian stages. Adjara-Trialetian zone: thinbedded red-coloured and pink limestones and marls, bedded lithorgaphic limestones with interscalations of bentonitic clays, sandy and marly limestones, sandstones, rarely lenses of conglomerates

K_2t-st — Turonian, Coniacian and Santonian stages. Artvin-Bolnisi and Lock-Karabach zones: lavas, extrusions and volcanic tuffs of calc-alkalic and tholeiitic rarely-alkalic basalts, andesites, dacites, dacites and rhyolites, tuffites, tufogenic sandstones, limestones, sandstones and marls

K_2s-st — Cenomanian, Turonian, Coniacian and Santonian stages. Mestia-Tianeti zone: clastic limestone and sandstone-siltstone flysch: clastic limestone, gritstone and siltstone turbidites, pelagic marls, argillites, phthanites, olistrosromes, conglomerates and in places-alternation of pelitomorphic limestones and marls.
Adjara-Trialetian zone: volcanic breccias, tuffs, tufogenic sandstones and lava sheets of calc-alkalic basalts and andesite-basalts. In upper part of section--intercaltions and benches of limestones

K_2s+t — Cenomanian and Turonian stages. Novorosiisk-Tuapse zone: schistose limestones, marls and silicites

K_2s — Cenomanian stage. Artvin-Bolnisi and Lock-Karabakh zones: basal conglomerates, gritstones, sandstones, sandy clays, limestones, marls, lavas, volcanic braccias, heteroclastic tuffs, rhyolites and dacites, in lower part--basalts and andesibasalts

Kal-t_1 — Albian, Cenomanian stages and lower substage of Turonian stage. Adjara-Trialetian zone: lavas, lava breccias and volcanic tuffs of calc-alkalic basalts, andesites and dacites, tuffites, intercalations of limestones, marls, sandstones and argillites

$Kal+s$ — Albian and Cenomanian stages. Northern subzone of Adjara-Trialetian zone: tuffs, glauconitic sandstones, tuffites and volcanic breccias of high-potassium trachytes

K_1 — Lower Gretaceous (undismembered). Novorosiisk-Tuapse zone: flyschoid alternation of argillites, arenaceous limestones and marls.

Georgian block and Gagra-Djava zone: shallow-water marine deposites: limestones, marls, dolomitezed limestones, dolomites, glauconitic sandstones.
Artvin-Bolnisi zone: basal conglomerate-breccias and coarse-grained sandstones, limestones and particoloured clays.

$K_1a_{+}al$

Aptian and Albian stages. Mestia-Tianeti zone. Sandstones-sillestone flycsh: sandstone, gritstone and siltstone turbidites, pelagic clays, argillites and marls.
Georgian block and Gagra-Djava zone: shallow - water marine marls, limestones, carbonaceous clays, glauconitic sandstones. In places--lavas and volcanic tuffs of mainly calc-alcalic basalts, andesite-basalts andesites, tuffites .

K_1br

Barremian stage. Georgian block and Gagra-Djava zone (Dzirula and Kelasuri massifs): Shallow-water-marine deposits: quartz-arcose sandstones and conglomerates, limestones, dolomites

$K_1h_{2+}br$

Upper substage of Hauterivian stage and Baremian stage. Mestia-Tianeti zone. Sandstones-siltstone flysch: sandstone and siltstone turbidites and pelagic argillites

K_1b-br

Berriasian, Valanginian, Hauterivian and Barremian stages. Georgian block and Gagra-Djava zone: shallow-water-marine limestones of Urgonian facies, ammonitic linmestones, dolomitized limestones, dolomites, marls, in places--basal conglomerates, quartzy sandstones and intercalations of anhydrite

K_1b-h_1

Berriasian and Valanginian stages and lower substage of Hauterivian stage. Mestia - Tianeti zone: clastic-limestone and sandstone turbidites, pelagic marls, limestones, argillites and clay shales

J_3

Upper Jurassic (undismembered). Mestia-Tianeti zone. Clastic-limestone flysch: clastic limestone, rarely sandstone turbidites, pelagic marls and clay shales, in places--alternation of marls, limestones and clay shales.
Georgian block and Gagra-Djava zone. Lagoonal-continental deposites: particoloured gypsiferous clays, argillites, sandstones, breccias and conglomerates, intercalations and benches of limestones, dolomites and marls, in places--lavas and volcanic tuffs of alkalic and subalkalic olivine basalts and trachytes. In upper part of section intercalations and lenses of gypsum and anhydrite (particoloured suite).
Artvin-Bolnisi zone: shallow-water marine crystalline limestones, marls, particoloured clays. Lock-Karabakh zone: calc-alcalic and tholeiitic basalts, andesites, rarely dacites and their volcanic tuffs, intercalations and benches of limestones, marls, cherty shales, sandstones, gritstones, conglomerates. In lower part of section--lenses of anthracite. In upper part--thick-bedded and massive limestones with thin beds of marls

$J_3km_{+}tt$

Kimmeridgian and Tithonian stages. Mestia-Tianeti zone: clastic-limestone, rarely sandstone-gritstone turbidites, pelagic clayey limestones, marls and argillites, in places--oolitic limestones

J_3O_2-tt

Upper substage of Oxfordian stage, Kimmeridgian and Tithonian stages. Mestia-Tianeti zone: flyschoid alternation of clastic limestone turbidites and pelagic argillites, schistose marls and pelitomorphic limestones, in places--intercalations and lenses of gritstones.
Gagra-Djava zone. Shallow-water marine deposits: gritstones, graywacke sandstones, conglomerates, limestones, dolomites, marls, siltstones and argillites

J_3O_2

Upper substage of Oxfordian stage. Mestia-Tianeti zone. Clastic-limestone flysch: clastic-limestone, rarely sandstone-gritstone turbidites, pelagic marls and clay shales

$J_3k_1O_1$

Callovian stage and lower substage of Oxfordian stage. Mestia-Tianeti zone. Clastic-limestone flysch: clastic-limestone turbidites, pelagic marls and clay shales, in places--alternation of marls and clay shales. On the eastern periphery of zone--sandstone-siltstone flysch: sandstone and siltstone turbidites and argillites.
Gagra-Djava zone. Shallow-water-marine deposits: graywacke sandstones, gritstones, conglomerates, siltstones, clay shales, calcareous sandstones, sandy clays, marls.
Novorosiisk-Tuapse zone: alternation of siltstones, graywacke sandstones, gritstones, rarely conglomerates, in places--thin benches of arenaceous limestones

J_2

Middle Jurassic (undismembered). Kazbegi-Lagodekhi and Ckhalta-Laila zones: clay and sandy shales, argillites, sandstones and siltstones, lavas and tuffs of tholeiitic basalts

J_2bt

Bathonian stage. Novorosiisk-Tuapse zone and north-eastern part of Gagra-Djava zone. Shallow-water marine deposits: alternations of sandy siltstones and graywacke sandstones with thin intercalations of arenaceous limestones. In upper part of section--intercalations and lenses of conglomerates.
Gagra-Djava zone. Shallow-water-marine and lacustrine deposits: quatrtz-arcose sandstones, sillstones, clay and coalbearing shales, anthracite beds, black argillites.
Georgian block. Shallow-water-lacustrine deposits: foliated shales with intercalations of tuffs of calc-alkalic basalts, tephroturbidites, sandstones, argillites coalbearing shales, anthracite beds.
Lock-Karabakh zone. Shallow-water-marine deposits: graywacke sandstones, clay schales, argillites, clays, tuffites, arenaceous limestones, conglomerates

J_2b_1bt

Bajocian and Bathonian stages. Kazbeg-Lagodekhi zone: clay shales, quartzy and polimictic sandstones, in places--sandy limestones

J_2b

Bajocian stage. Mestia-Tianeti (Ksani-Arkala parauthochthon) and Gagra-Djava zones, Georgian block and Lock-Karabakh zone: lavas, lavabreccias and volcanic tuffs of calc-alkalic bazalts, andesite-basalts, andesites, rarely dacites and rhyolites, tuffites, in places--tephroturbidites and tephroargillites. In upper part of section--tufogenic sandstones and siltstones, conglomerates, sandstones and clays (Porphirite series)

J_2a

Aalenian stage. Kazbegi-Lagodekhi zone: black clay shales with concretions of clayey siderite with intercalations of sandstone turbidites. In lower part of section in places--basalts and their volcanic tuffs.
Mestia Tianeti zone (Ksani-Arkala parauthochthon): clay shales, sandstones and con-

glomerates.
Gagra-Djava zone: flyschoid alternation of sandstone and siltstone turbidites and pelagic foliated argillites

J_{t+a}

Toarcian and Aalenian stages. Gagra-Djava zone. In southern part: alternation of thick-bedded sandstones and siltstone turbidites, argillites and shales. In northen part: siltstones, sandstones, clay shales with intercalations of tuffs and thin sheets of lavas of calc-alcalic basalts, andesites, dacites and rhyolites

$J_{1+}J_{2}a$

Lower Jurassic and Aalenian stage. Georgian block (Dzirula massif): basal conglomerates, gritstones, arcose sandstones, tuffites, tufogenic sandstones, clay shales, siltstones, crinoidal limestones, marls.
Artvin-Bolnisi zone: shallow-water-marine conglomerates, gritstones, quartz-arcose and micaceous sandstones, argillites.
Lock- Karabakh zone. Shallow - water-marine deposits: basal conglomerates, gritstones, quartz-arcose and micaceous sandstones, argillites, marls, limestones, tuffites and tuffs of calc-alkalic basalts and andesites

$J_{1}t$

Toarcian stage. Main Range zone of the Greater Caucasus, Kazbegi-Lagodekhi and Chkhalta-Laila zones: black clay shales, siltstones with lenses and intercalations of intraformational conglomerates. In places-thick benches of thick-bedded and massive sandstones.
Gagra-Djava zone: flyschoid alternation of sandstone turbidites, clay shales and argillites

$J_{1}p$

Pliensbachian stage. Main Range and Kazbegi-Lagodekhi zones: slates and clay shales with intercalations of siltstones and fine-grained sandstones, lenses of intraformational conglomerates, in places--volcanic tuffs and lavas (pillow lavas) of tholeiitic basalts.
Abkhasian part of Main Range zone, Chkhalta-Laila zone and northern edge of Gagra-Djava zone: slates and clay shales, siltstones with rare intercalations of sandstones. In lower part of section, in places-alternation of these rocks with volcanic tuffs and lavas of calc-alkalic rhyolites, rhyodacites and dacites or with marmorized limestones, gritstones, sandstones and conglomerates.
Gagra-Djava zone: clay, shales, carbonate argillites and micaceous sandstones with intercalations and lenses of crinoidal limestones and marls. In lower part of section--interformational conglomerates and volcanic tuffs of calc-alkalic rhyolites, rhyodacites and dacites

$J_{1}s$

Sinemurian stage. Main Range zone: bazal conglomerates and gritstones, sandstones, siltstones, sandstone turbidites, clay shales, quartzites, in places--lavas and volcanic tuffs of calc-alkalic rhyolites and rhyodacites.
Kazbeg-Lagodekhi zone (western-Racha-Svaneti part): basal conglomerates, clay shales with rare intercalations of sandstones and siltstones in places--lavas and volcanic tuffs of dacites and rhyolites, diabase veins. In eastern Transalasani part: sandstones, siltstones, clay shales, sandstone turbidites, lenses of limestones, marmorized limestones, marbles and quartzites; in places calc-alkalic andesites, dacites, rhyolites and their volcanic tuffs.
Chkhalta-Laila zone (Western-Abkhazian part): basal conglomerates, gritstones, sandstones, clay shales, interformational conglomerates; in eastern-Svanetian part: basal con-

glomerates, gritstones, sandstones, clay shales, slates, siltstones with limestone lenses and intercalations of marls; in places-volcanic tuffs of andesites and dacites.
Gagra-Djava zone: clay shales, sandstones, siltstones with lenses of limestones and marls, interformational conglomerates and gritstones; in places--volcanic tuffs of andesites and dacites

T — Triassic system. Georgian block: basal conglomerates, arcose sandstones, clays, tuffites, tuffs and lavas of calc-alkalic rhyolites and basalts

T — Triassic system. Chkhalta-Laila zone: black clay shales, silicites, sandstones and gritstones, lenses of limestones (Dizi series)

C+P — Carboniferous and Permian systems. Chkhalta-Laila zone: green goffered phyllites, silvery grey and brown sandstones, volcanic tuffs of andesitic and dacitic composition, marble lenses, intercalations of cherty shales and silicites (Dizi series)

D — Devonian system. Chkhalta-Laila zone: darkgray gritstones, sandstone turbidites, phyllites. In upper part--clay shales, lenses and beds of marbles and interformational conglomerates. Intercalations of cherty shales and silicites (Dizi series)

C_3 — Upper series of Carboniferous system. Main Range zone. Marine molasse: conglomerates, gritstones, sandstones, argilites, black shales, lenses of limestones (Kvishi suite)

C_{1+2} — Lower and Middle series of Carboniferous system. Georgian block (Dzirula massif): continental calc-alkalic rhyolites and their volcanic tuffs with intercalations and lenses of quartzy and quartz-arcose sandstones.
Artvin-Bolnisi zone (Khrami massif): subaeral costal-marine deposits: calc-alcalic rhyolites, basalts and their volcanic tuffs, tuffites, silicites, coaly shales, argillites and lenses of reef limestones

Є-C — Cambrian, Silurian(?), Devonian and Carbonoferous system. Georgian block (Dzirula massif, Chorchana-Utslevi allochthon): phyllites, metaphyllites, metasandstones, micaceous, two-mica, garnet and actinolite schists, weakly metamorphosed rhyolitic tuffs, quartzites, metaconglomerates, metagritstones, marble lenses

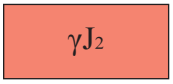
PZ_{1+2} — Lower and Middle Paleozoic. Main Range zone. Laba metamorphic complex. Mamkhurts tectonis sheet: biotite, biotite-horblende plagiogneisses, amphibolites. Damkhurts tectonic sheet: foliated schists, metaconglomerates, marbles. Lashtrak tectonic sheet: garnet-micaceous, staurolite and amphibole schists, amphibolites. Adjara tectonic scheet: cyanite schists, albite-quartzy porphiroids, quartzites, amphibolites, marbles

$PR+PZ_1m$ — Proterozoic and Lower Paleozoic. Main Range zone. Macera metamorphic complex. Infrastructure: two-mica, garnet, silimanite, andesite, cordierite crystalline schists, plagio-and granite-gneiss, plagio-and granite-migmatites. Suprastructure (Macera nappe): chlorite-sericite-chloritoid schists

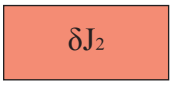
$PR_{+}PZ_{1}b$	Proterozoic and Lower Paleozoic. Main Range zone. Buulgen metamorphic complex. Gvandra suite: garnet-biotite, biotite-hornblende and hornblende plagiogneisses, amphibolites, micaceous, garnet, andalusite, cordiorite and staurolite schists. Klich tectonic sheet: plagio-and anchimonomineralic amphibolites. Ladeval (=sisina=vertskhlistba) suite: sericite-chlorite, muscovite, garnet, two-mica, andalusite, cordiorite, chlorite-cpidote, chlorite-cpidote-actinolite schists
$PR_{+}PZ_{1}$	Proterozoic and Lower Paleozoic. Lock-Karabakh zone (Locki massif): chlorite, micaceous, amphibole, andalusite and graphite schists, quartzites, marble lenses
PR	Proterozoic. Gagra-Djava zone. Crystalline schists and migmatites (Shoudidi exposure); monominerale, feldspatic, mylonitized, augen-amphibolites (Gorabi exposure). Georgian block (Dzirula massif). Gneiss-migmatite complex: micaceous and amphibol-biotite schists, amphibolites, plagiogneisses and plagiomigmatites. Artvin-Bolnisi zone (Khrami massif). Gneiss-migmatite complex: quartz-diorite gneisses, migmatite and crystalline schists

PLUTONS

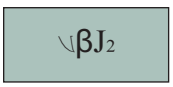
γN_{2}-Q	Pliocene-Quaternary granit-porphiries
δN	Neogene diorites
ξE_{2}^{3}	Upper Eocene syenite, syenit-diorites
δE_{2}^{2}	Middle Eocene diorites, quartz-diorites, monzonites, granosyenite
υE_{2}^{2}	Middle Eocene gabbro-pyroxenite, gabbros, gabbro-diorites, diorites, quartz-diorite
$P\gamma\pi E_{1\text{-}2}$	Paleocene-Eocene plagiogranit-porphyries
$\delta\pi K_{2}$	Upper Gretaceous diorite porphyrites
$\backslash\delta K_{2}$	Upper Gretaceous gabbro-diorites
$\backslash\beta K_{2}$	Upper Gretaceous gabbro-diabases, gabbro-porphyrites
$\gamma\pi J_{2}$	Middle Iurassic porphyraceous granitoids



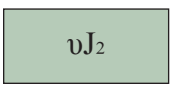
Middle Jurassic granitoids (granites, granodiorites, quartz-diorites, diorites)



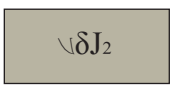
Middle Jurassic diorites, diorit-porphyrites



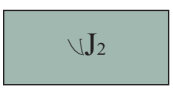
Middle Jurassic gabbro-diabases, diabas-porphyrites and granitoids



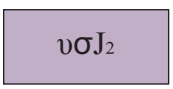
Middle Jurassic pyroxenites, gabbros, diorites



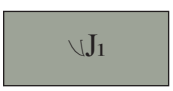
Middle Jurassic gabbro -diorites



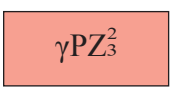
Middle Jurassic gabbros



Middle Jurassic ultrabasites

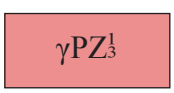


Lower Jurassic potassium feldspar gabbros



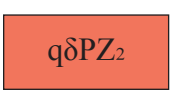
Upper Paleozoic microcline granites, granodiorites

Upper Paleozoic (Late Hercynian) quartz-diorites



Upper Paleozoic (Early Hercynian) granitoides (plagiogranites, granodiorites) and their gneissic varieties

Upper Paleozoic (Early Hercynian) quartz-diorites, diorites, gabbro-diorites



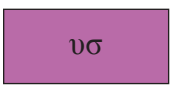
Middle Paleozoic gneissous quartz-diorites

Paleozoic gabbroids

Proterozoic quartz-dioritic orthogneisses

Proterozoic gabbroids

Proterozoic plagiogneisses and plagiogranites

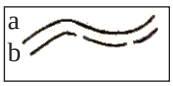
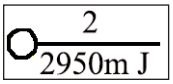


Protrusions of mantle serpentinous ultrabasites

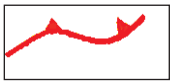
Subvolcanic bodies

E_0K_2	Upper Cretaceous teschenites, camptonites and monchiquites
$\upsilon\pi J_2$	Middle Jurassic diabases, diabas-porphyrites, porphyrites
λ	Rhyolites: Middle Eocene-λE_2^2, Upper Cretaceous-λK_2
$\tau\lambda E_{1\text{-}2}$	Paleocene-Eocene trachyrhyolites
$\lambda\zeta K_2$	Upper Cretaceous rhyodacites
ζ	Dacites: Neogene- ζN, Upper Cretaceous– ζK_2
α	Andesites: Middle Eocene-αE_2^2, Upper Jurassic-αJ_3,Middle Jurassic-αJ_2
$\alpha\beta$	Middle Eocene andesite-basalts– $\alpha\beta E_2^2$
β	Basalts: Neogene-βN, Lower Pliocene-βN_2

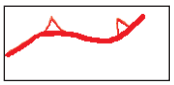
Other symbols

	Stratigraphic boundaries and intrusive contacts: a-trustworthy, b-supposed
	Contours of large landslides
	Volcanic centers
	Boreholes. In numerator--N of borehole, in denominator-- its depth and age of rocks on face

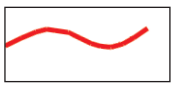
Faults



Nappes

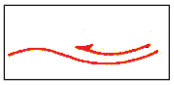


Reversed faults and thrusts

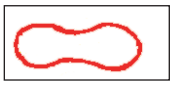


Normal faults and faults of unstated nature

The same faults coverd by younger deposits



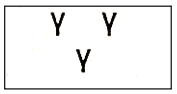
Strike-slip faults



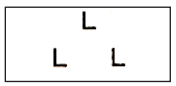
Protrusive contacts

Volcanic rocks

(submarine and subaeral)

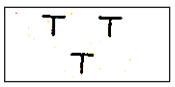


Calc-alkalic



Subalkalic

Alcalic



Tholeiitic