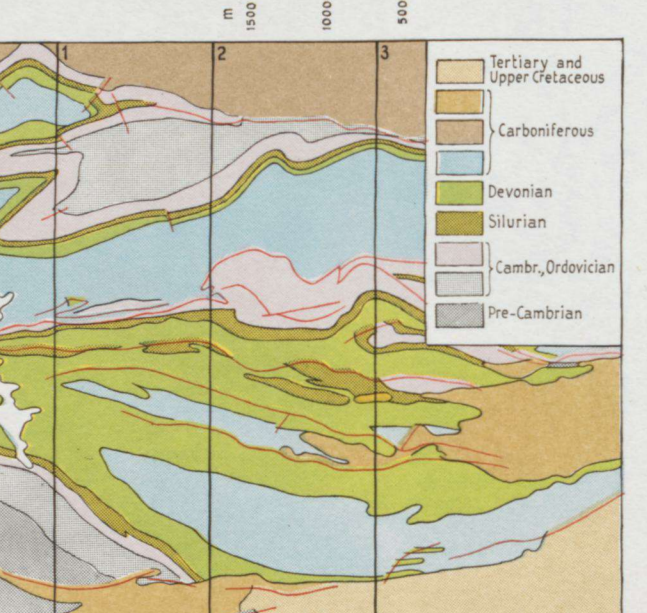
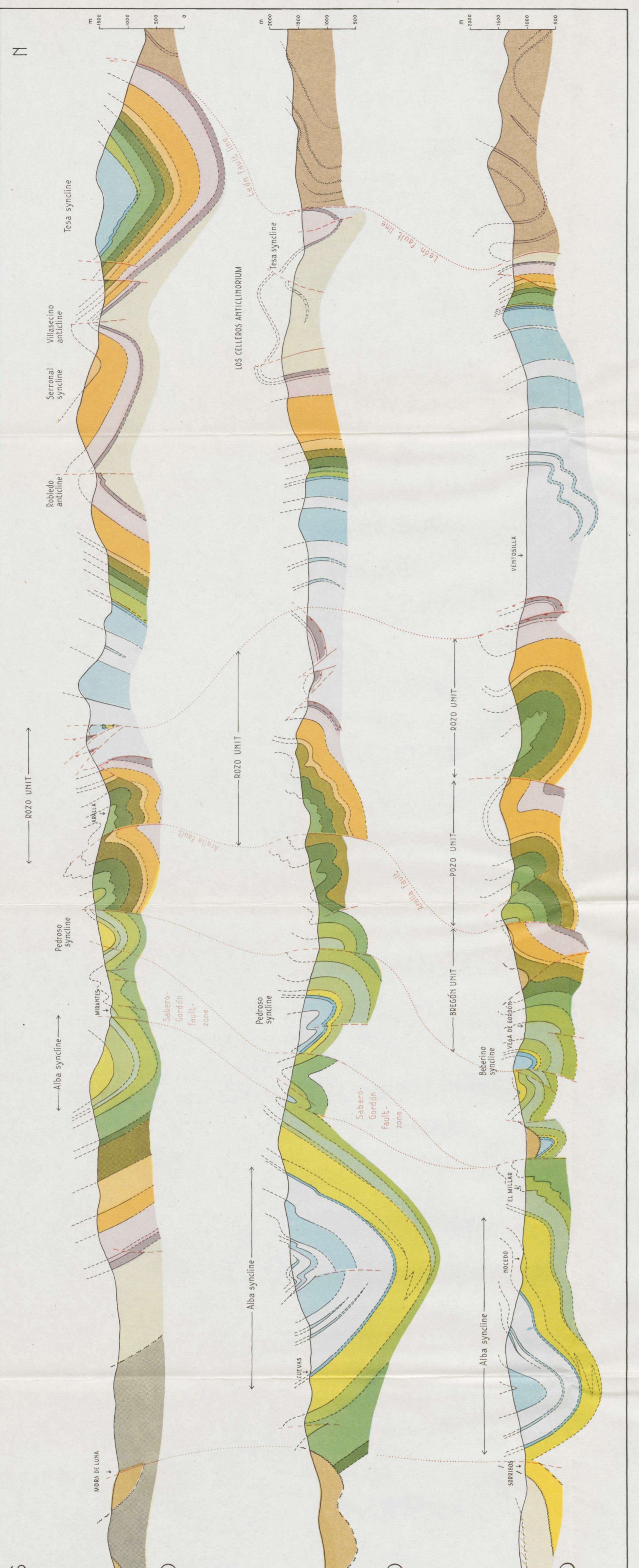
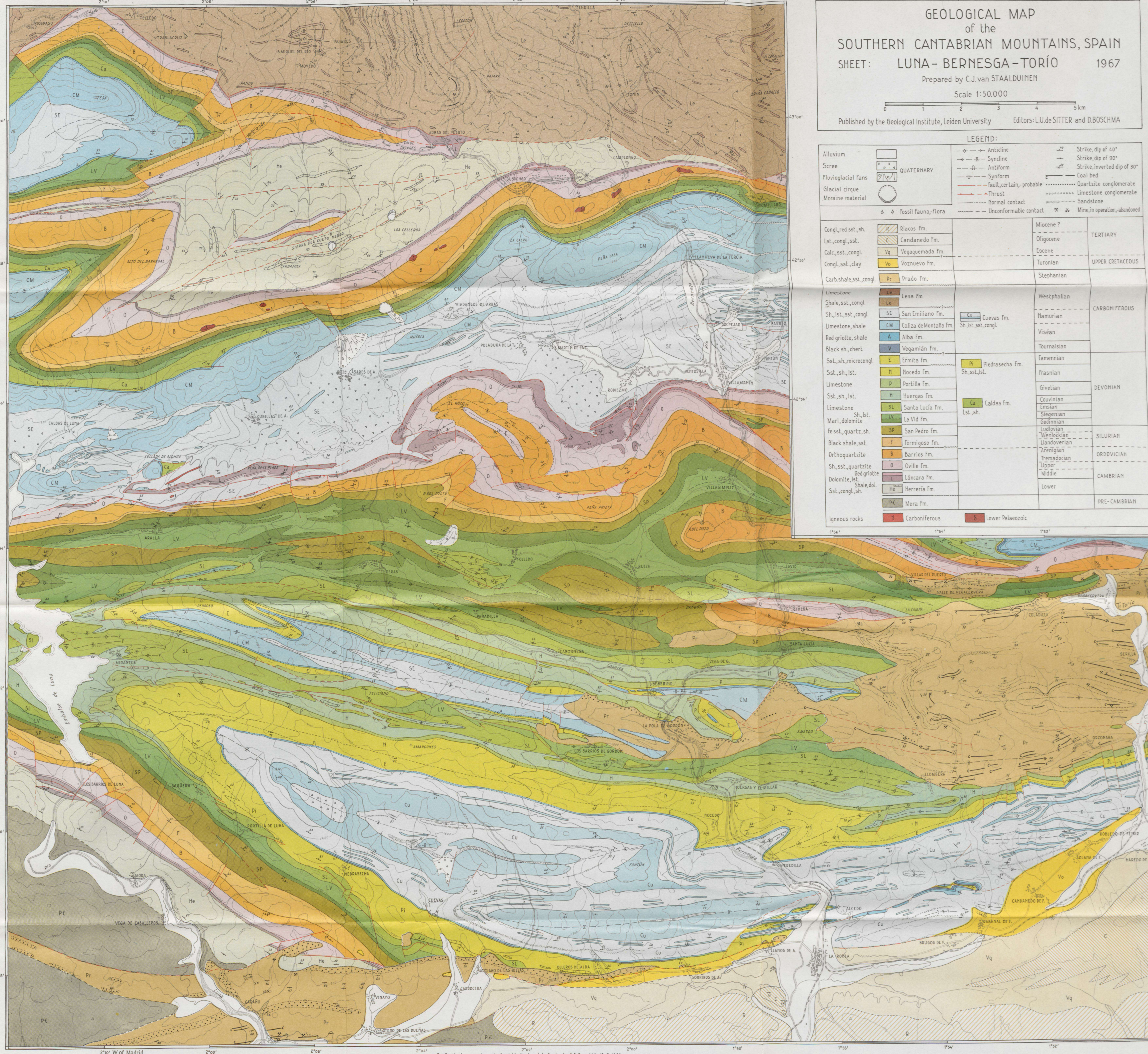


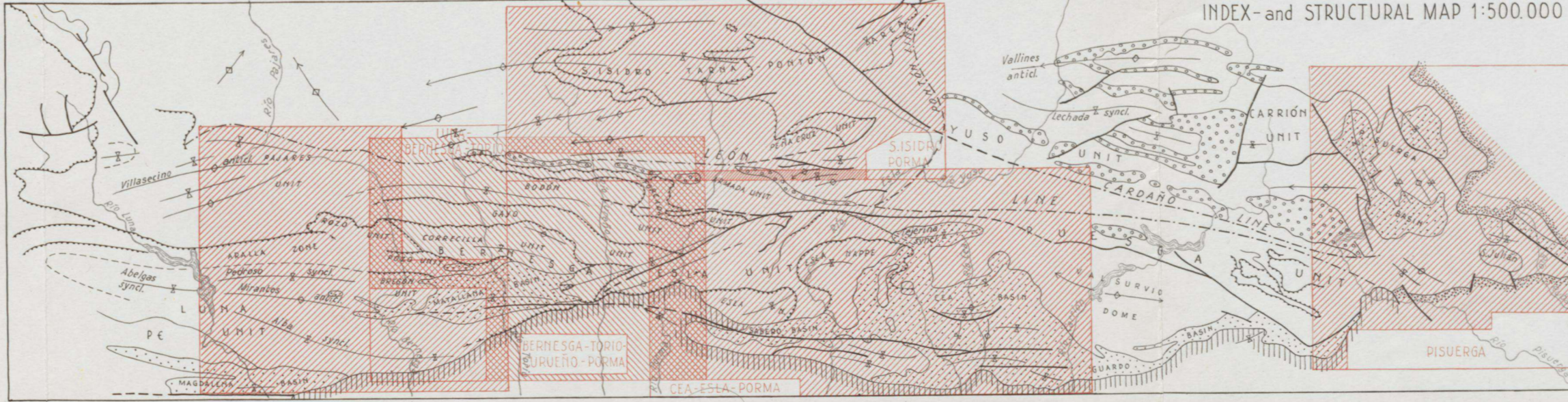
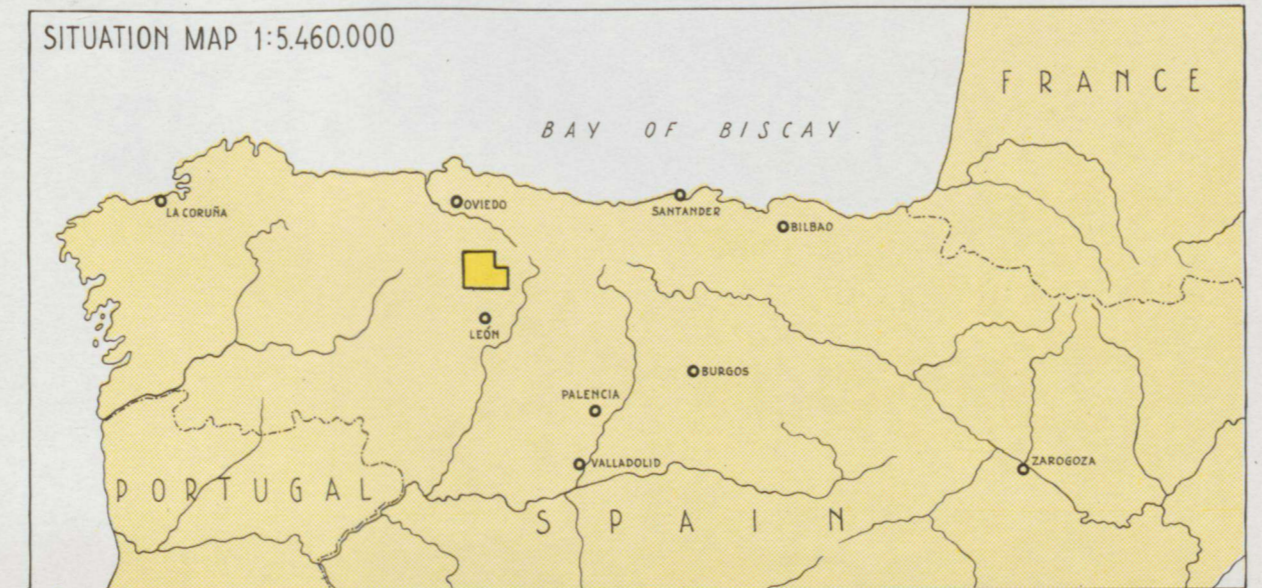
GEOLOGICAL MAP
of the
SOUTHERN CANTABRIAN MOUNTAINS, SPAIN
SHEET: **LUNA - BERNESGA - TORIO** 1967
Prepared by C.J. van STAALDUINEN
Scale 1:50.000
Published by The Geological Institute, Leiden University Editors: L.U. de SITTER and D.BOSCHMA

LEGEND:

Alluvium	Scree	Fluvioglacial fans	Glacial cirque	Moraine material	QUATERNARY	Anticline	Syncline	Antiform	Synform	Fault, certain, probable	Thrust	Normal contact	Unconformable contact	Strike, dip of 40°	Strike, dip of 90°	Strike, inverted dip of 30°	Coal bed	Quartzite conglomerate	Limestone conglomerate	Sandstone	Mine in operation, abandoned
<ul style="list-style-type: none"> Congl., red, sst., sh. Lst., congl., sst. Calc., sst., congl. Congl., sst., clay Carb. shale, sst., congl. Limestone Shale, sst., congl. Limestone, shale Red griotte, shale Black sh., chert Sst., sh., microcongl. Sst., sh., lst. Limestone Sst., sh., lst. Limestone Mari, dolomite Fe sst., quartz, sh. Black shale, sst. Orthoquartzite Sh., sst., quartzite Dolomite, lst. Sst., congl., sh. 	<ul style="list-style-type: none"> Riaces fm. Candanedo fm. Vegaquemada fm. Vozvevo fm. Prado fm. Lena fm. San Emiliano fm. Caliza de Montaña fm. Alba fm. Vegamian fm. Ermita fm. Nocedo fm. Portilla fm. Huergas fm. Santa Lucía fm. La Vid fm. San Pedro fm. Formigoso fm. Barrios fm. Ovile fm. Láncara fm. Herrería fm. Mora fm. 	<ul style="list-style-type: none"> Miocene ? Oligocene Eocene Turonian Stephanian Westphalian Namurian Viséan Tournaisian Famennian Frasnian Givetian Couvianian Emsian Slieganian Gedinnian Ludlowian Wenlockian Llandoveryan Arenigian Tremadocian Ligon Middle Lower 	<ul style="list-style-type: none"> TERTIARY UPPER CRETACEOUS CARBONIFEROUS DEVONIAN SILURIAN ORDOVICIAN CAMBRIAN PRE-CAMBRIAN Lower Palaeozoic 																		



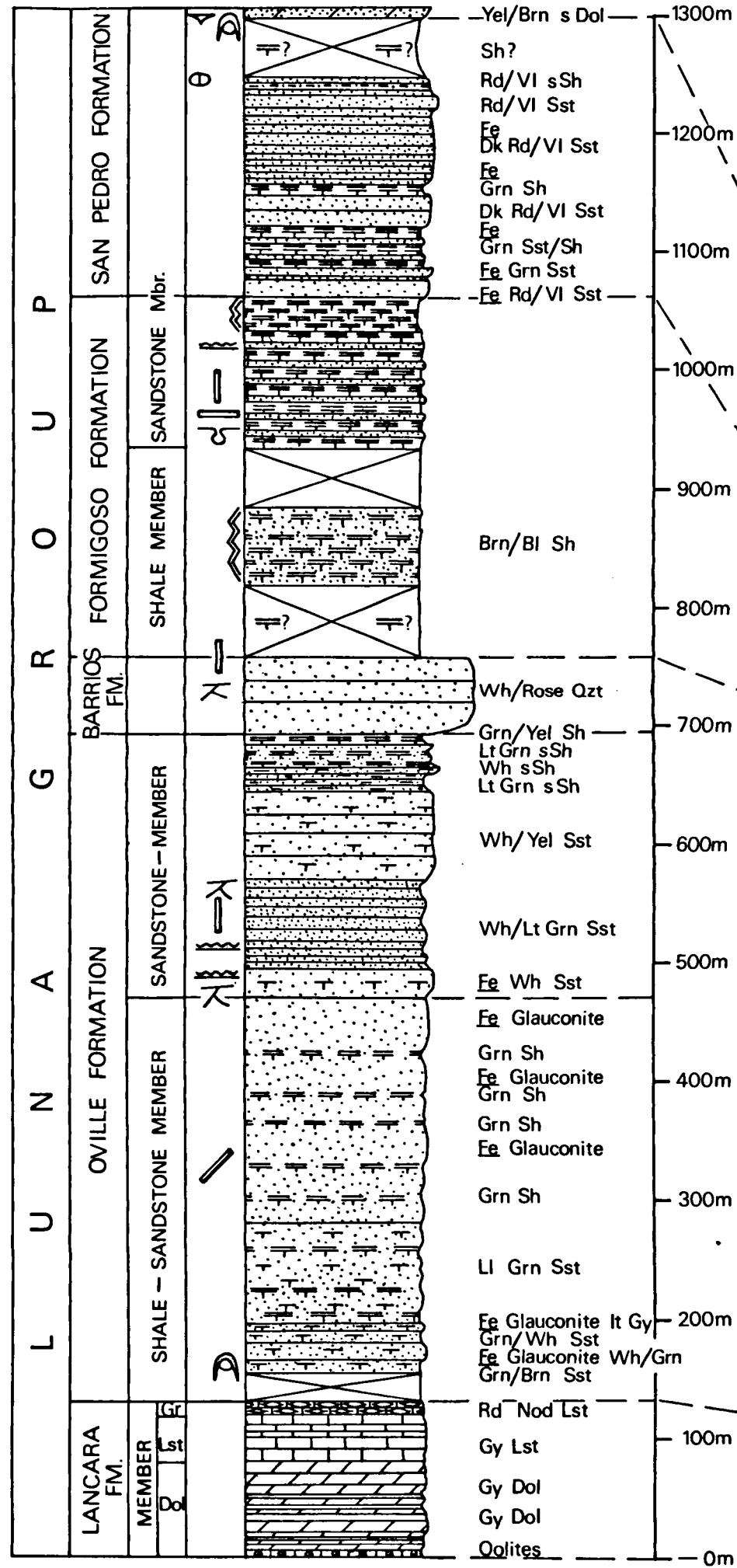
S-N Structural Sections
corresponding to map
sheet LUNA-BERNESGA-TORIO
scale 1:50.000



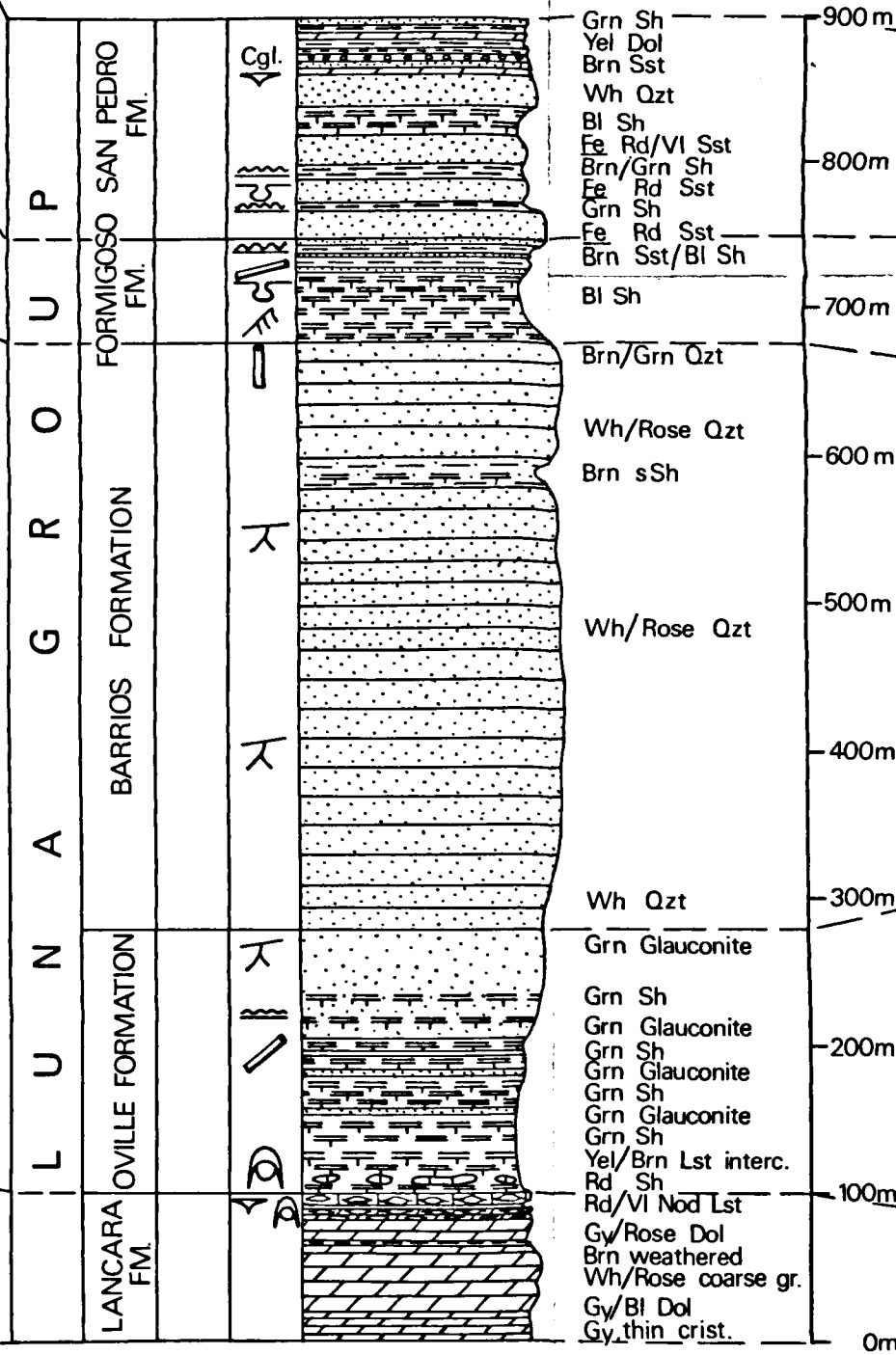
Geology by students:

A	= H.W. van Amerom	Bl	= G.P.J. Blom	J	= Sch. K.
B	= R.D.H. Beekman	H-St	= St.	W-St	= St.
Bo	= A.J. Bol	S-St	= St.	E	= St.
D	= J. van Dillewijn	St	= St.	Bo-St	= St.
E	= H.J. Evers	D+St	= St.	V+St	= St.
H	= J. Harsink	St	= St.	St	= St.
J	= W.J. Jalink	St	= St.	St	= St.
Sch	= R.P.M. Schreiner	St	= St.	St	= St.
Sch	= G.A.H.M. Schreuder	St	= St.	St	= St.
S	= B.J. Smits	St	= St.	St	= St.
St	= C.J. van Staalduinen	St	= St.	St	= St.
V	= L.T. van Vught	St	= St.	St	= St.
W	= F.J. Werre	St	= St.	St	= St.

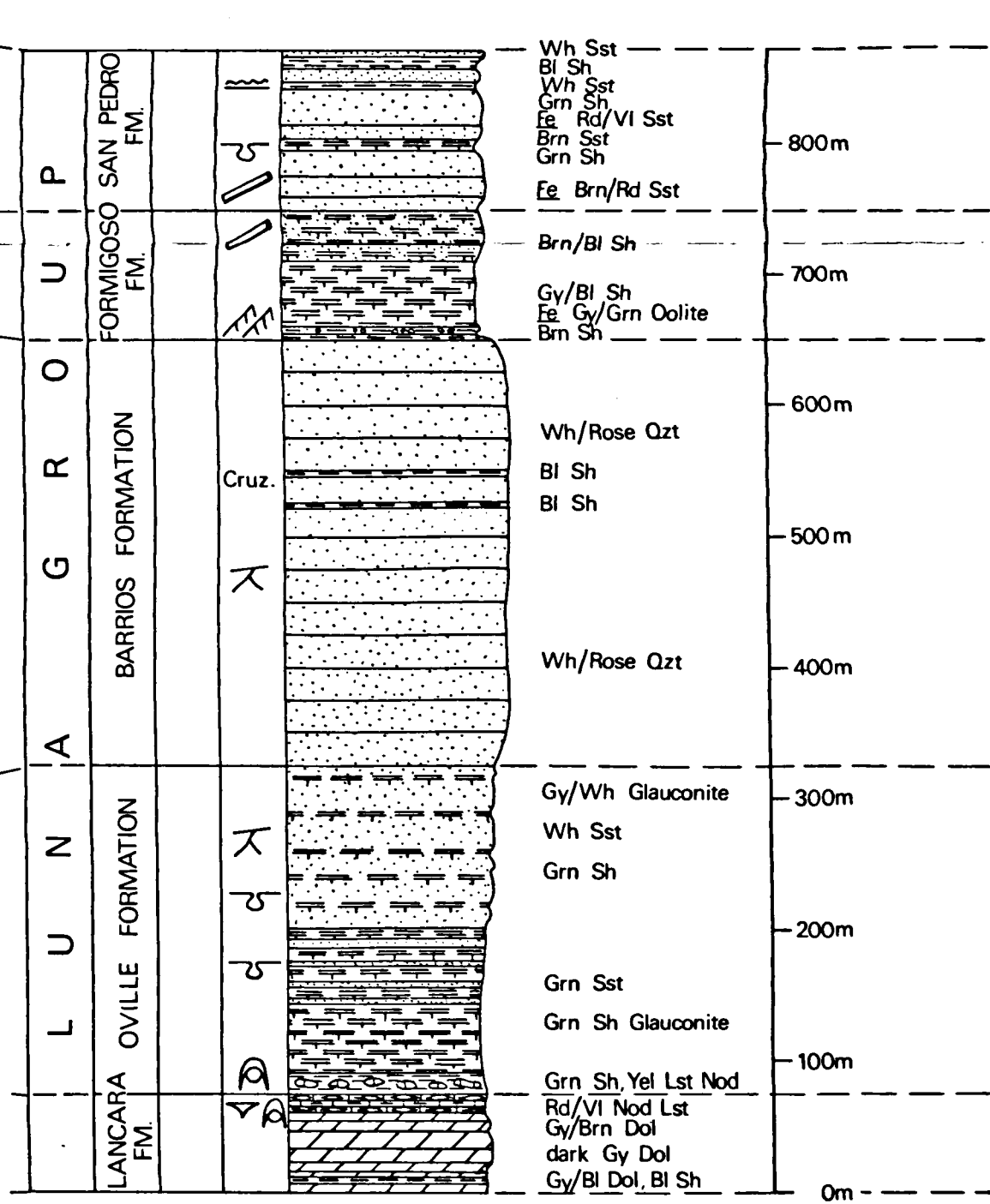
L U N A S E C T I O N



R O Z O S E C T I O N



P A J A R E S S E C T I O N



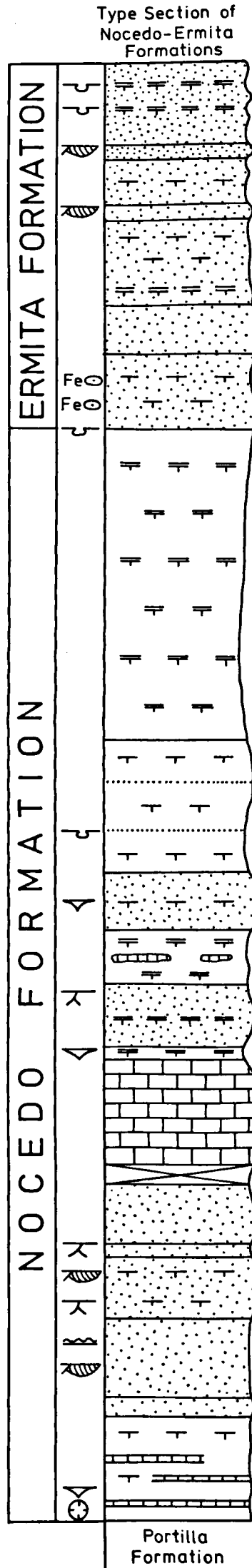
S of Huerqas de Gordon

SE of Mirantes

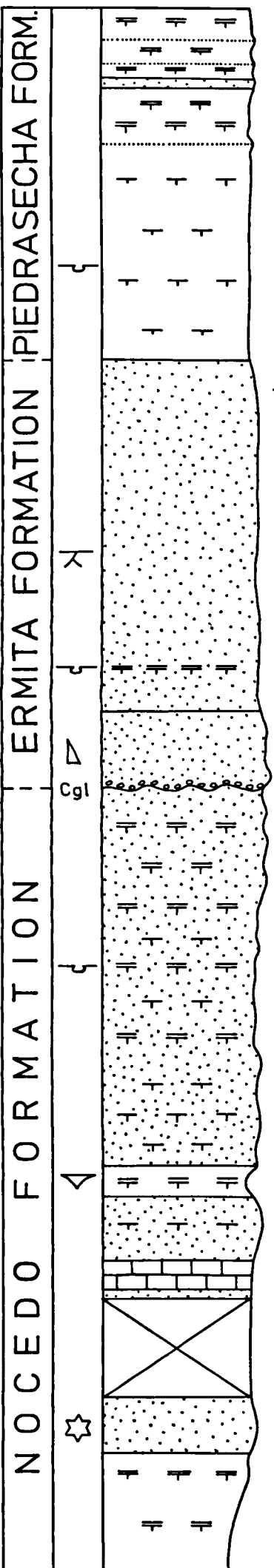
Near Piedrasecha

N of Santiago de las Villas

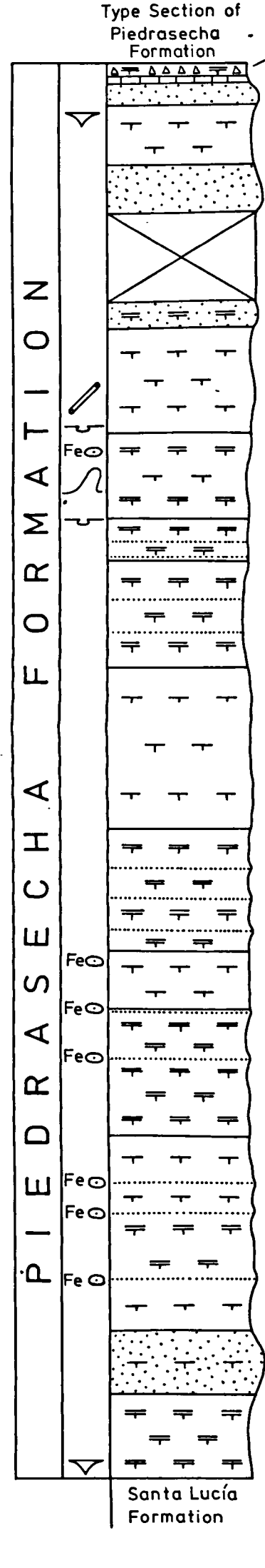
Legend of stratigraphic sections



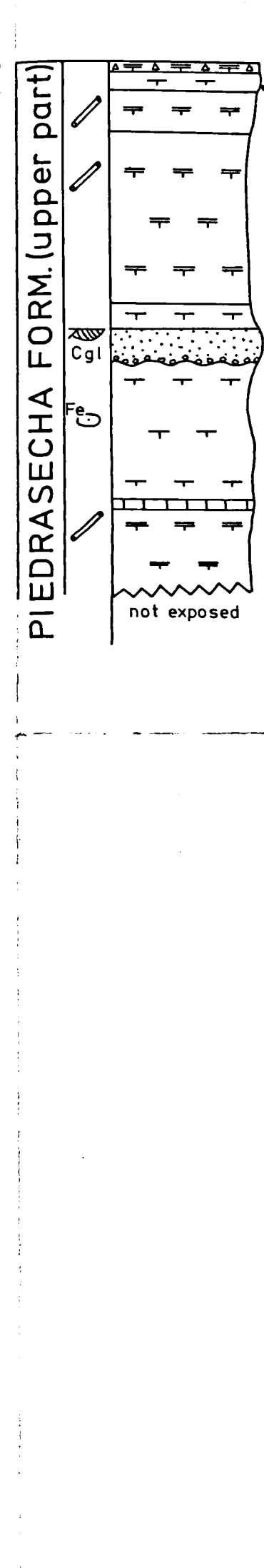
Rd/Brn Sst/Sh
Wh Q Sst
Rd Sst
Wh Q Sst
Rd Sst
Wh Q Sst
Rd Sst
Wh Q Sst
Rd Sst
Bl/Brn Sh
Bl/Brn Sh
Brn Mdst
Brn Sst
Wh/Gy Sst
Grn Sh
Gy/Wh Q Sst
Brn Sh
Gy Lst
not exposed
dark Grn/Bl Q Sst
Yel/Brn Sst
Gy Q Sst
Bl/Gy Q Sst
Lst/Mdst



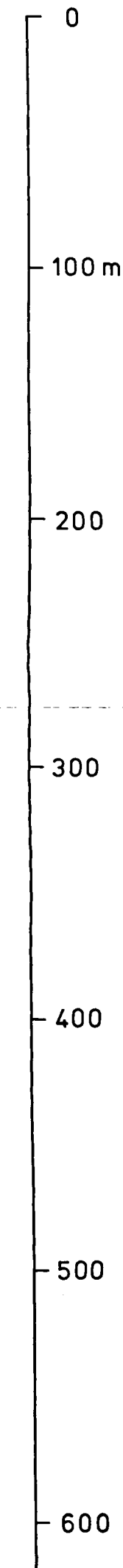
Brn Sst
Bl/Brn Sh
Brn Sst
Brn Mdst
Gy/Brn Q Sst
Gy/Wh/rose Q Sst
Brn Sh
Brn Sst
Brn Sh
Bl Sh
Brn Sst
Brn Sh
Brn Sst
Rd Sh
Brn Sst
Bl Sh
Gy/Brn Sst
Gy/Brn Lst
Wh Q Sst
not exposed
Mdst?
Rd Q Sst
Brn Sh



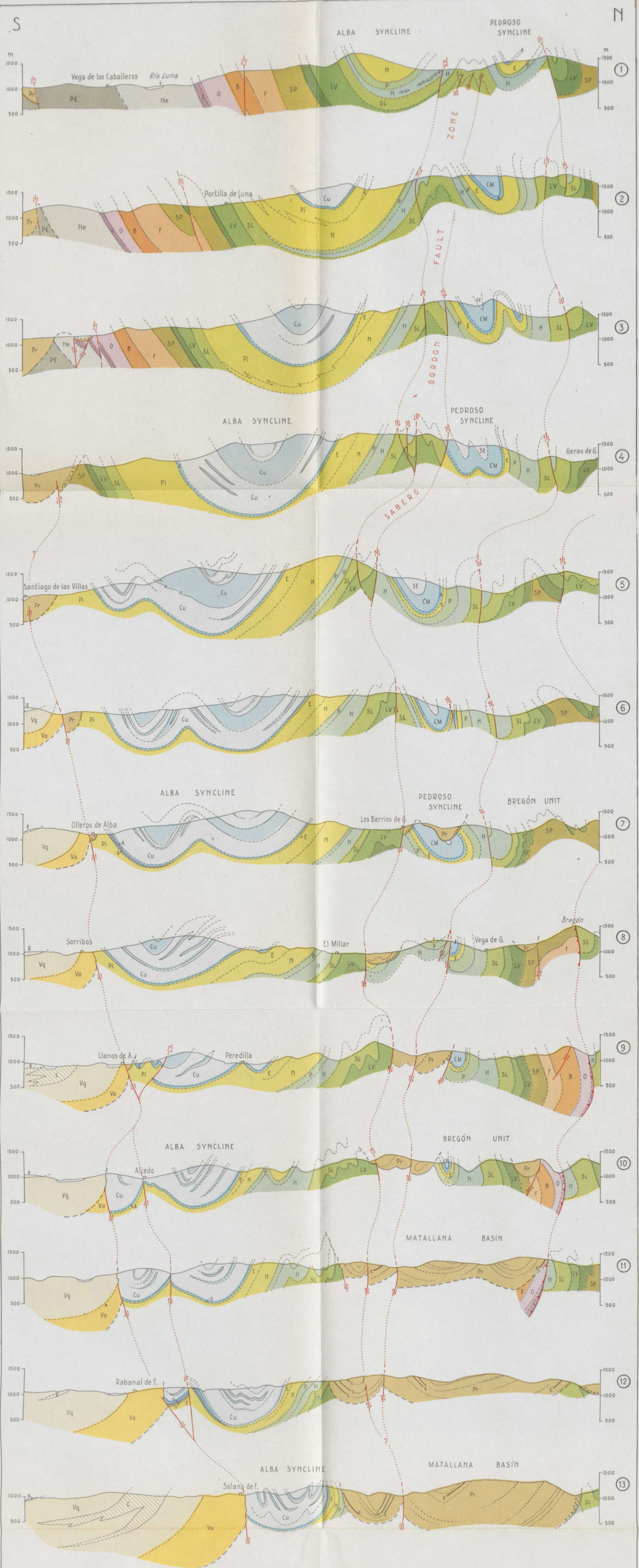
Bl Sh (Vegamián Form.)
Brn Lst
decalcified Q Sst
Brn Mdst
Brn Sst
not exposed
Q Sst/Sh
Brn Mdst
Brn Mdst Sh
Bl Sh/Sst
Bl Sh
Bl Sst
Bl Sh
Bl Sst
Bl Sh
Gy/Brn Mdst
Gy/Brn Sh
Gy/Brn Sst
Gy/Brn Sh
Gy/Brn Sst
Gy/Brn Sh/Sst
Brn Mdst
Brn Sst
Brn Sh
Brn Sst
Bl Sh
Brn Mdst
Brn Sst
Brn Mdst
Brn Sst
Bl Sh
Brn Sst
Brn Mdst
Brn Sst
Rd Q Sst
Brn/Bl Sh



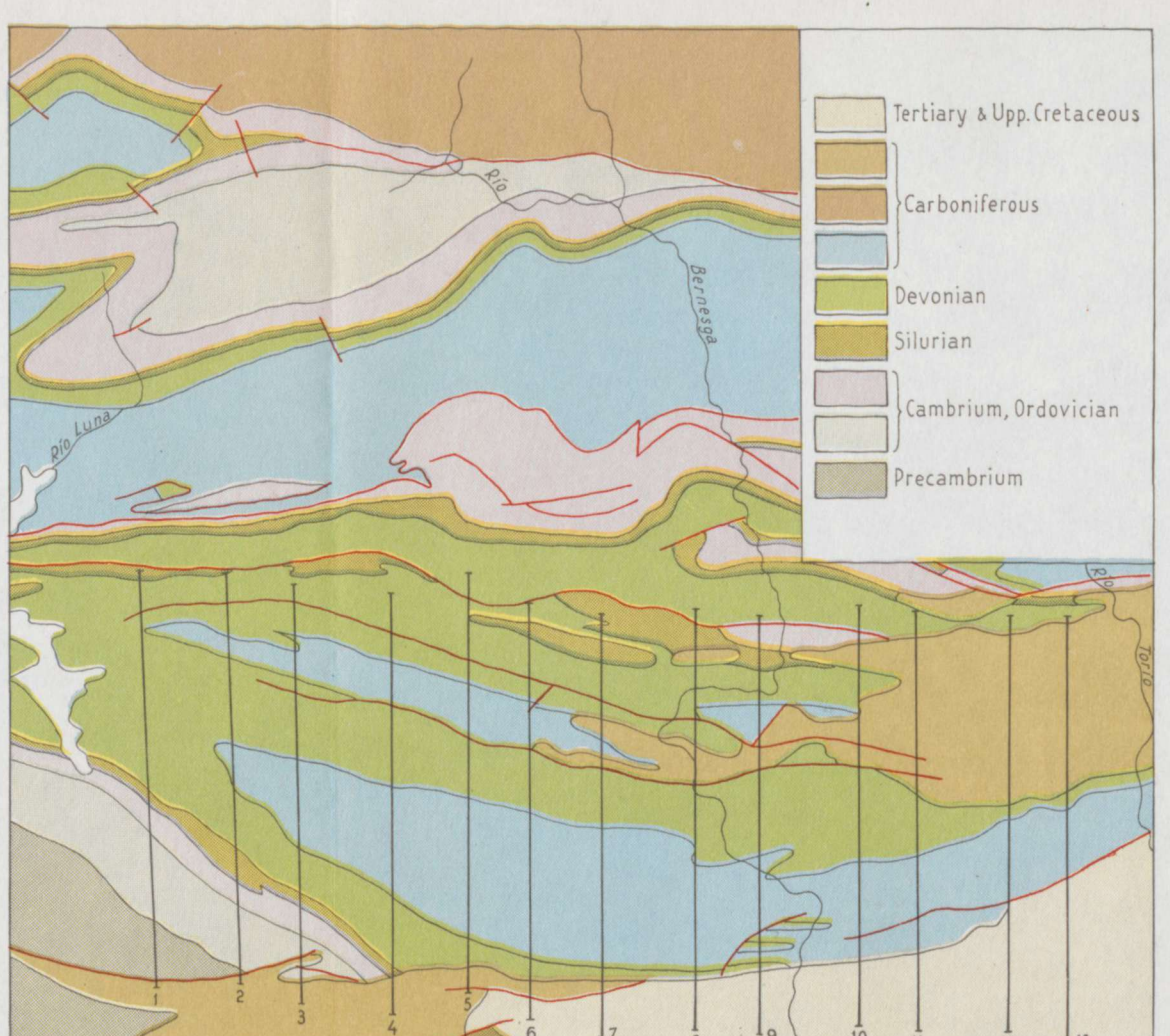
Bl cherty Sh (Vegamián Form.)
Brn Mdst
Gy/Wh Sh
Brn Sh
dark Brn Mdst
Rd/Gy Q Sst
Rd/Brn Mdst
Grn Lst
Yel/Rd Sh
not exposed



- quartzite, quartz sandstone
- sandstone
- mudstone
- shale
- dolomite
- limestone
- nodular limestone
- oolithic limestone
- limestone nodules in shale beds
- chert
- not exposed
- conglomerates
- concretions, Fe and limestone
- burrows
- vertical and horizontal burrows
- fining upwards sequence
- ripples
- loadcasts
- slump structure
- cross bedding
- erosive channel
- trilobites
- brachiopods
- crinoids
- graptolites
- corals



- Riacos Fm.
- Candanedo Fm.
- Vegaquemada Fm.
- Voznuevo Fm.
- Prado Fm.
- San Emiliano Fm.
- Cuevas Fm.
- Caliza de Montaña Fm.
- Alba Fm.
- Vegamián Fm.
- Ermita Fm.
- Piedrasecha Fm.
- Nocedo Fm.
- Portilla Fm.
- Huergas Fm.
- Santa Lucía Fm.
- La Vid Fm.
- San Pedro Fm.
- Formigoso Fm.
- Barrios Fm.
- Oville Fm.
- Láncara Fm.
- Herrería Fm.
- Mora Fm.



CROSS SECTIONS CORRESPONDING TO THE SOUTHERN PART OF THE MAP SHEET LUNA - BERNESGA - TORIO

SCALE 1:50,000

C.J.van STAALDUINEN