PERÚ Ministerio de Energía y Minas

GEOLOGICAL MAP OF PERU

ENERGY AND MINING SECTOR
INGEMMET
GEOLOGICAL, MINING AND METALLURGICAL INSTITUTE

The Geological Map represents the types of rock, soils and geological structures of the national territory, which includes the seabed.

INGEMMET makes available this version of the Geological Map of Peru at a scale of 1:1,000,000, and updates the second version published in 1999. This version was also elaborated based on the 501 quadrangles of the National Geological Chart. In addition, the geological mapping of the checked and updated quadrangles between 2000 and 2003, which belong to the second edition of the National Geological Chart at a scale of 1: 100,000 and 1: 50,000, was integrated.

The topographic base was provided by the National Geographic Institute (IGN) and the departmental limits by the National Institute of Statistics and Information (INEI).

The map coordinate system of the geological is GCS (Geographic Coordinate System), WGS84 (Word Geodetic System).

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GEOLOGICAL INFORMATION IN DIGITAL VERSION

GEOCATMIN INGEMMET
https://geocatmin.ingemmet.gob.pe

GEOLOGICAL MAP

Scale: 1:50 000

A. **Shapefile**: This section contains geological information for the period 2000-2018. The maps are in a shapefile format and include a geological report or bulletin

B. **Corrección**: These are maps in editing processes, preparation of the geological database and quality control.

C. **Geodatabase**: It contains the maps produced from 2019. They were elaborated in Geodatabase format, and include a geological bulletin.

INTEGRATED DIGITAL GEOLOGICAL MAP

AT 1:50,000 SCALE

It contains the GIS database of geological maps in digital format integrated at a 1:50,000 scale, which is divided into 3 WGS UTM zones, 17S, 18S and 19S. The maps produced from 2000 to 2019 were migrated from the shapefile to the geodatabase format, for the efficient storage and administration of a large amount of data at the level of the national territory.

GEOLOGICAL MAP

AT 1:00,000 SCALE

A. **100k boletines:** It contains 501 maps at 1: 100,000 scale, which covers the entire territory. They were elaborated during 1960 - 2004. Each geological map or group of maps includes a geological study, in which the geomorphology, stratigraphy, tectonics, economic geology, historical geology of the region, illustrated with full-color field photographs, stratigraphic sections, laboratory analysis results and reference bibliography are described for giving the product a scientific and technical strength.

B. **100k empalmados:** It contains spliced geological maps at a scale of 1: 100,000, produced between 2014 and 2016. They can be downloaded by quadrangles.

INTEGRATED DIGITAL GEOLOGICAL MAP

AT 1: 100,000 SCALE

It contains geological maps at a scale of 1:100,000, sections and digital geological profiles in shapefile format. These maps are integrated versions and were produced between 2014 and 2016. The objective of the integration was to digitally join the polygons and sheets in order to generate basic attribute tables for each lithostratigraphic unit, as well as the structural characterization (faults, folds, courses and dips) and geological sections, based on the use of international national standards for digital geological mapping.

GEOLOGICAL MAP

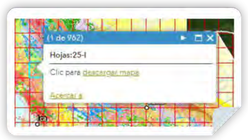
AT 1:100 000 SCALE

The National Geological Chart at scale of 1:1,000,000 is the result of the compilation and critical analysis of geological information at 1:100,000 scale, based on the review and standardization of the 501 quadrangles that make up the National Geological Chart. They were elaborated between 1960 and 1999, and also integrated the new information generated in the updating work carried out between 2000 and 2003 at 1:100,000 and 1:50,000 scales.

DOWNLOAD GEOLOGICAL MAPS

A. Activate the layer of interest

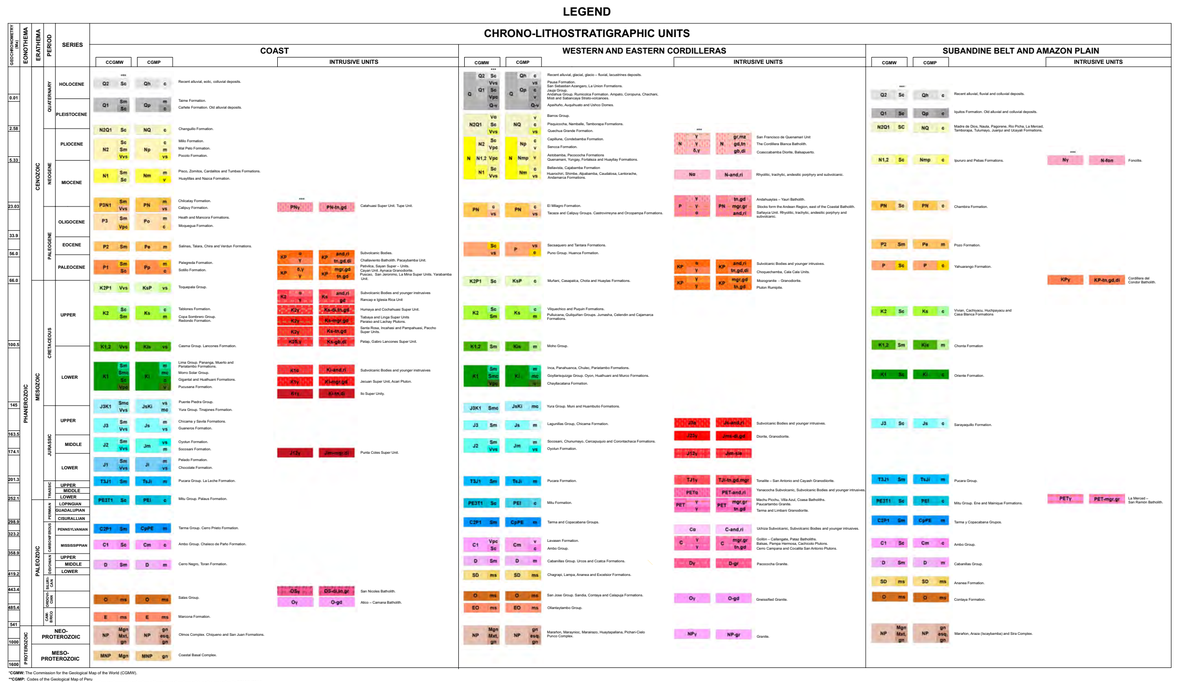
B. Open the Quadrangle and click on "descargar mapa"



C. File downloaded

LEGEND

CHRONO-LITHOSTRATIGRAPHIC UNITS



CHRONOSTRATIGRAPHIC CHART, MODIFIED FROM CGMW (2014)

EON	ERATHEMA	PERIOD	SERIES	STANDARDIZED CODE	NUMERATION
PHANEROZOIC	CENOZOIC	QUATERNARY	HOLOCENE	Q	2
			PLEISTOCENE		1
		NEOGENE	PLIOCENE	N	2
			MIOCENE		1
		PALEOGENE	OLIGOCENE	P	3
			EOCENE		2
			PALEOCENE		1
	MOSOZOIC	CRETACEOUS	UPPER	K	2
			LOWER		1
		JURASSIC	UPPER	J	3
			MIDDLE		2
			LOWER		1
		TRIASSIC	UPPER	T	3
			MIDDLE		2
			LOWER		1
	PALEOZOIC	PERMIAN	LOPINGIAN	PE	3
			GUADALUPIAN		2
			CISURALLIAN		1
		CARBONIFEROUS	PENNSYLVANIAN	C	2
			MISSISSIPPIAN		1
		DEVONIAN	UPPER	D	3
			MIDDLE		2
			LOWER		1
		SILURIAN	PRIDOLIAN	S	4
			LUDWLOLIAN		3
			WENLOCKIAN		2
			LLANDOVERIAN		1
		ORDOVICIAN	UPPER	O	3
			MIDDLE		2
			LOWER		1
		CAMBRIAN	FURONGIAN	E	4
			SERIES 3		3
			SERIES 2		2
			TERRENEUVIAN		1
	Neoproterozoic			NP	
	Mesoproterozoic			MP	
	Paeloproterozoic			PP	

A. Types of Rock

Igneous (Greek letters α, γ, δ)
Vulcan – sedimentary (V)
Sedimentary (S)
Metamorphic (M)

B. Subclasses

The number to the right of the Greek letter indicates the relative age (γ1,γ2) The number 1 indicates the oldest age

Letter	Nature
δ	Felsic volcanism
γ	Felsic Plutonism
δ	Mafic plutonism
vs	Sedimentary vulcano
pc	Pyroclastic

C. Sedimentary rocks

c	Continental
m	Marine

D. General context

ms	metasedimentary

E. Numbering

The sequence of the relative lithological age of the same fact is assigned a number: 1 for the oldest and n for the youngest.

DEVONIAN	UPPER	D	3
	MIDDLE		2
	LOWER		1

*CGMW: The Commission for the Geological Map of the World (CGMW).
**CGMP: Codes of the Geological Map of Peru.
***: Abbreviation that indicates the type of sedimentary environment and nature of igneous and metamorphic rocks, according to CGMW (2014).
INFORMATION TAKEN FROM THE BASE OF GEOLOGICAL MAPS AT SCALE 1: 1 000 000 VERSIONS 1975 – 1999

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