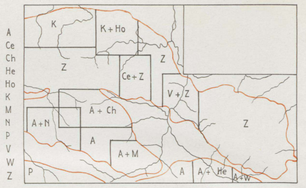
GEOLOGICAL MAP OF THE CENTRAL PYRENEES 1:50.000

Published by the Geological Institute, Leiden University
Editors: L.U. de SITTER and H.J. ZWART

SHEET 3
ARIÈGE – FRANCE

Geology by:

J.H. Allaart	A
W.E. Celosse	Ce
B. Chatab	Ch
H. Heetveld	He
H. Hoppener	Ho
J. Keizer	K
S.A. Manus	M
W.H. Nieuwenhuys	N
J. Prins	P
C.S. Vermeulen	V
W. ter Wee	W
H.J. Zwart	Z



Strike and dip of cleavage
0°–20°
21°–40°
41°–60°
61°–90°

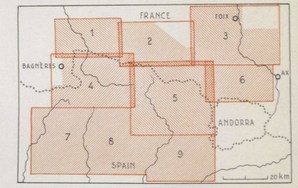
Strike and dip of schistosity
0°–20°
21°–40°
41°–60°
61°–90°

Direction and plunge of lineation
0°–20°
21°–40°
41°–60°
61°–90°

Direction and plunge of fold axis
0°–20°
21°–40°
41°–60°
61°–90°

× Economic deposits
Cu – Copper
Fe – Hematite
G – Gypsum
Mn – Manganese
Pb – Galena
T – Talc
Zn – Sphalerite
As – Mispickel

a fossil locality
Normal contact
Transitional contact
Unconformable contact
fault



QUATERNARY
- Alluvium
- Scree
- Alluvial fan
- Fluvioglacial terraces: Upper terrace; Middle terrace; Lower terrace
- Glacial deposits
- Terminal moraine

MESOZOIC and TERTIARY
- Limestones etc. undifferentiated; CENOMANIAN, UPPER CRETACEOUS, TERTIARY.
- Ophite (gabbros or diorites); Lherzolite (peridotites) — LOWER CRETACEOUS intrusives
- Alpine metamorphism: marmorization and scapolitization
- Limestones, shales etc. undifferentiated; JURASSIC and LOWER CRETACEOUS
- Variegated mudstones, limy and dolomitic marls, gypsum; KEUPER
- Blue limestones, dolomites, limestone breccias; MUSCHELKALK
- Conglomerates, breccias, red and green shales, cavernous limestones; LOWER TRIASSIC
- Basalt (melaphyre) flows in the TRIASSIC

CARBONIFEROUS
- Dark coloured shales in the Arize massif dated as VISEAN (fauna of Larbont and Mondette)
- Black cherts, locally with phosphate nodules; in the Arize massif dated as LOWER VISEAN.

DEVONIAN
- Nodular limestones (griotte); locally dolomitized, or marmorized to white marble. This nodular limestone is dated as UPPER DEVONIAN in several localities in the Pyrenees.
- Blue spatic limestones, locally dolomitized; dated as MIDDLE DEVONIAN by its intercalation between Upper- and Lower Devonian
- Limy slates and slaty limestones, in the Arize massif dated as LOWER DEVONIAN
- Grey and white limestones, locally dolomitized; Grey slates; Slates and slaty limestones, S. of Aulus — MIDDLE- and LOWER DEVONIAN, exact age unknown.

SILURIAN
- Black ampelitic shales

CAMBRO-ORDOVICIAN
- Sericite phyllites
- Calcite and dolomite marbles

ISOCHEMICAL METAMORPHIC FACIES OF CAMBRO-ORDOVICIAN
- Micaschists
- Andalusite micaschists
- Limesilicate gneiss

LATE CARBONIFEROUS INTRUSIVES
- Biotite granodiorite to quartzdiorite
- Lamprophyre dykes
- Porphyrite dykes
- Contact aureole

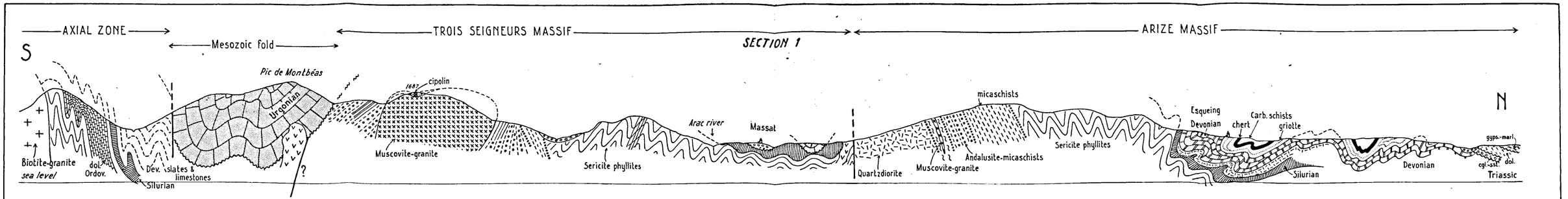
MIGMATITE–QUARTZDIORITE SERIES
- Quartzdioritic gneiss
- Sillimanite gneiss
- Quartzdiorite and nebulitic quartzdiorite
- Homogeneous biotite gneiss

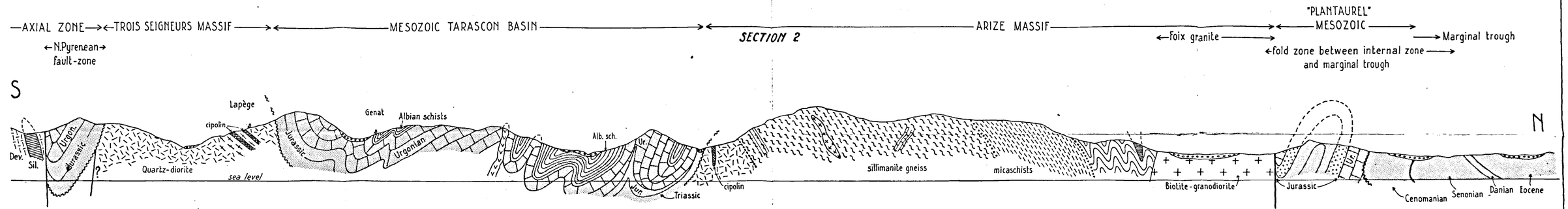
BASAL GNEISS SERIES
- Granitic biotite-muscovite gneiss
- Linear garnet augengneiss
- Folded garnet augengneiss
- Schistose garnet bearing granitic gneiss
- Granite and gneissose granite, locally leucocratic

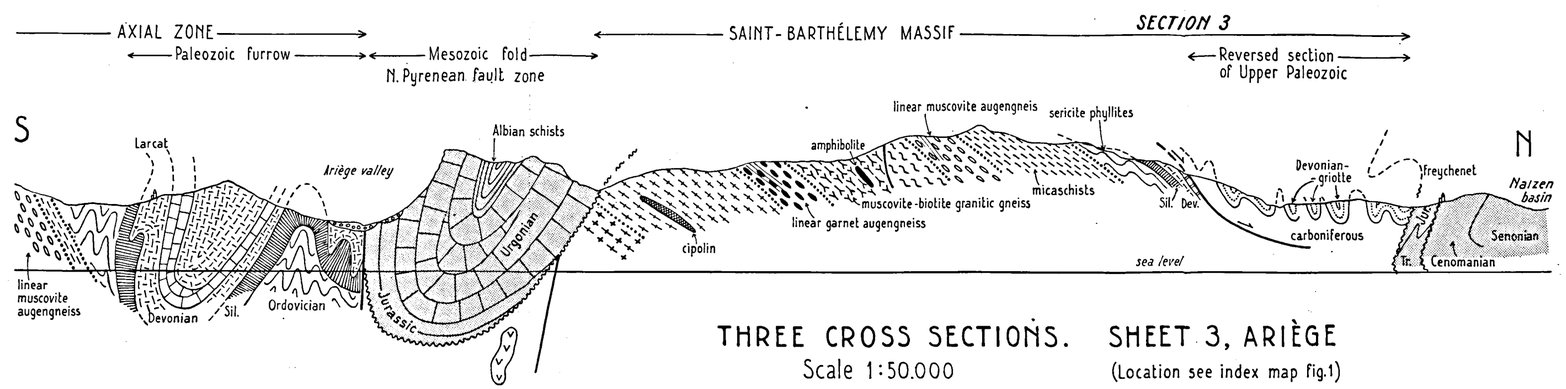
MUSCOVITE–GRANITE and GNEISS SERIES
- Muscovite and muscovite-biotite granite
- Muscovite-biotite granitic gneiss
- Linear muscovite-biotite augengneiss
- Linear muscovite augengneiss with euhedral feldspar porphyroblasts
- Pegmatites

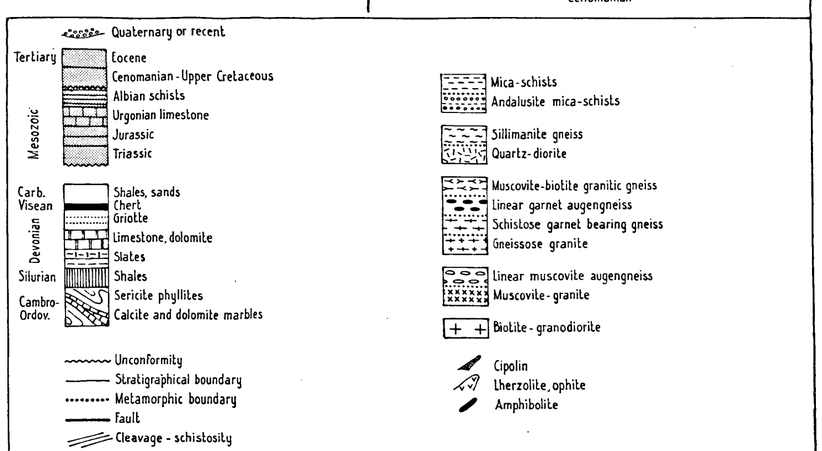
- Talc-chlorite rocks
- Metamorphic marble (cipolin)
- Amphibolite
- Peridotite
- Chlorite-albite rocks
- Quartzdykes and masses

520
525
530
535
540
545
550
555
560
75
70
65
60
55
La Bastide de Sérou
Montels
Mercus
Berny
Kastelnau Durban
Les Ateliers
Nescus
Monredon
Prades
Peudanes
Seurats
Montagagne
Fontes
Sentenac de Sérou
Soubères
Sabuc
Burret
Le Bosc
Encenou
Tour Lafont
Pic de Rascas
Tuchart
Bierl
Boussenac
Massat
Euchenne
Bielliot
Pic d'Estibat
Prat Communal
Port
Pic de Bernes
Pic de Journalade
Cap de la Basse
Pic de l'Areille
Trabiet
La Ruse
Col de la Pourtalonne
Pic des 3 Seigneurs
Pic de Barre
Pic de Peyrodde
Col d'Ires
Pic de Montbéas
Col de Pinet
Aulus
Les Bordes
Sentenac
Vicdessos
Orus
Tillier
Laramade
Pic de Querqueon
Pic de Proujou
Pic d'Arbas
Col de Lasthi
Lapège
Mercus
Dunac
Capoulet
Migios
Genat
Saurat
Sabart
Sédeilhac
Menac
Arignac
Rabat les 3 Seigneurs
Rabat
Castillon
Quié
Bourbit
Tarascon
Ussat
Ornolac
Barrié
Bonan
Sinsat
Larnat
Atlios
Les Cabanes
Larcat
Aston
Urs
Vebre
Gestiès
Vercé
Sem
Roc d'Amplaing
Ampilaing
Garrabet
Col de Rouy
Tarnat
Cruquier
Bompas
Montoulieu
Seignanx
Prayols
Cadirac
Foix
Vernajoul
Labarre
Cos
Carrol
S. Martin
Presbens
Balmajou
Lus
Serres
Cambiè
Bénac
Lauzat
Brassac
Jouan
Ganac
Bourrugue
La Cassagne
Becq
Mican
Planol
Burges
Cazals
Tussol
Argel
Pic de Soularac
Pic de Rascas
Pic de la Crouzette
Picou de Berne
Col d'Estagnon
Cap de las Costes
Roc de Tudinet
Pic de Pène
Pic de Querqueon
Col de Lasthi
Col d'Agnes
Pic de la Lauzat
Mont Tourcat
Sommet de l'Estagnon
Pic de Thabor
Pic de Mail Arrouy
Pic de Mail Barrié
Pic de Mail Bernat
Pic de Mail Ferrat
Pic de Mail Rouge
Pic de Mail Ferrié









THREE CROSS SECTIONS. SHEET 3, ARIÈGE

Scale 1:50.000

(Location see index map fig.1)