

Alentejo Regional Commission for Coordination and Development

Portugal

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Vice-president

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2016

HIGH LEVEL CONFERENCE IN

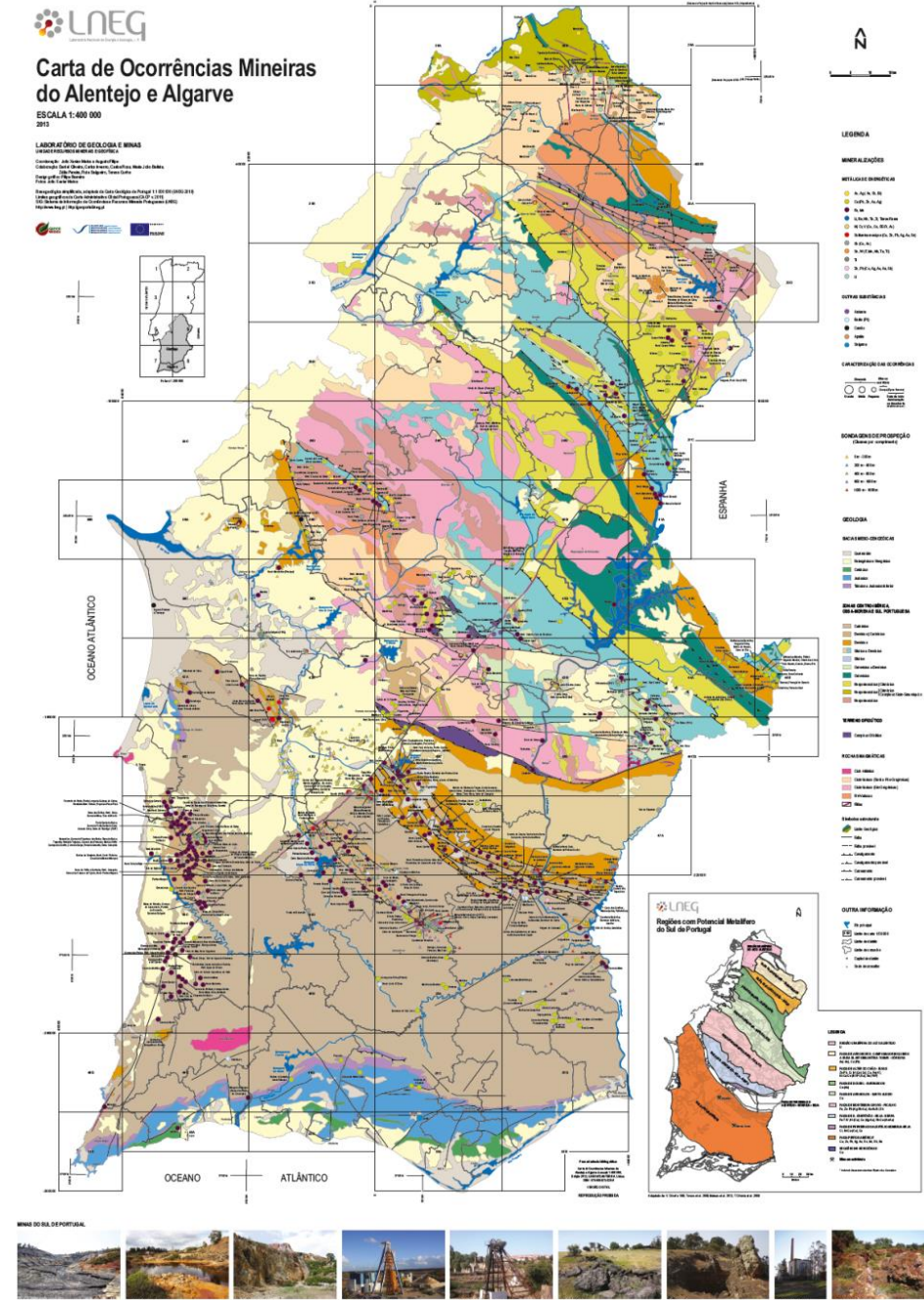


European Regions in the Critical Raw Materials
strategy and the Circular Economy Policy

Alentejo mineral potential

- Alentejo and Algarve mineral occurrences map Atlanterra project, EU Interreg Atlantic Area, Matos and Filipe Eds, LNEG 2013

<http://www.lneg.pt/download/7904>



Alentejo mining regions

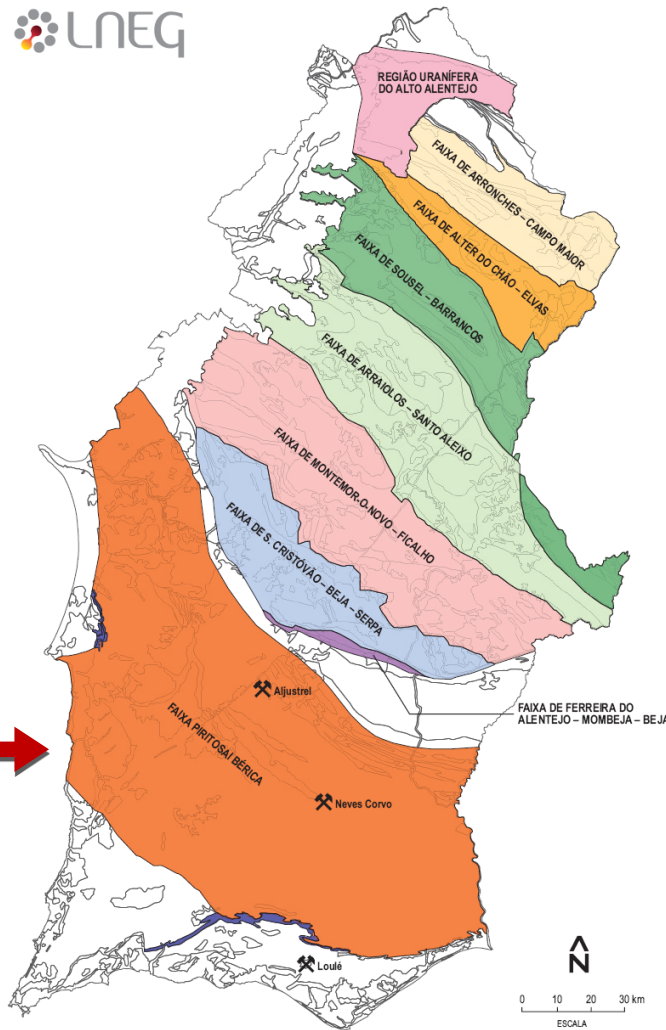
- Alentejo and Algarve mineral occurrences map Atlanterra project, EU Interreg Atlantic Area, Matos and Filipe Eds, LNEG 2013

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Iberian Pyrite Belt, an European Mine Region

Active mining:

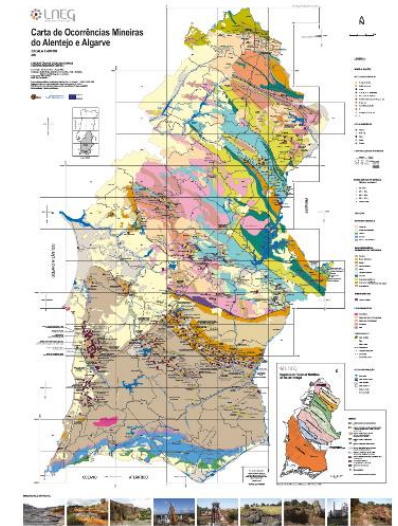
- Neves Corvo (Somincor/Lundin Mining)
- Aljustrel (Almina)



- REGIÃO URANÍFERA DO ALTO ALENTEJO
U
- FAIXA DE ARRONCHES - CAMPO MAIOR INCLUINDO A FAIXA BLASTOMILONÍTICA TOMAR - CORDOVA
Au(-As), Cu (Pb)
- FAIXA DE ALTER DO CHÃO - ELVAS
Zn-Pb, Cr, Ni-Cu-(Co), Cu, Fe(-V), Ni-Cu-Co-(EGPt, Au), Sn-(W-F)
- FAIXA DE SOUSEL - BARRANCOS
Cu-(Au)
- FAIXA DE ARRAIOLOS - SANTO ALEIXO
Cu
- FAIXA DE MONTEMOR-O-NOVO - FICALHO
Fe, Zn-Pb-(Ag-Sb-Au), Au-As-Bi, Sb
- FAIXA DE S. CRISTÓVÃO - BEJA - SERPA
Fe-Ti-V, Ni-(Cu), Cu-(Ag-Au), Sb-Cu-(As-Au)
- FAIXA DE FERREIRA DO ALENTEJO-MOMBEJA-BEJA
Cr, Ni-Cu-(Co), Cu
- FAIXA PIRITOSA IBÉRICA*
Cu, Zn, Pb, Ag, Au, Sn, Mn, Sb, Ba
- SEQUÊNCIAS MESOZÓICAS
Cu
- Mina em actividade



Adaptado de: V. Oliveira 1986, Tornos et al. 2006, Mateus et al. 2013, T. Oliveira et al. 2013



Production

Minérios Metálicos, 2014		
	Quantidade Produzida Ton	Valor Produção M€
Portugal (Cobre, Zinco, Chumbo..)	473.926	412
Alentejo (Cobre, Zinco)	471.946	390
(Alentejo/Portugal) (%)	99,6	94,7
<i>Fonte: DGEG</i>		

Minérios Metálicos, 2015		
	Quantidade Produzida Ton	Valor Produção M€
Portugal (Cobre, Zinco, Chumbo..)	501.596	407
Alentejo (Cobre, Zinco)	500.366	394
(Alentejo/Portugal) (%)	99,8	96,8
<i>Fonte: DGEG</i>		

The portuguese national government entities related with geology, mining and exploration:

Laboratório Nacional de Energia e Geologia (LNEG)

Geological mapping, geological, geochemistry and geophysical databases, exploration R&D projects

Portuguese Geological Survey since 1848, www.lneg.pt



•Direção Geral de Energia e Geologia (DGEG)

Mineral exploration and exploitation permit licenses, administrative process, legislation, www.dgeg.pt



•Empresa de Desenvolvimento Mineiro (EDM)

Mine rehabilitation program, exploration projects, experimental mining (Gavião license), www.edm.pt



Strategic plans

- **Green Growth National Strategy**
- **National Strategy for Geological Resources**

- **Regional Action Plan 2020 – Alentejo 2020 (research, innovation, internationalization, competitiveness)**
- **Regional Strategy for Smart Specialization**

- **Region Plan for Innovation**
- **Regional Development Plan for the Territory**

Portuguese regional and local government entities with intervention in mining sector

- **Regional Comissions for Coordination and Development**
 - **Regional government non elected**
 - **European Funds management**
 - **Territorialization of national policies and strategies**
 - **Planning, Financing, Licensing, Inspecting, Fiscalizing**

Portuguese regional and local government entities with intervention in mining sector

- **Intermunicipal Communities**
 - **Sub regional government elected by municipalities**
 - **European Funds management**
 - **Planning and financing**
 - **Strategic and Action Plan 2020**
 - **Integrated Territorial Intervention**

Portuguese regional and local government entities with intervention in mining sector

- **Municipalities**
 - **Local government elected**
 - **Planning, Financing, Licensing, Inspecting**
 - **Municipal Master Plan**

Projects

- **Regional System for Technological Transference**
- **Science and Technological Network of Alentejo**
- **Alentejo Science and Technological Park**
- **Cevalor**
- **Valorpedra**
- **Promoting Circular Economy**

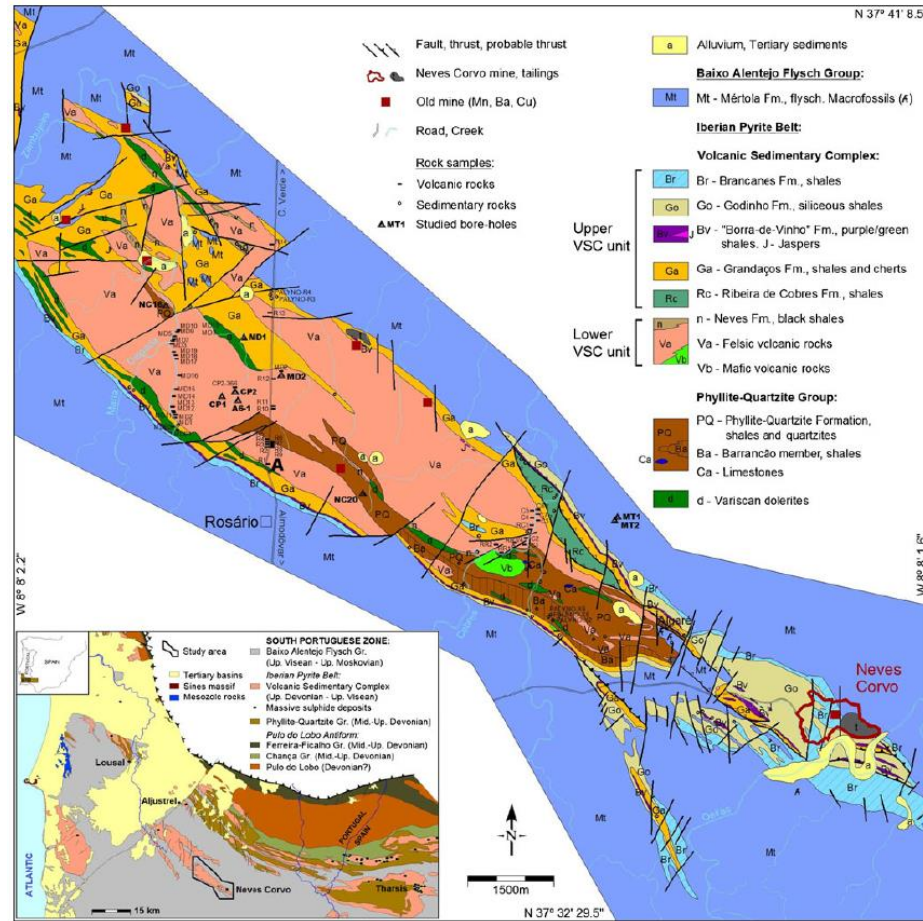


Fig. 1 Geological map of the Neves Corvo antiform at the Rosário area (LNEG for Lundin Mining, 2010). *Inset* shows the location of the Iberian Pyrite Belt and the study area is outlined in black

Geological mapping in the Neves Corvo area, ad. Oliveira et al., 2013, future LNEG Almodôvar 1/50 000 Geological map

LNEG, RTD research in the Alentejo's geological resources:

new CEGMA (QREN INALENTEJO project)
Centro de Estudos Geológicos e Mineiros do Alentejo, Aljustrel
Alentejo Geological and Mining Study Centre, Aljustrel

Current Alentejo2020 projects:

- **EXPLORA** – Neves Corvo deep exploration geological, geophysical and geochemical research
- **ZOM 3D** – GIS systems applied to the Ossa Morena mining regions

Challenges

- **Change public perception on mining activities**
- **Reduction of environmental passive / liability**
- **Adaptation to the new paradigm of Circular Economy**
- **Knowledge and protection of mineral resources**
- **Reduction of context costs**
- **Environmental responsible and sustainable projects**
- **Mitigation and adaptation to climate changes**
- **Clusterization**
- **Innovation: materials, products, ecodesign,...**

The Pyrite Route

a complementary thematic route focused in the Iberian Pyrite Belt

The **Pyrite Route** a thematic tourism route promoted by an informal network of partners, focused in the Iberian Pyrite Belt province, shared by Portugal (Alentejo and Algarve) and Spain (Andalucía), (Matos et al. 2008, 2011, Martínez & Gómez 2008, Matos & Pereira 2013). In Portugal the network is promoted in the Roteiro de Minas portal and by LNEG, CCV Lousal, Frederic Velge and Serrão Martins foundations, Aljustrel and Entradas museums and Grândola, Aljustrel, Mértola and Castro Verde municipalities.



Faixa Piritosa Ibérica
Seguindo a rota da pirite numa região mineira do Alentejo

ARQUEOLOGIA MINEIRA
Visita às minas
5 locais a não perder!

- Centro de Ciência Viva do Lousal
- Museu de Aljustrel
- Casa do Mineiro de São Domingos
- Porto Mineiro do Pomarão
- Museu da Ruralidade e das Lucernas de Castro Verde

A Faixa Piritosa Ibérica é uma das principais regiões mineiras da Europa, sendo caracterizada por mais de 90 depósitos de sulfuretos maciços, distribuídos pelo Alentejo e Andalúzia. Na província ocorrem também centenas de jazigos de manganês e numerosos filões de cobre, de chumbo, de bário e antimónio. Actualmente encontram-se em laboração as minas portuguesas de Neves Corvo (Sominco/Lundin), Aljustrel (Almina) e as espanholas Las Cruces (Cobre Las Cruces) e Águas Terribles (Iberian Minerals).



Atlanterra EU Atlantic Area Project, LNEG, Matos et al., 2013 - Download in www.lneg.pt