

## MAPPING OF MINERAL DEPOSITS OF PORTUGAL, 1:200 000 SCALE

DECEMBER 2020

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### PREAMBLE

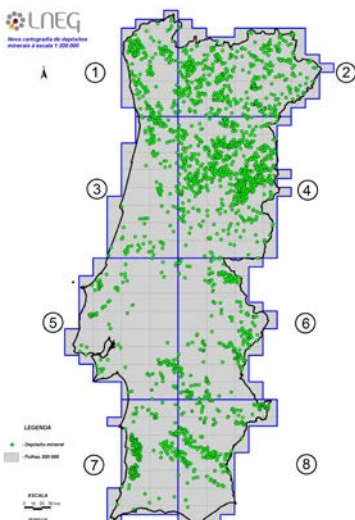
For a country to be able to manage its available mineral resources, it is necessary to know them properly and to be able to locate them effectively in the territory .

To achieve this objective, LNEG decided to create a specific project to produce mapping of the country's mineral deposits at a scale of 1:200 000.

The publication of the Mineral Deposits Maps of Portugal in the 1:200 000 scale was completed at the end of 2020 and processed according to the normative division into Sheets 1 to 8, which is also used in the Geological Map of Portugal at the same scale.

This project will culminate with the publication of a new edition of the map of Mineral Deposits of Portugal at the scale of 1:500 000, which is already under preparation.

### OBJECTIVES OF THE WORK



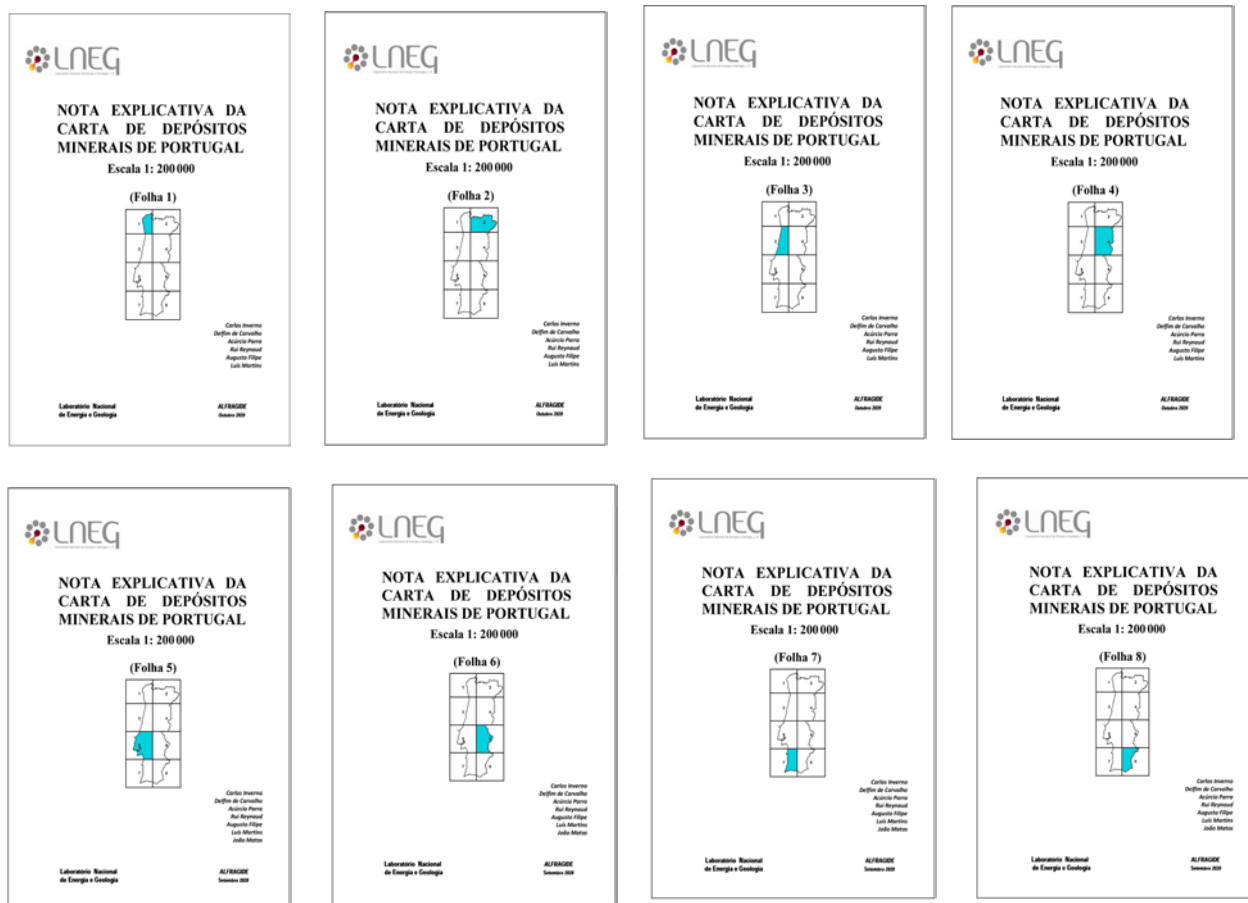
These maps, at the scale of 1:200 000, intend to represent in a legible form 2443 metallic mineral deposits, non-metallic minerals and concessionable industrial rocks (with permit), most of them from the Variscan orogeny. Such deposits range from simple occurrences to large deposits. The group of metallic minerals includes mineralizations of: antimony, arsenic, beryllium, bismuth, lead, cobalt, copper, chromium, tin, iron, lithium, manganese, molybdenum, nickel, gold, silver, pyrite, tantalum/niobium, rare earths, titanium, tungsten (wolframite), tungsten (scheelite), uranium, vanadium, zinc and zirconium. The group of concessionable non-metallic minerals and industrial rocks with permit includes: asbestos, apatite, barium (barite), bitumen/petroleum, coals and metamorphozed coals, kaolin, kaolin sands, diatomite, feldspar, feldspar and nepheline (Monchique massif), fluorine (fluorite), graphite, quartz, salt and talc.

As the country has a wide range of mineralizations, many of which have been explored in the past and present, with an emphasis on employment and the economy, this mapping essentially seeks to stimulate and facilitate relevant information to potential interested parties for a judicious definition and selection of areas and targets for the development of prospecting and research projects, with a view to the discovery, assessment and consequent exploitation of mineral resources.

This type of thematic mapping is also important in land use planning, as it can and should be used in the definition of plans and policies, at the municipal, regional



utilize may, in fact, be “green”, the equipment and devices used to store and transport this energy are not, and require an increasing amount of mineral raw materials, many of which are considered critical.



The objectives of the maps centre on: 1) Promotion of European and world mineral intelligence; 2) Providing a basis for viewing the distribution of mineral deposits in Portugal allowing comparison with other European partners; 3) Provide a graphical representation of the location of each occurrence, morphology and type of deposit; 4) Enhance pan-European mineral databases, e.g., EGD ( <http://www.europe-geology.eu/> ) and RMIS ( <https://rmis.jrc.ec.europa.eu/> ) and improve data sharing; 5) Refine validation methods and exchange models; 6) Improve models for conceptual criteria for mapping; 7) Provide the foundations of a global database needed to understand and improve critical minerals distribution controls; 8) Increase accuracy in the assessment of mineral resources; 9) Identify areas of mineral potential for additional European sources of mineral supply; 10) Promote the discovery of mineral deposits; and 11) Promote communication and dissemination.

**RELATED PROJECTS**
**SIORMINP**

The Portuguese Mineral Resources and Occurrences Information System - SIORMINP was developed since 1997 to include all known mineral deposits in the country. In 2002 the coverage of the entire continental territory was completed with the identification of 2164 mineral deposits. In 2020, it totalled 2292 registrations, and it is expected that in the next few years it will reach 2500 registrations.

This Information System contains different types of information: general data, geographic data, geological data, economic data, tonnage data, mineral and concentrate data and concession data, in a total of 60 information fields.

The main objectives that led to the development of SIORMINP were to increase the geoscientific, technical and economic knowledge of Portuguese mineral deposits; promote mining development in the national territory through the selection and dissemination of information on new target areas with possible mineral potential for mining companies; contribute to land use planning; provide information on mineral resources for cartography and for safeguarding mineral resources in environmental impact studies in new projects.

It was from the information described in SIORMINP that it was possible to characterize all the mineral deposits included in these maps, by previously carrying out a classification exercise in terms of their genesis, morphology, dimension and useful substances, according to previously defined criteria.

**ADDITIONAL INFORMATION LNEG**

[www.lneg.pt](http://www.lneg.pt)

**SIORMINP**

<https://geoportal.lneg.pt/pt/bds/siorminp/#!/>

**GEOPORTAL**

<https://geoportal.lneg.pt/>

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**DOWNLOAD THE MAPS**

Get access to the 1:200 000 minerals deposits of Portugal maps [HERE](#).