



Legend

Unconsolidated Deposits		Sedimentary Rocks		Volcanic Rocks		Plutonic Rocks		Metamorphic Rocks	
Symbol	Code	Symbol	Code	Symbol	Code	Symbol	Code	Symbol	Code
St Alluvium	st	c Continental	c	U Ultrabasic	U	U Ultrabasic	U	U Very low grade	U
Al Alluvium	al	t Transitional	t	m Mafic	m	m Mafic	m	mg Medium grade	mg
W Wetland	w	cm Continental-Transitional	cm	U Ultrabasic	U	U Ultrabasic	U	mg Medium grade	mg
M Marine	m	cm Continental-Transitional-Marine	cm	U Ultrabasic	U	U Ultrabasic	U	mg Medium grade	mg
Pa Paludal	pa	cm Continental-Transitional-Marine	cm	U Ultrabasic	U	U Ultrabasic	U	mg Medium grade	mg
Cl Clastic	cl	cm Continental-Transitional-Marine	cm	U Ultrabasic	U	U Ultrabasic	U	mg Medium grade	mg

Geological Conventions

- Fault
- - - - - Inferred fault
- Strike-slip fault, right-lateral offset
- Strike-slip fault, left-lateral offset
- Strike-slip fault, with lateral offset
- Strike-slip fault, with lateral offset
- Thrust fault or reverse fault
- Inferred thrust fault or reverse fault
- Concealed thrust fault or reverse fault
- Normal fault
- Inferred normal fault
- Concealed normal fault
- Lithostratigraphic unit
- Anticline
- Plunging anticline
- Doubly plunging anticline
- Overturned anticline
- Syncline
- Concealed syncline
- Plunging syncline
- Doubly plunging syncline
- Overturned syncline
- Polygenetic Volcano
- Monogenetic Volcano
- Multi-volcano
- Ultra-high temperature rock
- High-pressure rock
- Well



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GEOLOGICAL MAP OF COLOMBIA 2023

Compiled by:
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and Eliana MARÍN RINCÓN**

Scale 1:1 500 000

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Quaternary volcanoes of Colombia

1. Páez Volcanic Complex	21. Plan de Azúar Volcano
2. San Diego West Volcano	22. Yelkovaque West Volcano
3. Rueda del Volcano	23. Laguna del Rey Volcano
4. El Escudido Volcano	24. Moscote Monogenetic V. F.
5. Guadalupe Volcano	25. Sotará Volcanic Complex
6. Romeral Volcano	26. Sucasibá Volcano
7. Cerro Bravo Volcano	27. San Agustín-Llanos Monogenetic V. F.
8. Nevado del Ruiz Volcanic Complex	28. Cuitago Volcano
9. Cerro Mono Negro Volcanic Complex	29. Aconcabo Monogenetic V. F.
10. Nevado de Santa Isabel Volcanic Complex	30. Páez Volcano
11. Paramito de Santa Rosa Volcano	31. Las Ánimas Volcano
12. Cerro Esquivel Volcanic Complex	32. Cofre Jairo Volcanic Complex
13. Paramito del Quindío Volcano	33. Micoarica Volcano
14. Nevado del Tatama Volcano	34. Galeras Volcanic Complex
15. Cerro Maches Volcano	35. Sibundoy Monogenetic V. F.
16. Atacá Volcano	36. Asofú Volcano
17. Marimar Monogenetic V. F.	37. Curbará Volcanic Complex
18. Nevado del Huila Volcanic Complex	38. Cerro Negro Volcano
19. Puracá Volcano	39. Chiles Volcano
20. Los Cocoruzos Volcanic Chain	V. F. Volcanic Chain

Recommended citation

Gómez, J., Montes, N.E., & Montes, E. (compilers). 2023. Geological Map of Colombia 2023. Scale 1:1 500 000. Servicio Geológico Colombiano, Bogotá.

Cartographical sources of the base map

Generalized at a scale of 1:1 500 000 from the vector database at a scale of 1:500 000 (IGAC, 2016) by Eliana MARÍN RINCÓN and Nohora Emma MONTES RAMÍREZ.

Cartographical parameters

Conformal Transverse Mercator Projection
Datum: WGS 84
Bogotá Zone Origin
Origin of geographic coordinates: 74° 00' 30.000" W 4° 35' 46.101" N
False origin (plane coordinates, meters): X: 1 500 000 Y: 1 500 000

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Abstract

The Grupo Mapa Geológico de Colombia is attached to the Dirección de Geociencias Básicas del Servicio Geológico Colombiano (SGC). Its aim is to perform periodic and updated versions of the Geological Map of Colombia (GMC). The first three editions of the map were published at a scale of 1:1 000 000 in 2001, 2015, and 2020. Unlike the previous ones, the 2023 edition is released at a scale of 1:1 500 000.

The fourth edition of the GMC was updated with the geotopographic maps at a scale of 1:100 000, 1:50 000 and 1:25 000 published by the SGC from 2015 to 2022, data from papers published in peer-review journals from December 2019 until March 2022, and the changes of the Geology of Colombia Multiscale Book.

The units incorporated in the map are chronostratigraphic and were grouped according to age and lithology. For age, the 'International Chronostratigraphic Chart 2022' was used as a reference and for the lithological division, rocks and deposits were differentiated. The rocks incorporated in the map are sedimentary and igneous rocks, metamorphic rocks, and volcanic rocks. Sedimentary rocks are grouped into a separate type. The deposits were subdivided into: alluvial, volcanoclastic, glacial, lacustrine, alluvial fan, pyroclastic, dune and dune, glacial, igneous rocks were classified by their igneous formation: ultrabasic, mafic, intermediate, and felsic, and according to their composition into ultrabasic, mafic, intermediate, and felsic. Metamorphic rocks were evaluated by their grade of metamorphism into very low, low, medium, and high grade, and, by their economic importance, the rocks were differentiated. The rocks were classified as continental, transitional, continental-transitional, continental-transitional-marine, transitional-marine, and marine, while the latter were classified as continental, continental-transitional, and marine.

Since 2015, with each edition of the GMC and the Geological Atlas of Colombia (GAC) the geochronological database of Colombia has been updated. For the geochronological database 2023, around 2000 new radiometric ages were added. The database allowed updating the ages of the map chronostratigraphic units.

The GMC 2023 was carried out at a scale of 1:1 500 000 from the generalization in ArcGIS 10.8 of the GAC 2023 at a scale of 1:500 000. The chronostratigraphic units, faults, and beds of the map were adapted with the shaded relief image of Colombia with a spatial resolution of 30 m created for this purpose.

Unlike the previous editions, the GMC 2023 is synthesized in a sheet that contains both the map and the legend for ease of use by the users. The main element in the geological map at a scale of 1:1 500 000 and includes the details of Colombia that, due to the distance that separates them from the mainland and their small size, are displayed as insets at a scale of 1:500 000.

The GMC 2023 includes the layers of chronostratigraphic units, faults, folds, volcanoes, mud volcanoes, high-pressure rocks, ultrahigh-temperature rocks, and tectonic elements. The users can consult the map in different formats: GIS (File Geodatabase, MGD, MxL source), PDF, Google Earth, 3D, and TIFF. Additionally, web services and ArcGIS Online are implemented.

References

Cohen, K.M., Finney, S.C., Gibbard, P.L. & Fan, J.X. 2013 (updated 2022/02). The ICS International Chronostratigraphic Chart. Episodes, 36(3): 199-204. <https://doi.org/10.1888/0973136302>

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IGAC. 2016. Base de datos vectorial básica. Colombia. Scale 1:500 000. Consulted on March 5, 2021, from <https://geoportal.sgc.gov.co/conteudo/basica-ebasica-cartografia-y-geografia>

