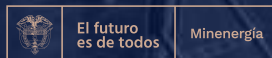
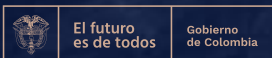




COPPER ROUTE

COLOMBIA'S
MINING POTENTIAL





**COPPER
ROUTE**

COLOMBIA'S
MINING POTENTIAL

Minister of Mines and Energy

Diego Mesa Puyo

Vice Minister of Mines and Energy

Sandra Rocío Sandoval Valderrama

**Vice President of Promotion and
Development**

Germán Barco López

**Vice President of Procurement and
Mining Permits (in charge)**

Ana Maria Gonzalez Borrero

**Administrative and Financial Vice
President**

Felipe Andrés Plazas Gómez

**Vice President of Monitoring, Control
and Mining Safety**

Javier Octavio García Granados

Promotion Manager

Catalina Rueda Callejas

**Communications and Citizen
Participation Advisor**

Marisol Rojas Izquierdo

**Colombian Geological Service General
Director**

Oscar Paredes Zapata

Mineral Resources Technical Director

Gloria Prieto Rincon



El futuro
es de todos

Gobierno
de Colombia



El futuro
es de todos

Minenergía

**NATIONAL MINING
AGENCY**

Strategic Mining Areas



Mining in Colombia is a strategic sector for the economic development of the country. In this regard, the role of the National Mining Agency – ANM has been paramount both national and across Latin America.

Since its inception, ANM has been in charge of comprehensively managing the mineral resources owned by the State to promote their optimal use in a responsible manner with the environment and communities, in line with an institutional framework that was established for the development of exploration and mining activities.

With the improvement of these and other actions,

Colombia has been characterized by offering national and foreign investors a stable legal environment and competitive economic terms. Additionally, ANM has been a benchmark for how mining in Colombia can be carried out in an orderly manner and in compliance with legal, environmental, social and responsibility standards to ensure the success of projects.

This means developing impact strategies in order to ensure that mining is carried out in a responsible and safe manner, all the while generating opportunities and wealth for the country and investors.

The mining sector currently represents 8.8% of the country's total Foreign Direct Investment – FDI. Mining contributed 1.38% to the GDP in Q32020, with coal in the first place in the mining GDP (56%) followed by gold and metals with 28%.

The mining sector generates 350,000 direct jobs and more than one million indirect jobs. In addition, it contributes about 20% of the royalties allocated to social investment.

The National Mining Agency works on the development of different technological systems we have created the new Mining Cadaster to strengthen the protection of the environment, legality and transparency.

This is the first time Colombia has an agile, efficient and transparent mining cadaster to delimit and protect territories for the sustainable development of mining activities in the country.

AnnA Minería will streamline procedures for the exploration and exploitation of resources in areas protected by the environmental authorities, from the moment of the request.

ANM carries out important work in favor of continuing to build an efficient and effective agency to enable the development of projects in a sustainable way thereby demystifying the mining activity in Colombia.

A dissemination strategy has been furthered in the regions, not only with environmental processes but also with coordination and concurrency activities. This is the manner in which we strive to bring companies to the regions, through adequate social work for the development of exploration. Our goal is to generate confidence amongst investors interested in exploring in Colombia, which also has clear tax issues and transparent processes.

These are some of the reasons that have strengthened both our institutional management and our country. Therefore, I invite you to participate in the different processes that ANM will open during 2021 – a year that is both full of challenges and excellent mining opportunities.

Juan Miguel Duran Prieto
National Mining Agency President

Reserve, declare, call for offers



In pursuance of the functions granted to the National Mining Agency - ANM (from its original Spanish language initials – Agencia Nacional de Minería) for the comprehensive administration of mineral resources owned by the State, as well as for the promotion and optimal and sustainable use of mining resources, ANM has been coordinating with the Ministry of Mines and Energy and the Colombian Geological Service – SGC (from its original Spanish language initials – Servicio Geológico Colombiano) to determine the country’s mining potential. A new contracting model is currently being design which seeks to improve the economic benefits for the nation and the regions, as compensation for the exploration and mining exploitation in the territory.

General Processes



Key stages / Objective Selection Procedure

Qualification of Participants

This stage of the process includes to the presentation of the minimum requirements that participants must meet to qualify, accrediting requirements of legal, financial, technical, environmental capacity and corporate social responsibility.

Selection Process

This stage includes the submittal of offers and counteroffers, as defined in the Terms of Reference (ToRs) for each mineral for the different Strategic Mining Areas (SMAs)

Signing the Agreement

This stage includes the signing of the Minutes of the Agreement by the winning offeror. The Minutes of the Agreement include the terms and conditions of the special contract for exploration and exploitation of minerals of the SMA awarded.

Stages in the SMA delimitation and declaration process

Reserve

Reserve Zones

- The Colombian Geological Service – SGC (from its original Spanish language initials – Servicio Geológico Colombiano) identifies areas with potential for strategic minerals
- ANM issues technical report

Declaration

Characterization

- Comprehensive diagnosis of the area of interest
- Added value by ANM for the community and for investors

Coordination and concurrence

- For the declaration of the zones above as Strategic Mining Areas (SMAs)

Prior consultation

- Prior free and informed consent by ethnic communities, should any be found in the territory

SMA Delimitation and declaration

- ANM issues the administrative act with delimitation and declaration of Strategic Mining Areas (SMAs)

Objective Selection Procedure

Through the objective selection process, the ANM seeks to award the Strategic Mining Areas by selecting the most favorable offer to award special contracts for the exploration and exploitation of strategic minerals. The interested party that has met all the requirements during the qualification stage may participate in the objective selection process.

The process will have a maximum duration of **6 months** from the date whereupon an enabled offer is submitted.

Stages

- 1** Qualification of interested parties
- 2** Submittal of the offer
- 3** Evaluation of the offer
- 4** Offer evaluation report publication
- 5** Term for counteroffers
- 6** Evaluation of counteroffers submitted
- 7** Term for the submittal of counteroffers with opportunities for improvement
- 8** Evaluation of improved offers
- 9** Definitive evaluation report
- 10** Contract award

Strategic Mining Areas



The Strategic Mining Reserve Areas (SMAs) are free areas with high potential for strategic minerals, identified by the Colombian Geological Service in the reports resulting from the prospecting carried out in the area of interest. Once the SMAs have been delimited by the Mining Authority, it is not possible to receive new proposals or sign mining concession contracts in these areas, as they must be awarded under a special exploration and exploitation contract, through objective selection processes.

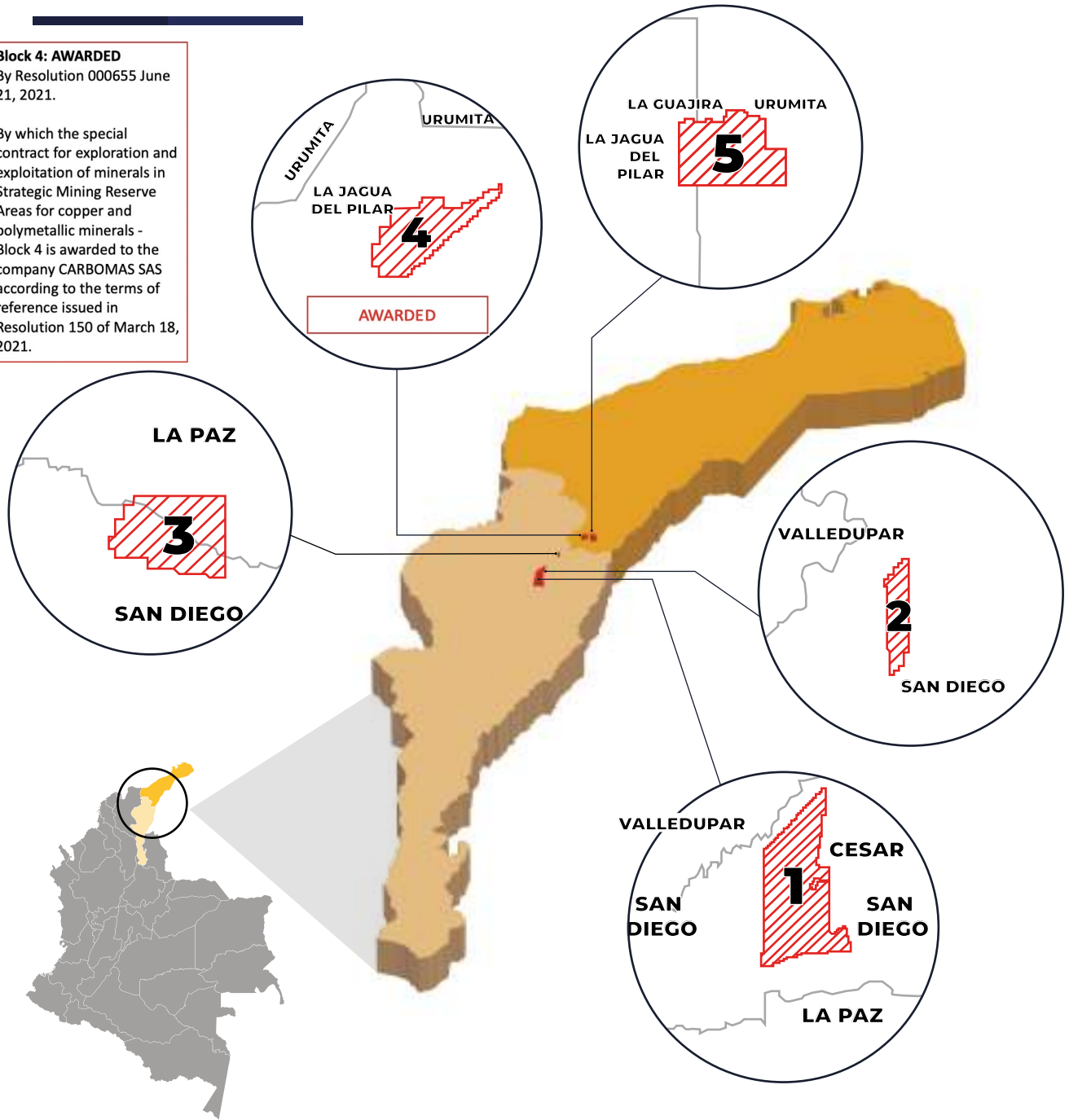
On this occasion, four blocks have been defined as they meet the basic requirements of being free and having high potential to present strategic mineral

deposits. Three of these deposits are located in the area called Perijá Sur, and one in Perijá Norte. Activities required by the Constitutional Court have been carried out in the areas defined for these blocks to obtain the prior, free and informed consent of the ethnic communities that may have a presence in the area (such as the processes of consultation with the corresponding territorial authorities) declared as strategic mining areas through Resolutions No. 009 and 008 issued on February the 16th, 2021, to be included in the objective selection process.

General location of SMAs

Block 4: AWARDED
By Resolution 000655 June 21, 2021.

By which the special contract for exploration and exploitation of minerals in Strategic Mining Reserve Areas for copper and polymetallic minerals - Block 4 is awarded to the company CARBOMAS SAS according to the terms of reference issued in Resolution 150 of March 18, 2021.



La Guajira
 Cesar
 SMA Block
 Municipality boundaries

Blocks declared At Perijá South



Photo taken from: <https://www.elcampesino.co/>

Three blocks have been defined in this area as SMAs as per Resolution of the Vice-presidency for Promotion - VPPF No 008 issued on February the 16th, 2021, wherein the following stands out:

For the acquisition of geoscientific information necessary to evaluate the potential of resources in the areas, the Directorate of Mineral Resources of the Colombian Geological Service carries out prospecting campaigns that include geological reconnaissance, geochemical sampling (active sediments, rocks, bedrock concentrates), acquisition of airborne and terrestrial geophysical information (magnetometry and gamma spectrometry), and metallogenic characterization of mineralizations.

The prospecting process to evaluate the mineral potential of copper and other metals in the area by the SGC was conducted between the years 2013 to 2019. These mineral prospecting campaigns allowed to obtain enough information on the aforementioned aspects, with which it was possible to identify a mineral potential for copper in the sectors studied.

Definition of **high potential**

For the definition of high potential, the report presents the analysis carried out taking into account the following variables with their respective parameters for each of the districts evaluated:

Geophysics

- Presence of lineaments and magnetic anomalies.
- Geometric parameters of the magnetic bodies interpreted (dimensions, depth).
- Presence of superficial changes in the composition of the soil with gamma spectrometry (e.g. high relative values of k).

Geology

- Presence of adequate lithologies to host one or more types of mineralizations.
- Structural geology favorable to the location of one or more styles of mineralization.
- Field evidence of the presence of mineral occurrences.

Geochemistry

- Elemental associations with high absolute values that suggest the possible presence of mineralizing events both on the surface and in depth.

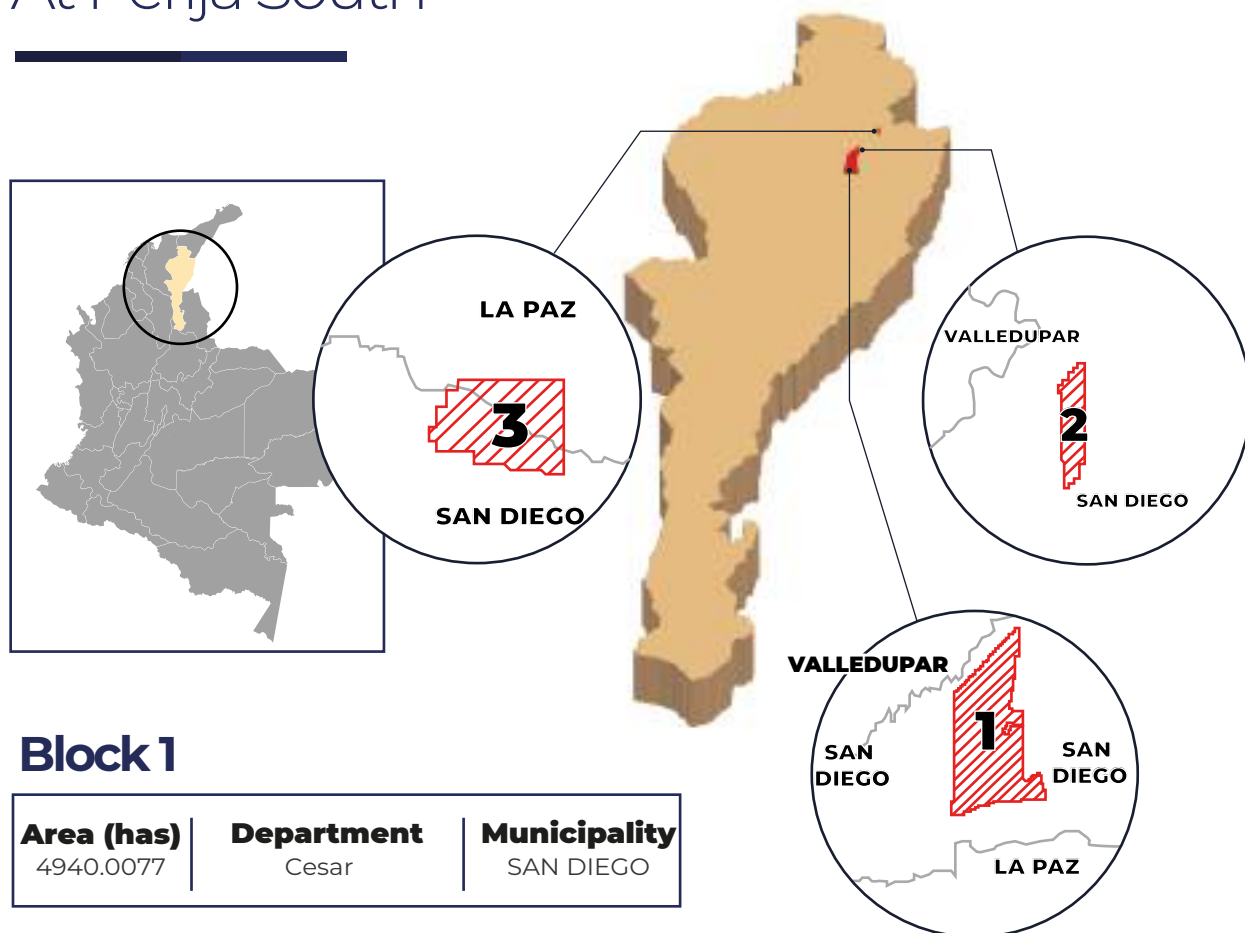
Metallogeny

- Proximity to metallogenic districts (mineral districts) and presence of mineral deposits and occurrences.

Based on the information on areas with high potential to host strategic minerals provided by SGC, ANM defined the alignment of blocks 1, 2 and 3, in the free area resulting from the geographic analysis with respect to the areas that can be excluded from mining permits, requests, etc., and made the corresponding adjustment to the mining grid provided in the AnnA Mining geographic viewer.

Blocks declared

At Perijá South



Block 1

Area (has)	Department	Municipality
4940.0077	Cesar	SAN DIEGO

Block 2

Area (has)	Department	Municipality
101.8123	Cesar	SAN DIEGO

Block 3

Area (has)	Department	Municipality
155.0976	Cesar	SAN DIEGO LA PAZ

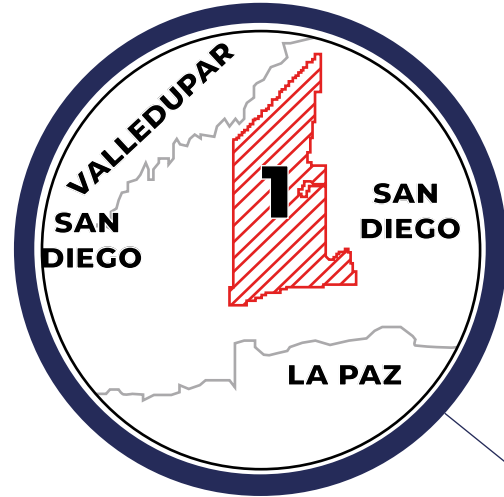
 SMA Block

 Municipality boundaries

Block 1

At Perijá South

Block No 1: a free area is defined with an extension of 4940.0077 Has. It is located in an area defined by the SGC as having high potential for copper minerals and located in the jurisdiction of the municipality of San Diego in the Department of Cesar.

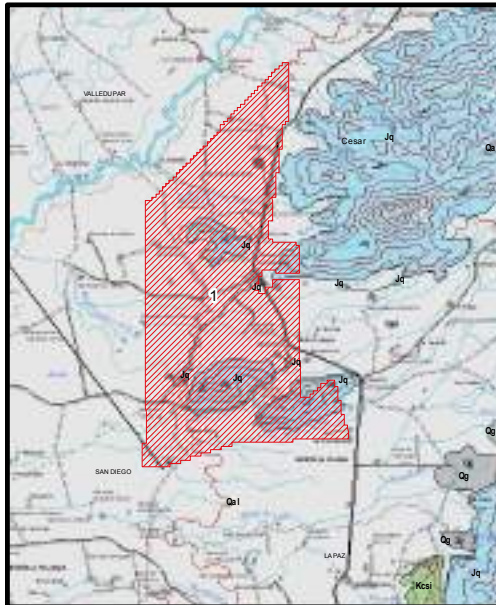


Regional Geology Block 1

Conventions

Geology 1: 100,000 SGC

- EOms Cambrian and Ordovicic Metasedimentites
- Jca Ignimbrite from la Caja de Ahorros
- Jg Golero Rhyolite
- Jgp Porphyritic Granite
- Jlc Ignimbrite from los Clavos
- Jpbp-cm Facies - Quartzomonzonite
- Jq La Quinta Formation
- Jt Riodacita from Los Tábanos
- Kcsi Undifferentiated Cretaceous limestones and shales
- Krn Rio Negro Formation
- P Thermal Sediment
- PZc Cachiri Group
- Qal Recent Alluvial Deposits
- Qg Fans and Gravels
- Qt Alluvial Terraces
- TJg Guatapuri Formation
- TJs Triassic Spillite



Block 1

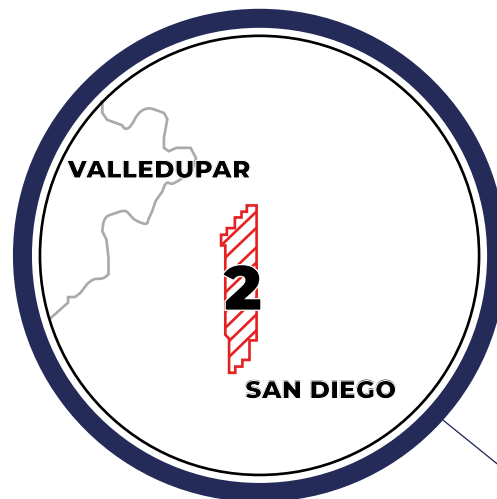
Area (has) 4940.0077	Department Cesar	Municipality SAN DIEGO
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SMA Block

Block 2

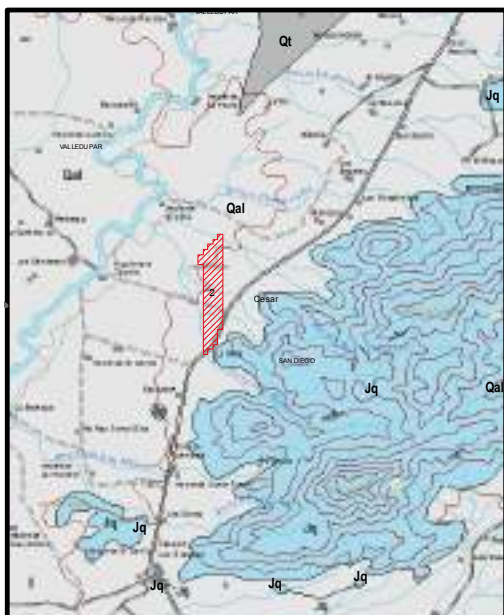
At Perijá South

Block No 2: a free area is defined with an extension of 101.8123. It is located in an area defined by the SGC as having high potential for copper minerals in the jurisdiction of the municipality of San Diego in the Department of Cesar. It borders on its western side with Block No.1



Regional Geology

Block 2



Conventions

Geology 1: 100,000 SGC

- EOms Cambrian and Ordovician Metasedimentites
- Jca Ignimbrite from la Caja de Ahorros
- Jg Golero Rhyolite
- Jgp Porphyritic Granite
- Jlc Ignimbrite from los Clavos
- Jpbp-cm Facies - Quartzomonzonite
- Jq La Quinta Formation
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- PZc Cachiri Group
- Qal Recent Alluvial Deposits
- Qg Fans and Gravels
- Qt Alluvial Terraces
- Tjg Guatapuri Formation
- TJs Triassic Spillite

Block 2

Area (has)	Department	Municipality
101.8123	Cesar	SAN DIEGO

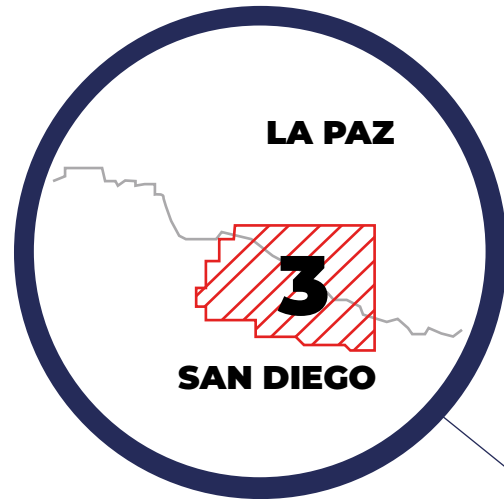
SMA Block



Block 3

At Perijá South

Block No 3: A free area has been defined with an extension of 155.0976 Has. It is located in an area defined by the SGC as having high potential for copper minerals and in the jurisdiction of the municipalities of San Diego and La Paz, in the Department of Cesar.



Regional Geology Block 3

Conventions

Geology 1: 100,000 SGC

- EOMS Cambrian and Ordovician Metasedimentites
- Jca Ignimbrite from la Caja de Ahorros
- Jg Golero Rhyolite
- Jgp Porphyritic Granite
- Jlc Ignimbrite from los Clavos
- Jpbp-cm Facies - Quartzomonzonite
- Jq La Quinta Formation
- Jt Rioldacita from Los Tábanos
- Kcsi Undifferentiated Cretaceous limestones and shales
- Krn Rio Negro Formation
- P Thermal Sediment
- PZc Cachiri Group
- Qal Recent Alluvial Deposits
- Qg Fans and Gravels
- Qt Alluvial Terraces
- TJg Guatapuri Formation
- TJs Triassic Spillite



Block 3

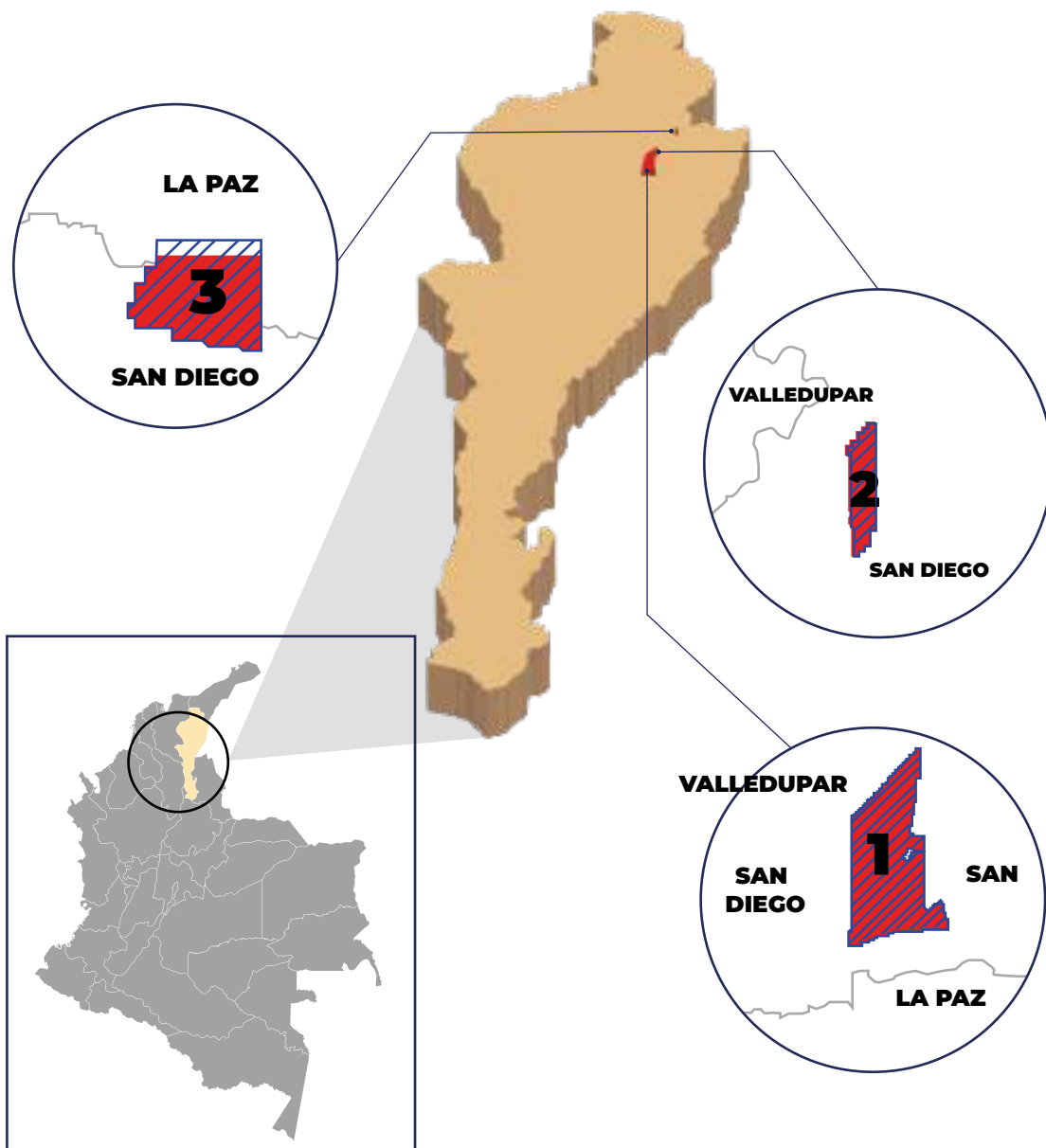
Area (has) 155.0976	Department Cesar	Municipality SAN DIEGO LA PAZ
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SMA Block

Potential

Perijá South

SMA Block
High potential for Cu – SGC
Municipality boundary



 SMA Block

 High potential for Cu – SGC

 Municipality boundary

Blocks declared at Perijá North

In this area two blocks have been declared as Strategic Mining Areas, by means of the rulings of the Vicepresidency of Promotion and Development No. 009 of february 16th, 2021 and number 034 of march 29th, 2021.

Block 4. ~~This area meets the basic requirements of being free and having~~ high potential to present strategic mineral deposits. ~~This area~~ was subject to exploratory drilling by the Colombian Geological Service through geological-structural, geochemical, geophysical and metallogenic studies that allowed a better understanding of the origin of the mineral manifestations present in the region and of the possible geological processes that originated them. From the integration of geological, geochemical (sediments, rocks), geophysical (magnetometry and airborne gamma spectrometry), and metallogenic information, the Colombian Geological Service evaluated the mineral potential for each of the blocks under study and identified a high potential for copper mineralizations in the southern sector of this block.

Block 5. This block is formed from blocks ZRP 315-1 (reserved by Ruling No. 001 of January 13, 2020), located between the municipalities of La Jagua del Pilar and Urumita and from block ZRP 321 (reserved by Ruling No. 135 of June 15th, 2017),

located in the municipality of Urumita in the department of La Guajira, for which the following is defined:

In the report prepared by the Colombian Geological Service, entitled 'Mineral potential of the blocks of Ruling 135/2017 in the Serranía del Perijá', of July 2019, the results of the evaluation of mineral potential of the blocks 315 and 321, among other blocks, are presented. Here, it is stated that the block 315 presents a mixed potential, since the area located in the quaternary deposits has a low potential to find copper minerals and precious metals other than those of pleasure.

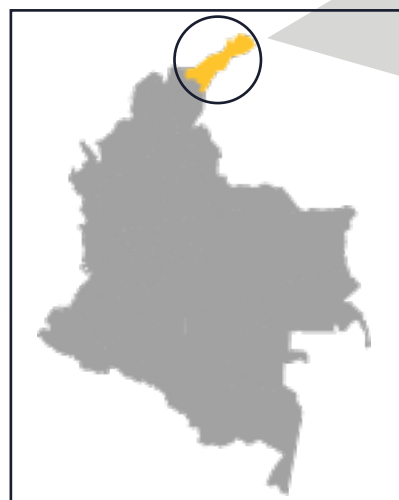
Towards the southern sector of this block, arenites, tuff arenites and tuffs that belongs to the La Quinta Formation appear. That is why the south zone of this block presents a high potential for the occurrence of copper mineralizations. In the block 321 basic volcanic, volcanoclastic and intrusive rocks associated with the Formación La Quinta emerge. This unit represents a serie of events related to a magmatic arc in the Jurassic, this block presents middle potential for the occurence of copper minerals or precious metals. These two block are adjacent, then only one polygon is defined the includes the zone defined with high potential an part of the defined with middle and low potential.

Blocks declared

Perijá North



SMA General Location



Block 4

Area (hectares)
469,9682

Departament
La Guajira

Municipality
LA JAGUA DEL PILAR

Block 5

Area (hectares)
892,7058

Departament
La Guajira

Municipality
URUMITA, LA JAGUA DEL PILAR



Bloque AEM

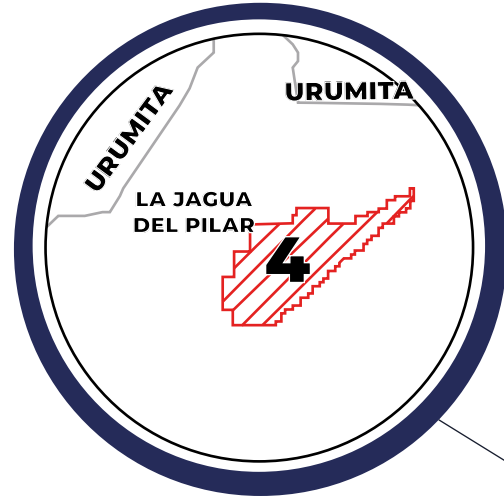
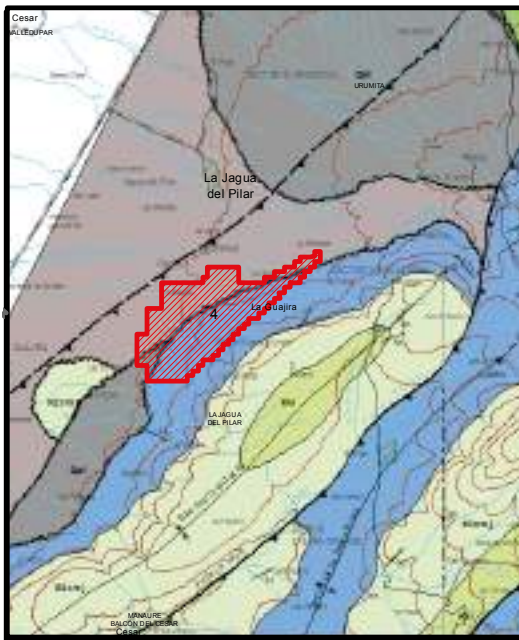


Límite Municipal

Block 4

At Perijá North

Block No. 4: A free area has been defined with an extension of 469.9682 Ha. Its southern sector covers a part of the area defined by the SGC as having high potential for copper minerals. This block is located in the jurisdiction of the municipality of La Jagua del Pilar in the Department of La Guajira.



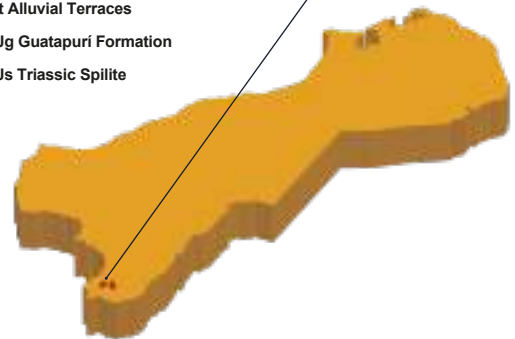
Regional Geology

Block 4

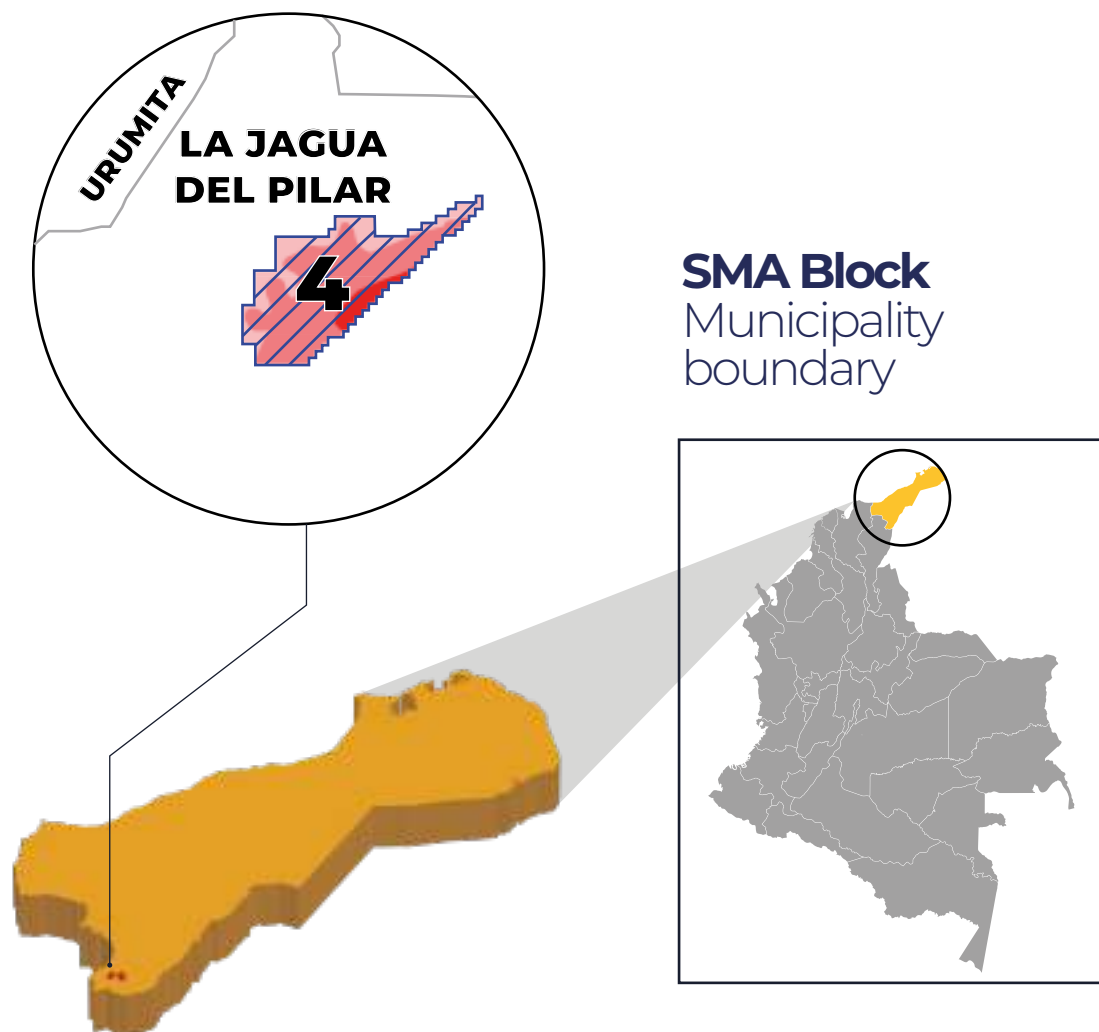
Conventions

Geology 1: 100,000 SGC

- EOms Cambrian and Ordovician Metasedimentites
- Jca Ignimbrite from la Caja de Ahorros
- Jg Golero Rhyolite
- Jgp Porphyritic Granite
- Jlc Ignimbrite from los Clavos
- Jbbp-cm Facies - Quartzomonzonite
- Jq La Quinta Formation
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- Qg Fans and Gravels
- Qt Alluvial Terraces
- TJg Guatapuri Formation
- TJs Triassic Spillite



Perijá North Potential



Cu Potential – SGC



High



Mid



Low



SMA Block

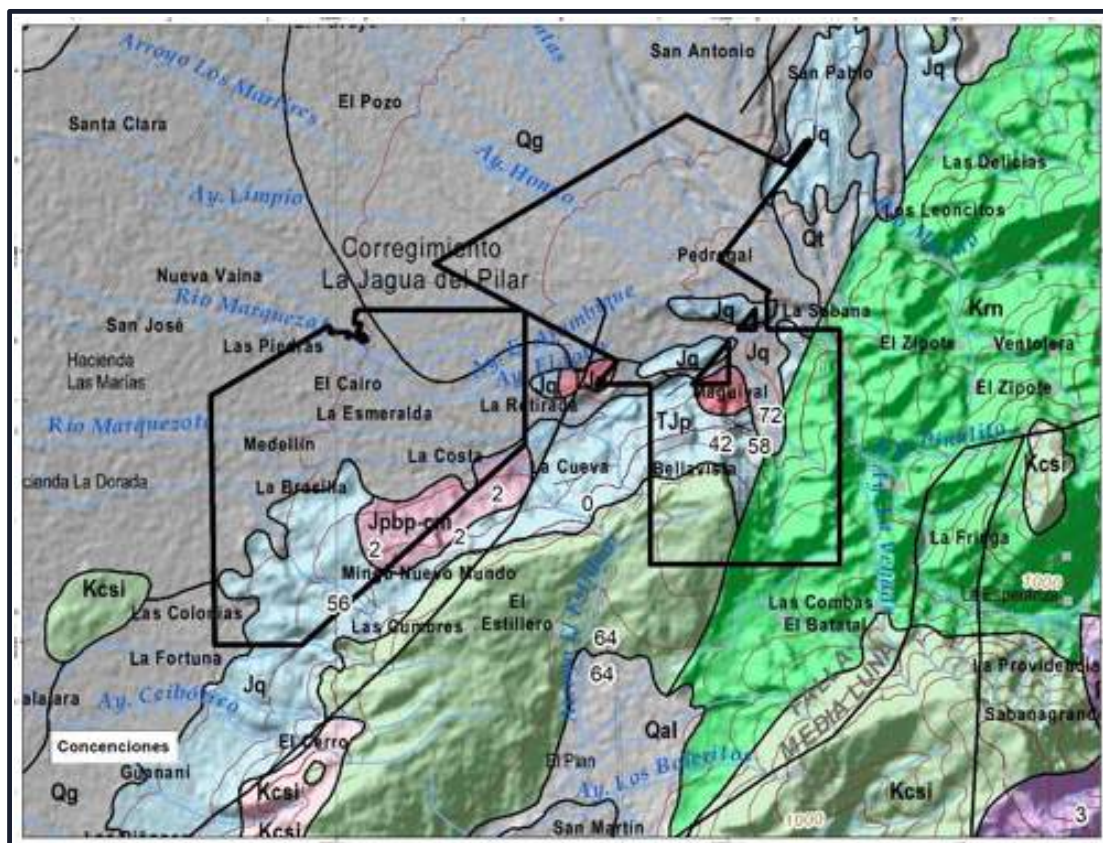


Municipality boundary

Block 5

Perijá North

Regional Geology



Geological map of the area. Jq: La Quinta Formation. Qg: Quaternary deposits. Jpbc-cm: basic hypoabasal rocks.

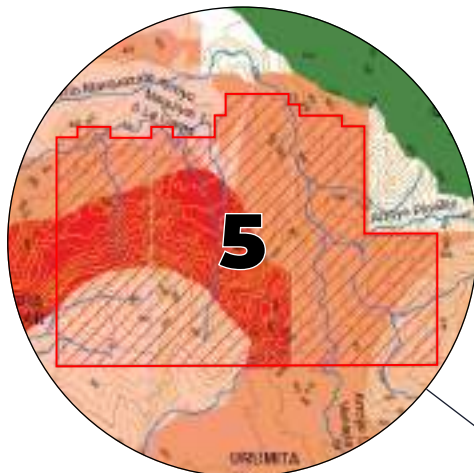
Source: Colombian Geological Service

Perijá North Potential

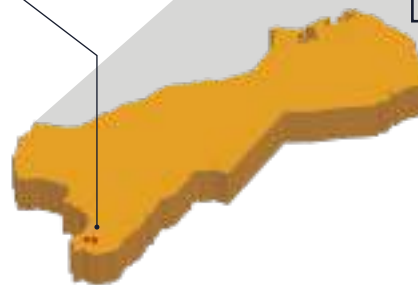
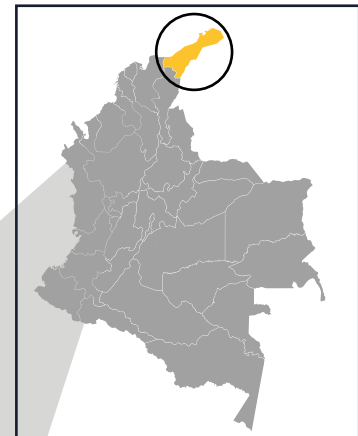
For the evaluation of the mineral potential of each block, the Colombian Geological Service consider the evidence that the geological, geochemical, geophysical and metallogenic components could contribute on the probability that, within the area of each one of them, base metal and precious metal mineralizations could appear, which may be emerging or not.

From the above, it was concluded that the southern sector of block 315 (block 315-1), presents a high mineral potential for the occurrence of base metal mineralizations (mainly copper), and that block 321 presents a medium mineral potential for the occurrence of copper mineralizations and associated precious metals.

Given the geological, geochemical, geophysical and metallogenic characteristics, it is considered that the Perijá region has a greater potential to host “stratum-confined” mineralization of copper and precious metals.



Map of Potential, Block 5.
Source: Colombian Geological Service



POTENTIAL Cu - SGC



High



Mid



Low



SMA Block



Information Protected Areas System

www.anm.gov.co
promocion@anm.gov.co



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[Agencia Nacional de Minería](https://www.linkedin.com/company/Agencia Nacional de Minería)