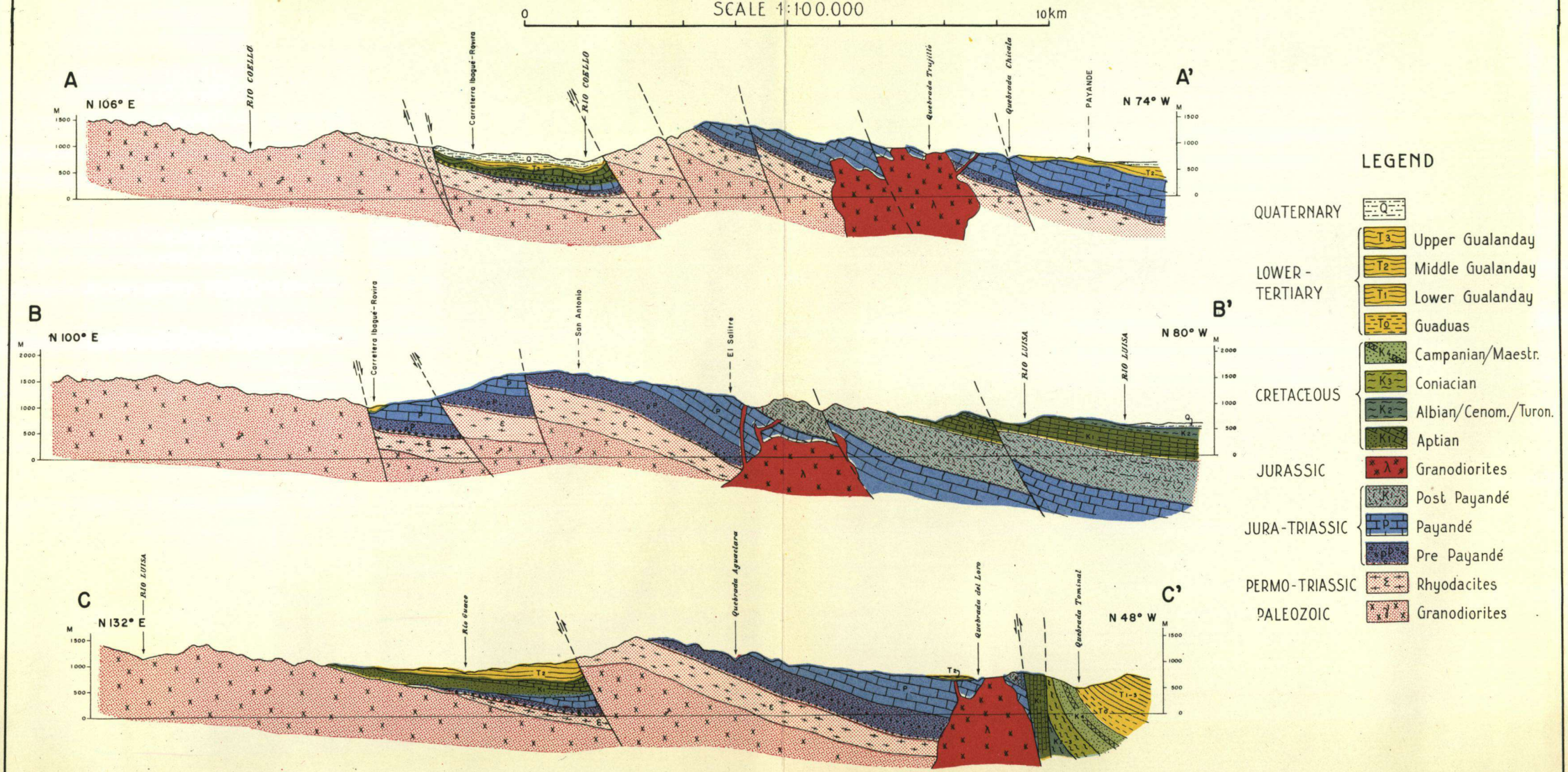
GEOLOGICAL SECTIONS THROUGH THE EASTERN BORDER OF THE CENTRAL CORDILLERA BETWEEN RIO COELLO AND RIO CUCUANA

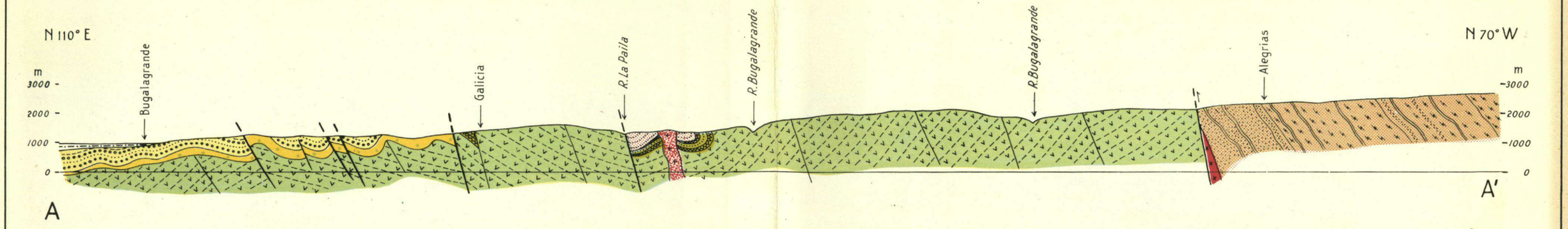
BY H.W. NELSON

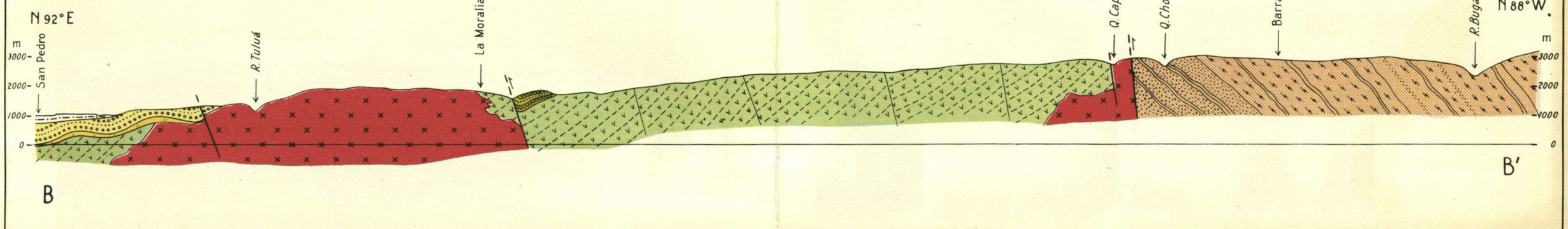
SCALE 1:100.000



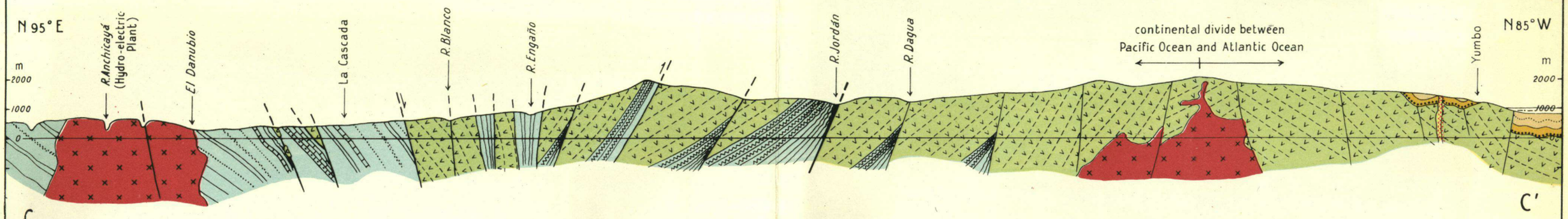
GEOLOGICAL SECTIONS OF THE WESTERN SLOPE OF THE CENTRAL CORDILLERA

By H.W. Nelson





SECTION THROUGH THE WESTERN CORDILLERA BETWEEN NEAR CALI (CAUCA VALLEY) AND THE PACIFIC COASTAL PLAIN



Scale 1:150.000

QUATERNARY			Fluvial deposits, terraces, etc.
MIOCENE		Upper La Paila	Fluviatile conglomerates; lignite seams at the top.
		Lower La Paila	Dacitic tuffs, mainly reworked.
			Rhyolite and dacite stocks.
OLIGOCENE	U	Upper Cauca	Greywackes
	M	Middle Cauca	Sandy shales, etc.; coal seams in the lower part.
EOCENE	L	Lower Cauca	Sandstones and shales with coal beds; basal conglomerate.

PALEOCENE		Nogales	Black calcareous cherts and greywackes.
			Tonalites
CRETACEOUS	U M L	Diabásico	Diabase flows, with some chert beds.
JURASSIC TRIASSIC		Dagua	Black cherts and siliceous slates in the upper part; slates, limestone beds and fine sandy rocks in the middle part; graphitic slates in the lower part.
PALEOZOIC		Cajamarca	Amphibolites with intercalations of graphite schists.
			Quartzites with intercalations of graphite schists.

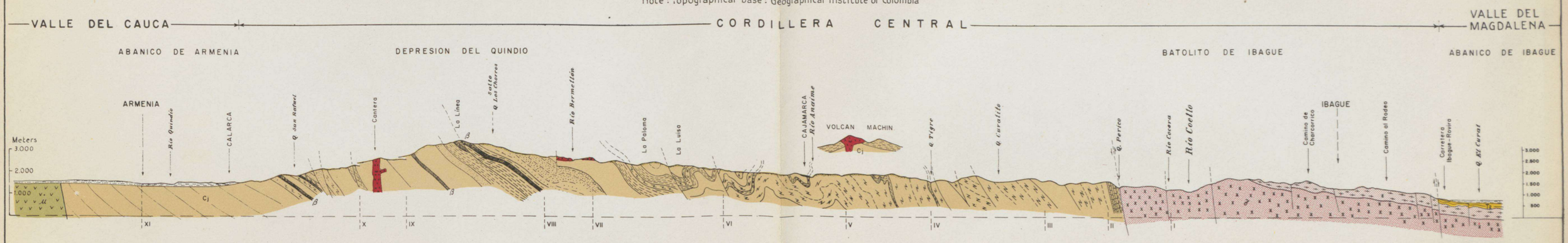
GEOLOGICAL SECTION THROUGH THE CENTRAL CORDILLERA BETWEEN IBAGUE AND ARMENIA

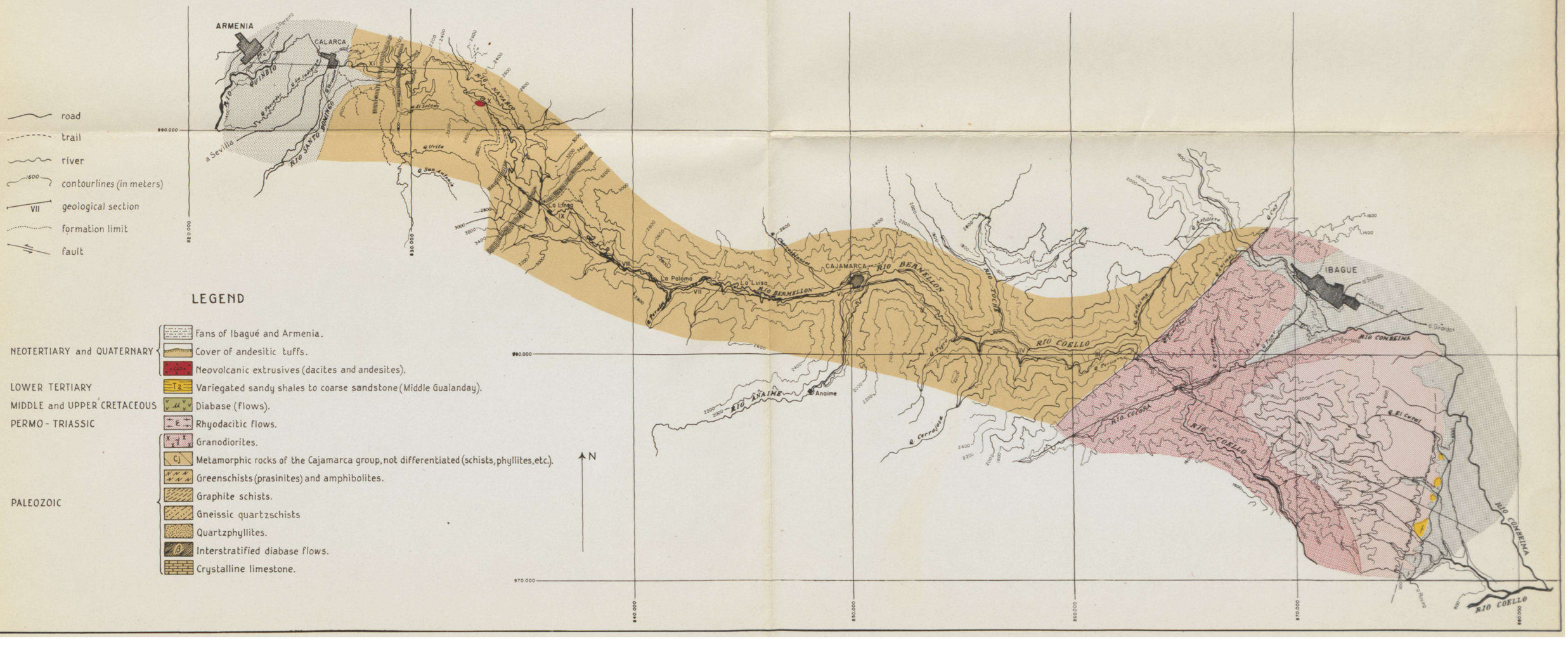
BY H.W. NELSON

0 10 km

SCALE 1:150.000

Note: Topographical base: Geographical Institute of Colombia





road
trail
river
1600 contourlines (in meters)
VII geological section
formation limit
fault

LEGEND

NEOTERTIARY and QUATERNARY	Q	Fans of Ibagué and Armenia.
		Cover of andesitic tuffs.
		Neovolcanic extrusives (dacites and andesites).
LOWER TERTIARY	T2	Variegated sandy shales to coarse sandstone (Middle Gualanday).
MIDDLE and UPPER CRETACEOUS		Diabase (flows).
PERMO - TRIASSIC		Rhyodacitic flows.
PALEOZOIC		Granodiorites.
	Cj	Metamorphic rocks of the Cajamarca group, not differentiated (schists, phyllites, etc.).
		Greenschists (prasinites) and amphibolites.
		Graphite schists.
		Gneissic quartzschists
		Quartzphyllites.
		Interstratified diabase flows.
		Crystalline limestone.

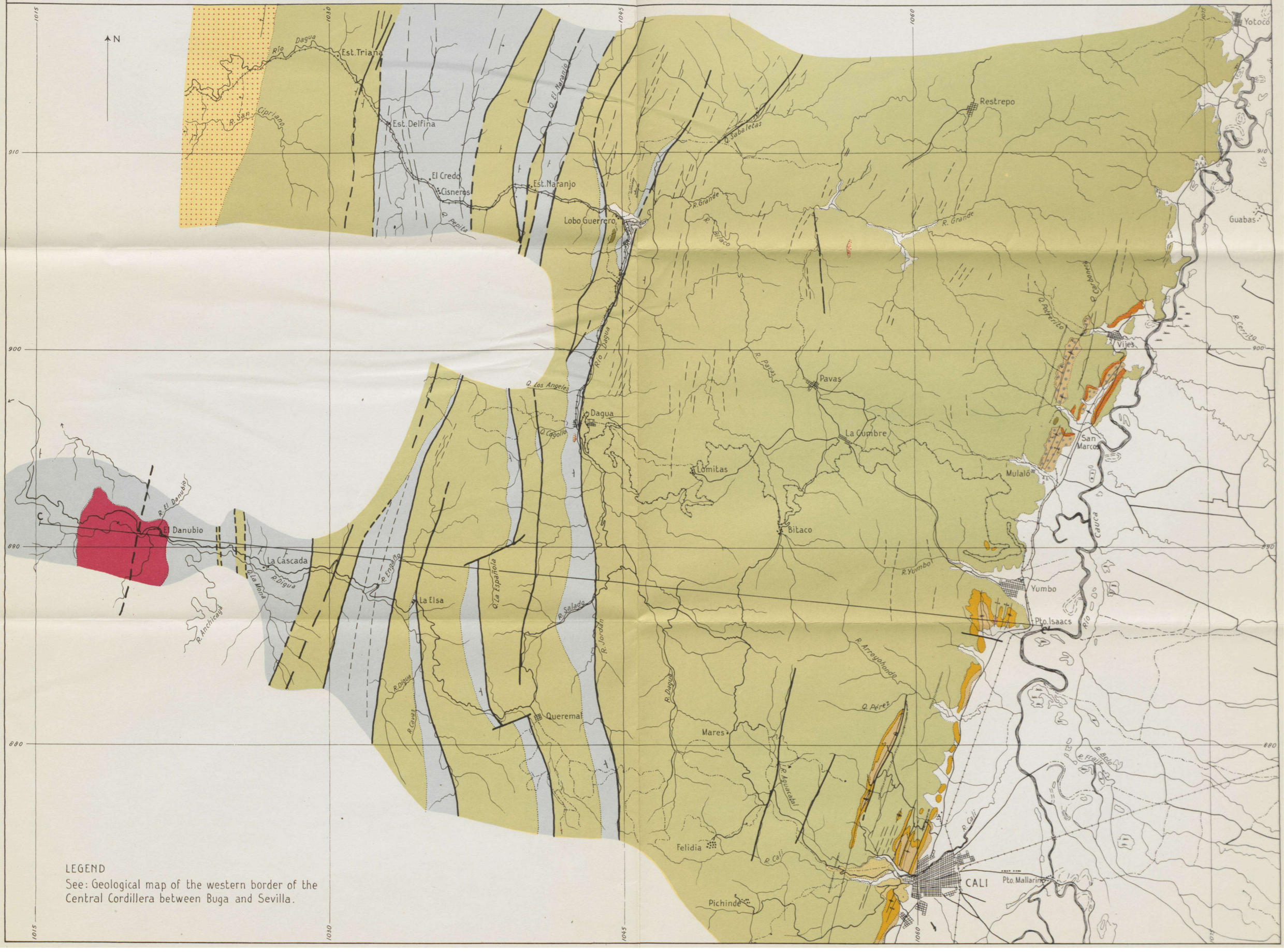
GEOLOGICAL MAP OF THE WESTERN CORDILLERA BETWEEN RIO CAUCA AND THE PACIFIC COASTAL PLAIN, NW. OF CALI

BY H.W. NELSON

0 5 10 km

SCALE 1:150.000

Note: terrestrial survey has been done in close collaboration with J. KEIZER. The results are deposited in the archieve of the Instituto Geológico Nacional at Bogotá as sheet III of the Mapa Geológico de la Hoya del Alto Río Cauca, by J. Keizer and H.W. Nelson. — Topographic base: aerial photographs.



LEGEND

See: Geological map of the western border of the Central Cordillera between Buga and Sevilla.

GEOLOGICAL MAP OF THE WESTERN BORDER OF THE CENTRAL CORDILLERA BETWEEN BUGA AND SEVILLA

BY H.W. NELSON

0 5 10 km

SCALE 1:150.000

Note: terrestrial survey has been done in close collaboration with J. KEIZER. The results are deposited in the archieve of the Instituto Geológico Nacional at Bogotá as sheet IV of the Mapa Geológico de la Hoya del Alto Río Cauca, by J. Keizer and H.W. Nelson. Topographic base: aerial photographs.

LEGEND:

HOLOCENE		Valle	Fluvial deposits of argillaceous sediments, locally sandy and tuffaceous; terraces.
PLEISTOCENE			High terraces.
		Popayán	Argillaceous sands alternating with gravel beds; reworked tuffs, locally lateritized; two autochthone tuff beds (Aguacatal fan).
PLIOCENE		Zarzal	Diatomites and tuffaceous sands.
MIOCENE	COMBIA-	Upp. La Paila	Coarse grained to argillaceous sandstones and conglomerates with fluviatile cross-bedding; lignite seams at the top.
		Naya	Dark blue mudstones and shales with plant remains (Pacific coastal plain).
		Low. La Paila	Dacitic tuffs, mainly reworked.
			Rhyolite and dacite stocks.
OLIGOCENE	Upper	Upper Cauca	Greenish greywackes. (the lower part consists of shales with coal beds; not exposed in the area of the map).
	Midd. / Low. VIJES	Middle Cauca	Ferruginous sandy shales in the upper part, shales and sandstone beds with coal seams in the lower part.
			Fossiliferous limestones overlain by ferruginous shales (marine Vijes facies).
			Rhyolite flows (underlying the Vijes limestone).
EOCENE	Upp.	Lower Cauca	Sandstones in the upper part, locally quartzitic (La Cima horizon); ferruginous shales and sandstone beds, locally with exploitable coal beds near Cali; basal conglomerate with diabase pebbles.
	Midd. / Low.		
PALEOCENE		Nogales	Black calcareous cherts with carbonaceous material; intercalations of greywackes.
			Eruptives of unknown composition or stratigraphic position.
			Tonalites; mylonitic tonalites (Barragán)
CRETACEOUS	U	Diabásico	Ultrabasic eruptives.
	M / L		Diabase flows with some intercalations of chert beds and siliceous shales.
JURASSIC TRIASSIC		Dagua	Black cherts and siliceous slates in the upper part; slates, sometimes slightly phyllitic, siliceous or fine sandy rocks and a limestone horizon in the middle part; phyllitic slates in the lower part (base not exposed).
PALEOZOIC		Cajamarca	Greenschists (prasinites) and amphibolites with intercalations of graphite schists.
			Bluish quartzites with intercalated graphite schists ("Barragan").

road, trail, railway, river, strike and dip

anticline, inverted anticline, syncline, inverted syncline, fault

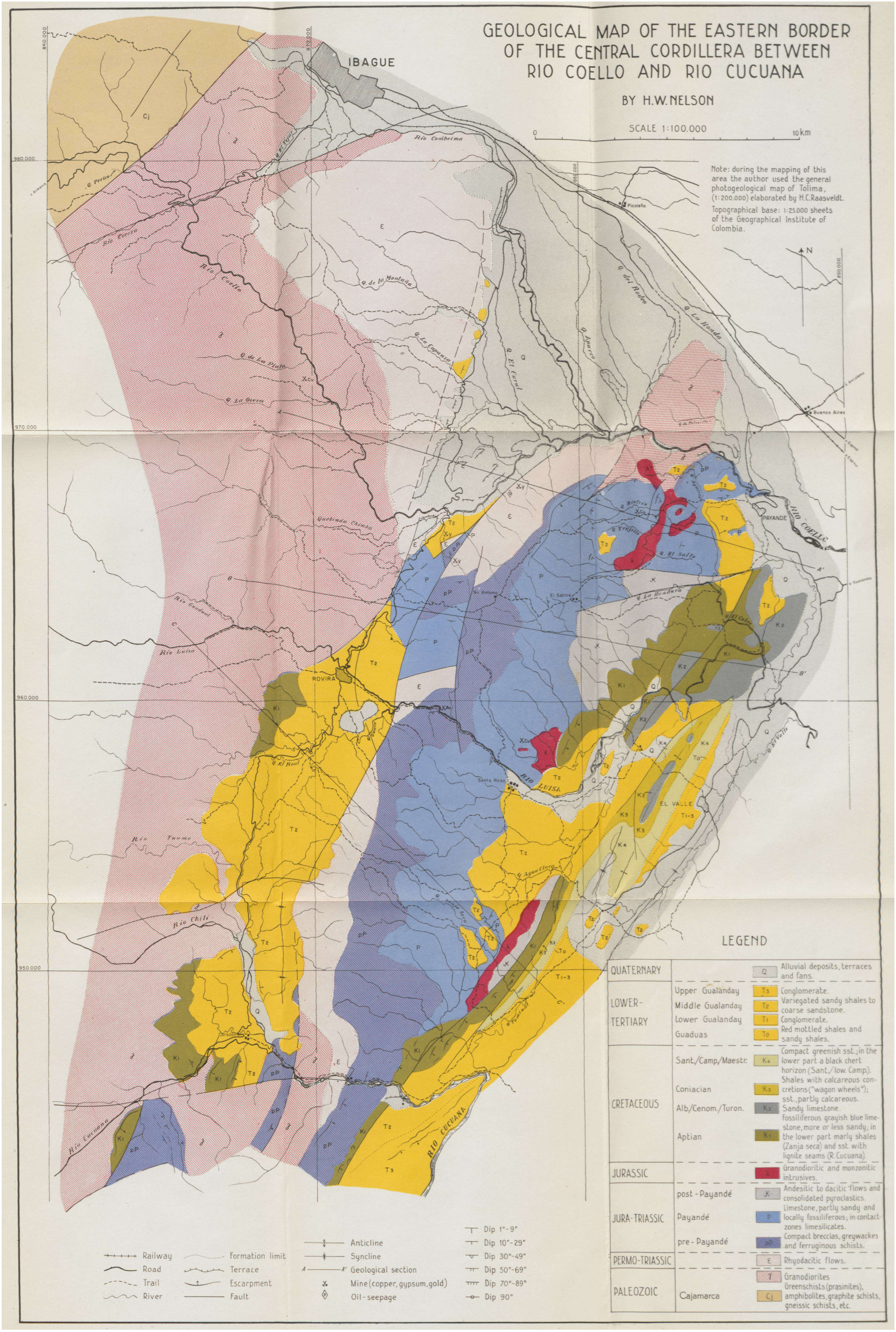
formation limit, escarpment, trend, terrace, scree

Caicedonia, Pijao, Río Lejos, Sevilla, Samaria, Murillo, Robledo, Huasanó, La Paila, Bugalagrande, San Antonio, Río Rojo, Génova, Galicia, Andalucía, Chorreras, Tochecitos, Cumbarco, Altaflor, La Begonia, La Paloma, Ceilán, Tuluá, Puerto Frazadas, Las Vegas, Alegrías, La Marina, La Moralia, Barragán, San Pedro, Depresión del Alto Italia, Buga, Yotoco, La Habana, La Magdalena, Río Tuluá, to Darién

A – A'

B – B'

N


GEOLOGICAL MAP OF THE EASTERN BORDER OF THE CENTRAL CORDILLERA BETWEEN RIO COELLO AND RIO CUCUANA
BY H.W.NELSON
SCALE 1:100.000
0
10 km
Note: during the mapping of this area the author used the general photogeological map of Tolima, (1:200.000) elaborated by H.C.Raasveldt.
Topographical base: 1:25.000 sheets of the Geographical Institute of Colombia.
N
860.000
870.000
880.000
890.000
980.000
970.000
960.000
950.000
IBAGUE
Picaleña
Buenos Aires
PAYANDE
ROVIRA
EL VALLE
Santa Rosa
El Salitre
Sn. Antonio
Corazón
Río Combeima
Río Cocora
Río Coello
RIO COELLO
Q. Perico
Q. El Tejar
Q. de la Montaña
Q. La Capanza
Q. de La Plata
Q. La Osera
Q. El Coral
Q. Aparco
Q. del Rodeo
Q. La Honda
Q. Riofrío
Q. Trujillo
Q. El Salto
Q. La Hondura
Q. El Cobre
Q. El Valle
Q. El Real
Q. Agua Clara
Q. Zanja Seca
Q. Tominal
Quebrada Chimba
Río Gualanay
Río Luisa
RIO LUISA
Río Tuamo
Río Chili
Río Cucuana
RIO CUCUANA
a Armenia
a Ambalema
a Espinal
a Gualanday
LEGEND
QUATERNARY
Q Alluvial deposits, terraces and fans.
LOWER-TERTIARY
Upper Gualanday T3 Conglomerate.
Middle Gualanday T2 Variegated sandy shales to coarse sandstone.
Lower Gualanday T1 Conglomerate.
Guaduas To Red mottled shales and sandy shales.
CRETACEOUS
Sant./Camp./Maestr. K4 Compact greenish sst.; in the lower part a black chert horizon (Sant./low. Camp.).
Coniacian K3 Shales with calcareous concretions ("wagon wheels"); sst., partly calcareous.
Alb./Cenom./Turon. K2 Sandy limestone.
Aptian K1 Fossiliferous grayish blue limestone, more or less sandy; in the lower part marly shales (Zanja seca) and sst. with lignite seams (R. Cucuana).
JURASSIC
λ Granodioritic and monzonitic intrusives.
JURA-TRIASSIC
post-Payandé Andesitic to dacitic flows and consolidated pyroclastics.
Payandé P Limestone, partly sandy and locally fossiliferous; in contact-zones limesilicates.
pre-Payandé pP Compact breccias, greywackes and ferruginous schists.
PERMO-TRIASSIC
ε Rhyodacitic flows.
PALEOZOIC
Granodiorites
Cajamarca Cj Greenschists (prasinites), amphibolites, graphite schists, gneissic schists, etc.
Railway
Road
Trail
River
Formation limit
Terrace
Escarpment
Fault
Anticline
Syncline
A A' Geological section
Mine (copper, gypsum, gold)
Oil-seepage
Dip 1°-9°
Dip 10°-29°
Dip 30°-49°
Dip 50°-69°
Dip 70°-89°
Dip 90°