ALLEGATO 13

LEGENDA

SCALA 1: 25.000

QUATERNARY CONTINENTAL DEPOSITS

Eluvio-colluvial deposits
Silty-clay deposits, colluvial origin with sand fraction and with elements depending on the nature of the feeding basin. *Pleistocene - Holocene*

Slope deposits
Scree and talus deposits with variable grain size, well sorted or heterometric, unconsolidated or poorly cemented. The clasts are very angular to little or moderately rounded. *Pleistocene - Holocene*

Landslide deposits
Chaotic deposits with variable grain size, emplaced due to gravitational processes. *Holocene*

Alluvial deposits
a) fluvial deposits: mainly calcareous gravels, occurring along river beds.
b) alluvial fans: polygenic conglomerates, sands and silty-clay layers massive or thinly laminated. *Pleistocene - Holocene*

Fluvio-lacustrine deposits
Fine grained sediments and peat levels, mixed with coarser elements, deposited in lacustrine, fluvial-lacustrine and marsh swamp environments. *Middle / Upper Pleistocene - Holocene*

Moraine deposits
Chaotic deposits composed of heterometric clasts, up to the block size, with a silty matrix, locally cemented. *Pleistocene? - Holocene*

Travertines
Travertines and calcareous silt of fluvial and lacustrine environment. *Pleistocene - Holocene*

MARINE SUCCESSION

LAGA BASIN

Laga Formation
Torbiditic sandstones which consist of three members: pre-evaporitic, evaporitic and post-evaporitic members.
The first (LAG_1) is formed by some lithofacies associations: arenaceous (prevailing), arnaceous-pelitic and pelitic-arenaceous, defined by the sandstone/pelite ratio, which alternate in a vertical direction. The thickness is about 800 m.
The evaporitic member (LAG_2) consists essentially of an arenaceous lithofacies that includes a level of black anoxic bituminous marls and the typical "gessarenitic key-bed" (G). The thickness is about 500 m. In the northernmost sector this member is replaced by the bituminous clays and marls of the Gessoso-solifera Formation (GES).
The post-evaporitic (LAG_3) member is prevalently formed by a pelitic-arenaceous lithofacies in which numerous arenaceous-pelitic and arenaceous levels are inserted. In the upper part the "volcanoclastic key-bed" (V) is present. The outcropping thickness is 900 m. *Messinian*

Marne con Cerrogna - Schlier
The Marne con Cerrogna are constituted by light grey marls, calcareous marls and clayey marls with medium to thick bedded calcareous turbidites. A severe bioturbation is present. The uppermost part (Marne a Pteropodi) consists of grey-green marls and clayey marls, bituminous and laminated in the upper part. The thickness is 100-300 m. In the northernmost sector the Marne con Cerrogna Unit is replaced by the Schlier. *Burdigalian p.p.- Early Messinian*

CAMERINO BASIN

Camerino Formation
Arenaceous turbidites, formad by three lithofacies: arenaceous, arenaceous-pelitc and pelitic-arenaceous lithofacies, which are defined by the sandstone/pelite ratio.
The lithofacies are spatially associated in different ways. The thickness is about 500 m.
Tortonian p.p. - Messinian p.p.

Schlier
Grey marls and clayey-siltose marls, white calcareous marls and calcarenitic levels. The thickness varies from 80 to 200 m. *Burdigalian p.p. - Tortonian p.p.*

Bisciaro
Dark grey marly and siliceous limestones, limestones with black cherts nodules, in medium to thick beds, alternated with grey calcareous marls and clayey marls. The lower part contains thin intercalations of altered ocraceous volcanoclastic. Frequent bioturbations are also present. The thickness varies from 50-60 to 100-150 m. *Aquitanian p.p. - Burdigalian p.p.*

Scaglia cinerea
Green-grey to cinder-grey calcareous marls, marls, and clayey marls, in medium-thin beds. Subordinately there are marly limestone levels especially in the lower part. Grey calcarenites, rich in Nummulites, in 10-60 cm thick levels, are also present. The unit is 200 m thick. *Bartonian p.p.- Aquitanian p.p.*

Scaglia variegata
Red, grey and green limestones and marly limestones, in thin-medium beds, alternated with grey and red marls and calcareous marls. The maximum thickness is about 50 m. *Lutetian p. p. - Bartonian p.p*

Scaglia rossa
Pink, dark, red, rarely white marly limestones and limestiones, stratified in medium beds, with very thin pelitic levels and red or pink chert in nodules and ribbon missing in the middle part. The latter contains thick marly levels Thick grey or white calcarenite levels are also present. The thickness is 250-450 m. *Lower Turonian p.p. - Lutatian p.p.*

Scaglia bianca
White limestones and marly limestones, in medium beds, with chert beds and ribbons, black or brown in the upper part, pink in the lower one. In the uppermost part, the "Livello Bonarelli", made up of black anoxic bituminous shales, is present, with a maximum thickness of 1.5 m. The usual thickness of the unit is about 50-80 m. *Upper Albian p.p.- Lower Turonian p.p.*

Marne a Fucoidi
Grey, green and red marls and shaly marls, marly limestonse, with abundant clay levels, frequently bituminous ("black shales"). The marls and the shaly marls prevail in the lower part, the marly limestones in the upper one, where the green chert is also present. Calcarenites and calcirudites are frequent. The thickness varies from 50 to 80 m. *Lower Aptian p.p. - Upper Albian p.p.*

Maiolica
White and ivory calcilutites, in thin-medium beds, containing grey chert nodules and lenses, black in the upper part, white or grey in the lower one. The thickness is variable ranging from 150 to 450 m. *Upper Tithonian - Lower Aptian p.p.*

COMPLETE JURASSIC SUCCESSION

Calcari diasprigni
The lower portion of the Calcari diasprigni is formed by red, green and grey, finely to very finely bedded siliceous calcilutites, alternating with green, red or grey cherts and some marly levels. Locally clastic and bioclastic limestones, in medium to very thick beds, are present ("membro selcifero"). The upper part ("Calcari a Saccocoma e Aptici") is characterised by grey, green, sometimes red, cherty limestone, in medium-thin beds, frequently with aptichi. The maximum thickness is about 150 m. *Upper Bajocian - Lower Tithonian*

Calcari a Posidonia
Whitish or brown limestones and marly limestones, sometimes nodular, stratified in medium beds, with abundant Posidonia filaments and cherts increasing upward. Clastic and bioclastic limestones, stratified in medium - to very thick beds, are present. The maximum thickness is about 200 m. *Upper Toarcian p.p.- Lower Bajocian*

Rosso ammonitico
Dark red, pink, sometimes grey-green nodular limestones and marly limestones alternating with red marls and shaly marls. The whole unit, 40 m thick, is regularly stratified in medium - to thin (3-25 cm) beds. The limestones and marly limestones prevail in the lower part. Local calcareous resedimented materials are present. The unit can be partly or totally replaced by the Marne del Monte Serrone Fm. *Toarcian p.p.*

Marne del M. Serrone
Green and grey marly limestones, in beds of various thickness, alternating with grey marls or shaly marls and grey-brown clastic limestones in medium-thick beds. The thickness varies from a few to 150 m.
The age is variable and reaches up to *Pliensbachian p.p. - Toarcian p.p.*

Corniola
Grey or brown limestones, in 10-50 cm thick beds (occasionally thicker), with nodules and ribbons of white and grey chert. Calcareous turbidites and sometimes megabreccias and olistoliths of Calcare massiccio are frequently present, whereas grey-green thin shaly-marly interbeds are abundant in the upper part. The upper part can be replaced by the Marne del M. Serrone. The unit thickness can exceed 500 m. *Lower Sinemurian p.p.- Lower Toarcian p.p.*

CONDENSED JURASSIC SUCCESSION

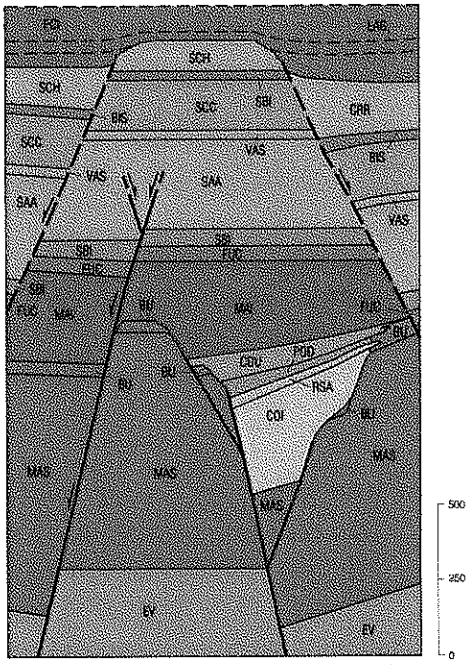
Bugarone Group
Grey, brown or pink micrites, with nodular texture, locally dolomitized, in 20-40 cm thick beds, with green marls in the middle part, ammonites, crinoids particles and braciopods are present. The thickness reaches 40 m. *Carixian p.p - Lower Tithonian*

Calcare massiccio
White, grey or pale brown limestones, made up of grainstons, packstones and less common wackestones. The unit is massive or coarsely bedded; the beds display cyclothemic features, indicating a tidal environment. The uppermost part consists of bioclastic and ooid grainstone. The unit reaches a thickness of 700 m. *Hettangian- Carixian p.p.*

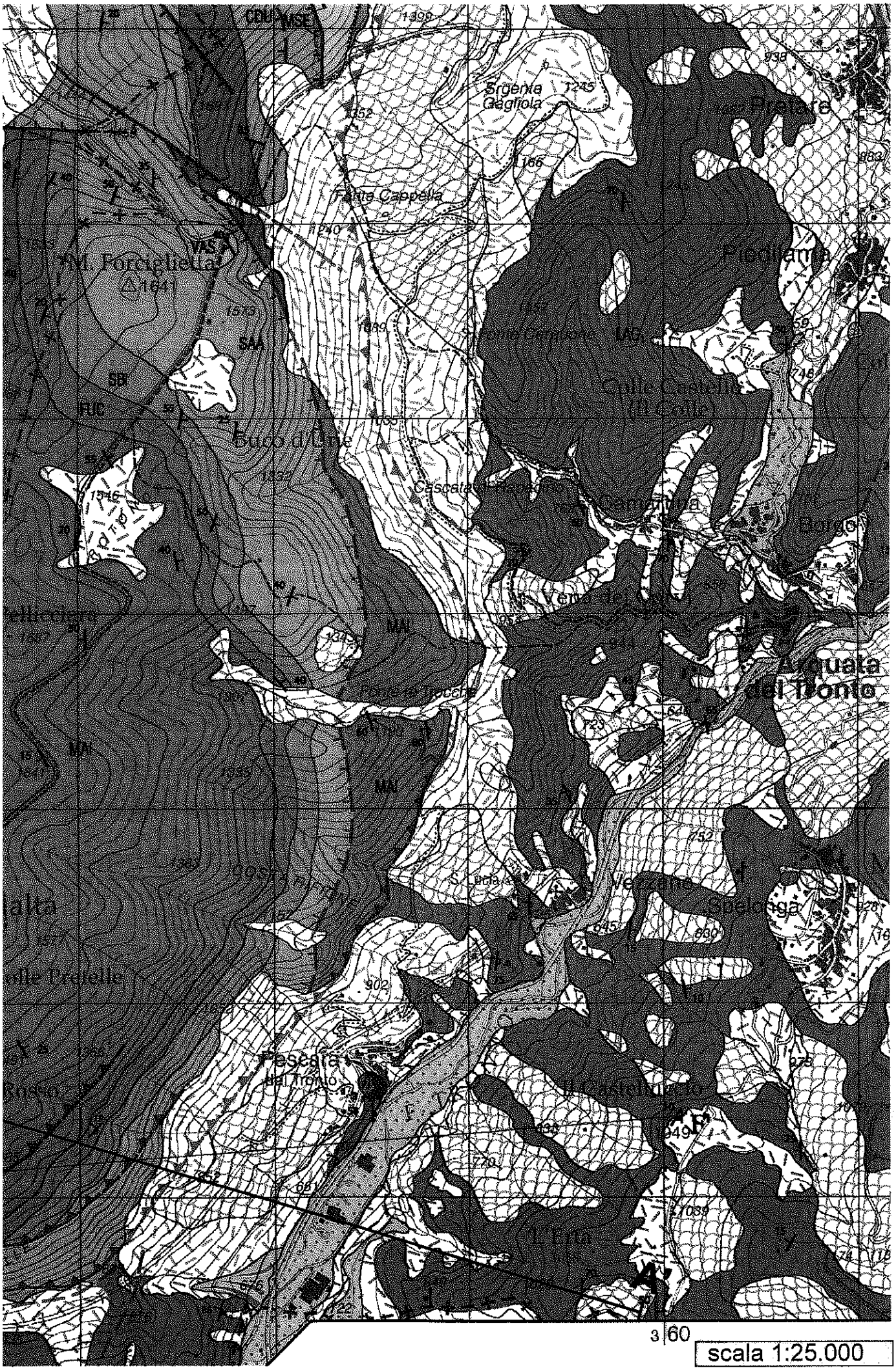
LEGENDA DEI SIMBOLI

- *Bedding attitude*
- *Attitude of overturned strata*
- *Attitude of horizontal strata*
- *Attitude of vertical strata*
- *Stratigraphic boundary*
- *Unconformable stratigraphic contact*
- *Fault*
- *Normal and transtensive fault*
- *Reverse and thrust fault*

SCHEMA STRATIGRAFICO



stralcio della «Carta dei Monti Sibillini» da Pierantoni et al. 2013



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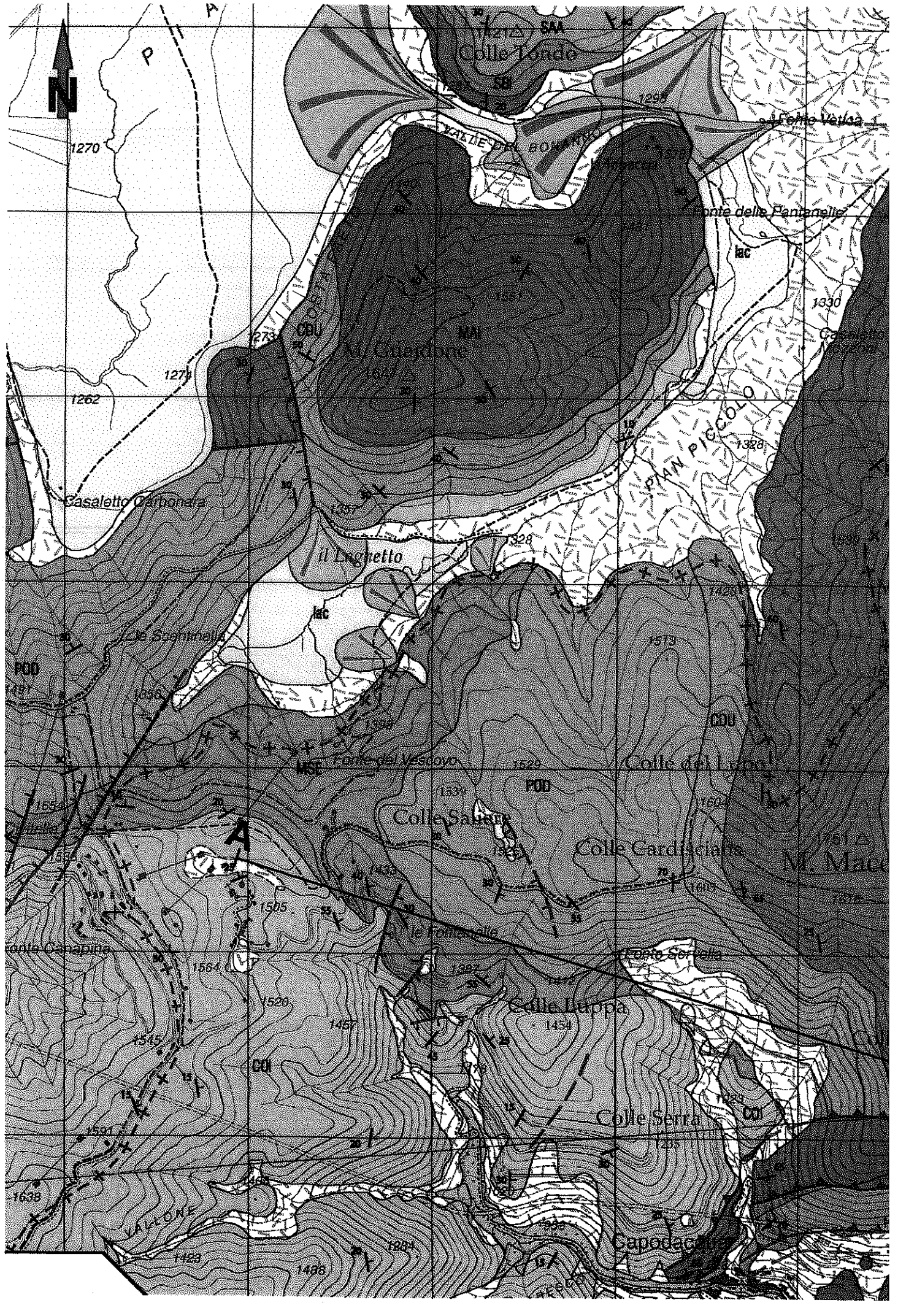
N
Colle Tondo
SAA
SBI
Fonte Vetica
VALLE DEL BONANNO
Fonte delle Pantanelle
lac
MAI
CDU
M. Guajdone
PIAN PICCOLO
Casaletto Carbonara
il Laghetto
lac
le Scontinella
POD
MSE
Fonte del Vescovo
Colle del Lupo
POD
Colle Salione
Colle Cardisciana
M. Mace
le Fontanelle
Fonte Canapina
Fonte Servella
Colle Luppa
COI
Colle Serra
COI
VALLONE
Capodacqua