



REMIX

Interreg Europe



European Union
European Regional
Development Fund



Workshop meeting, Prague, Czech Republic 11-14.9.2017

Pegmatitica

Sociedade Mineira de Pegmatitos, Ld^ª

Alexandra Carolino

Geologist Owner and Manager

Who are you as an organisation?

Pegmatítica is a mining company based in Mangualde (district of Viseu), centro Portugal.

Pegmatítica owners the Gonçalo **open-pit mine** (C-57 or “Castanho”), in Belmonte, near Guarda city – (90 km Viseu / Guarda).

Our product is Feldspar with Lepidolite / **Pegmatite with Lepidolite** .

These raw-materials are mined **for the ceramic industry** transported by tipper trucks.

We are a small company established in **January of 1980** by a family branch after several inheritance and sharing processes, always working in the same region.

Nowadays we are passing through a restructuring phase.

The oldest documents of our activity are **earlier than 1932** and related to the supply of the traditional feldspar for fine china.

Four main lines of work:

- **Mining exploration**, with planning and reports to the Portuguese national mining supervisor;
- **Projects**, mainly in new areas for industrial application of chemical flux;
- **Training** new geological and topographic engineers;
- **Interaction** with local Polytechnic Institutes.



It is during II World War (1939-1945) and in consequence of the development contract to provide **Litiophilite** and **Beryl** for companies in Germany that the business and the family achieved a great position.

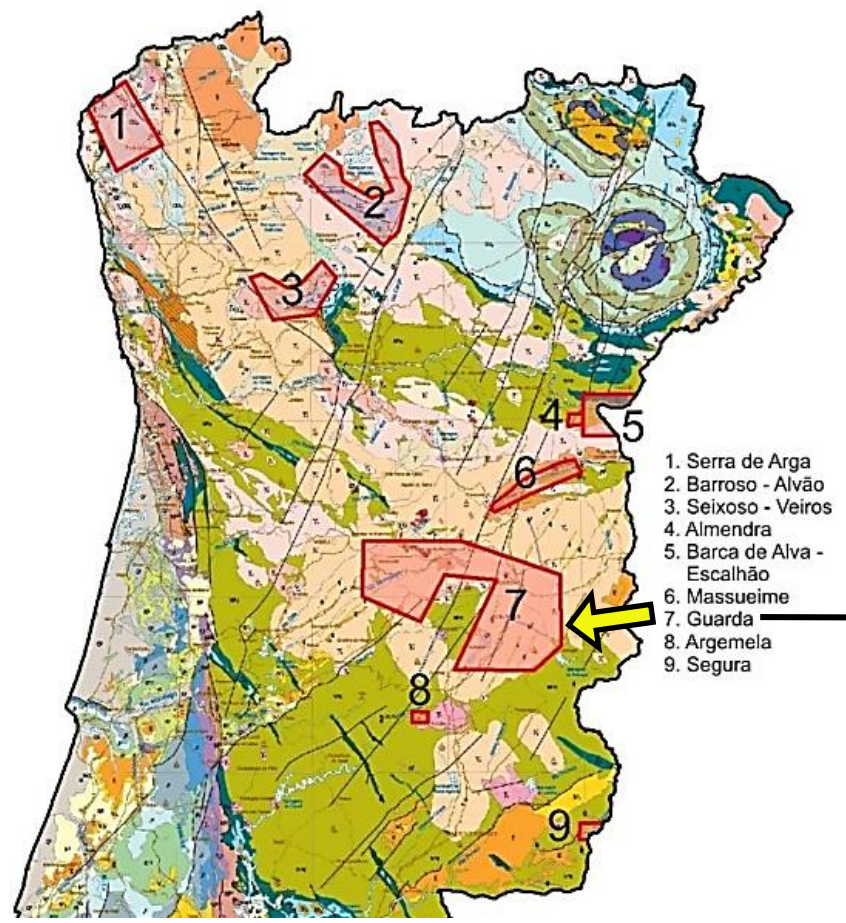
Later (1973) it is with the “**Oil Crisis**” that new challenges are placed on companies mainly based on high energy consumption.

With the pioneering information coming from American Universities on Lithium, and after recovering an old lepidolite mining concession (*belonging to the French multinational chemical and pharmaceutical company, Rhône Poulenc*) a long and difficult period began for the company.

The introduction of a revolutionary **new product** in the ceramic paste - **the Litiniferous pegmatite** (*already with incorporated flux*) gave great advantages over the traditional chemical formula in that period.

New chemical solutions were proposed for better results in ceramic tile manufacturing lines.

Lithium in Portugal



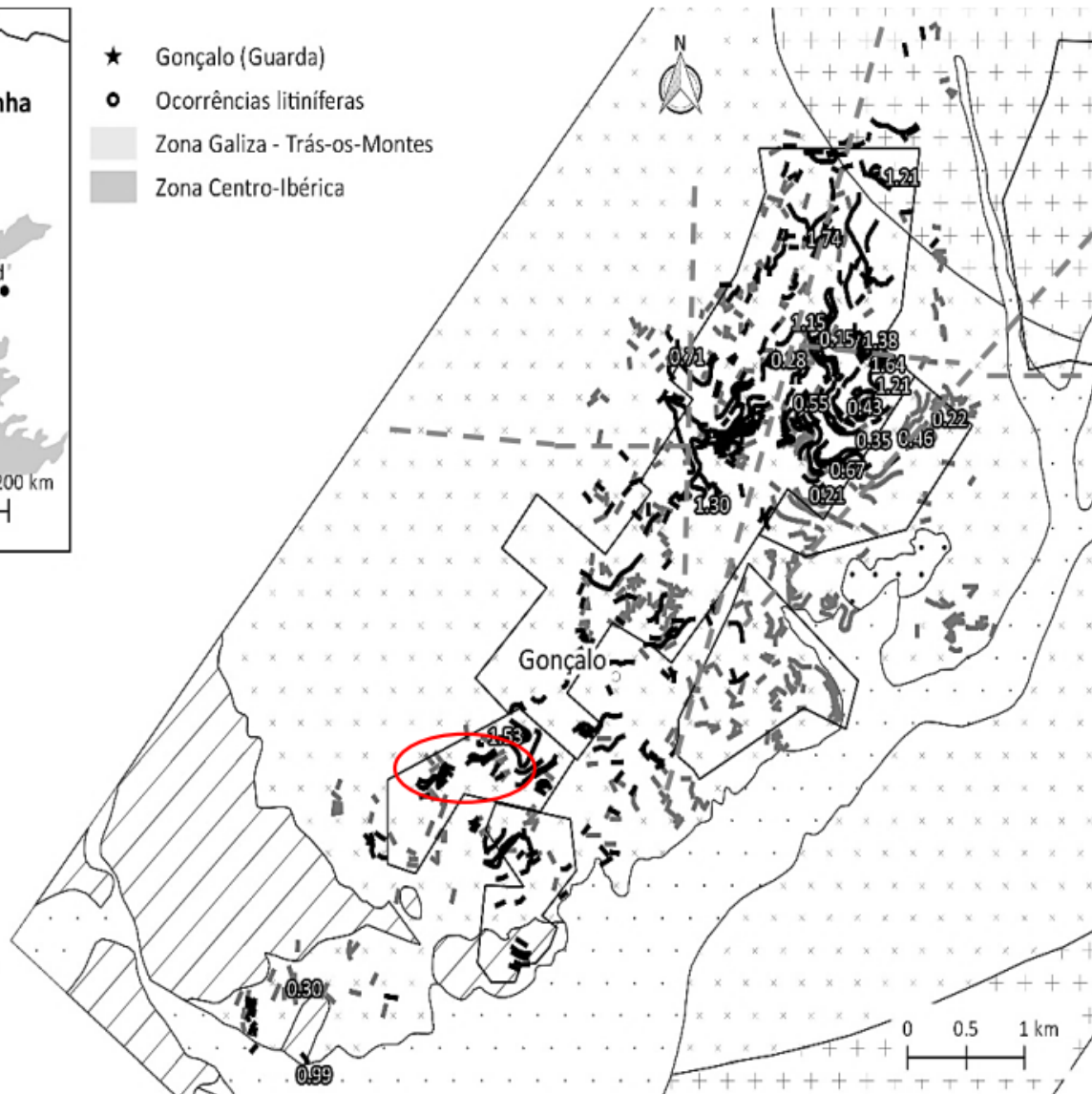
Extract of the geological map of Portugal scale 1: 1,000,000 (LNEG)

Location (📍) of the Lithium P & P requests, requested from the Portuguese State in the last 18 months.

Source: Diário da República, 2nd series, several dates.



- ★ Gonçalo (Guarda)
- Ocorrências litiníferas
- Zona Galiza - Trás-os-Montes
- Zona Centro-Ibérica



- Filões litiníferos
- Filões estaníferos
- - - Falhas
- ▨ Aluviões
- ▨ Arcoses
- ▨ Granito da Guarda
- ▨ Granito da Pega
- ▨ Complexo Xisto-Grauváquico
- Concessões mineiras activas

Pegmatitic field of Gonçalo (Guarda) and main litiniferous occurrences of the Iberian Peninsula; % LiO₂.

[Adapted from Farinha Ramos, 1998, 2007; Roda-Robles et al., 2016].



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This area was submitted to geological surveys with drilling up to 70m, financed by a Brit Euram program.



Directorate General XII

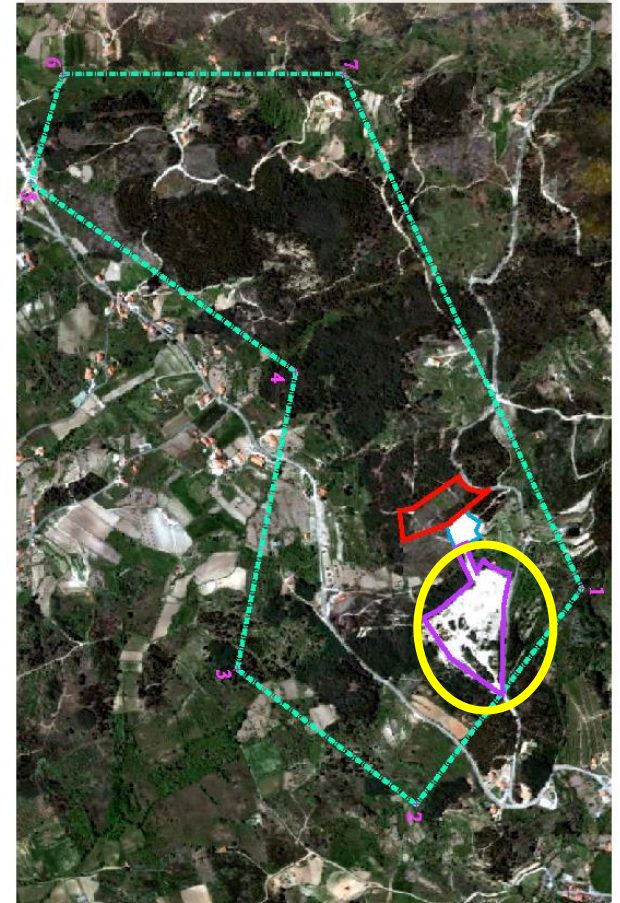
Science, Research and Development

Contract N° BRE2-CT93-0345

Eng.Doctor George Katalagarianakis

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What will be your main contribution in the project?

- ✓ Pegmatítica can provide the point of view of a mining company with a wide knowledge based on **about 100 years of experience in mining business** area reinforced by my own knowledge developed in relation with Oporto **University** and **other projects** mainly with Technische Universität Berlin - Institut für Bergbauwissenschaften.
- ✓ **Knowledge of accumulated experience** (we have always worked in one of the disadvantaged inner region, because it is aged and sparsely populated.

This region - Guarda / Viseu - in the centro of Portugal - has a very **high potencial** such as:

geotourism, geological routes, geomorfology, geodiversity, industrial archeology mining. A museum in the open air ...

Mines **should not reach the point** of a single solution – its total closure...
... We have to find a way, on a **case-by-case** basis, **to reconvert them.**

What do you want to achieve by participating in REMIX?

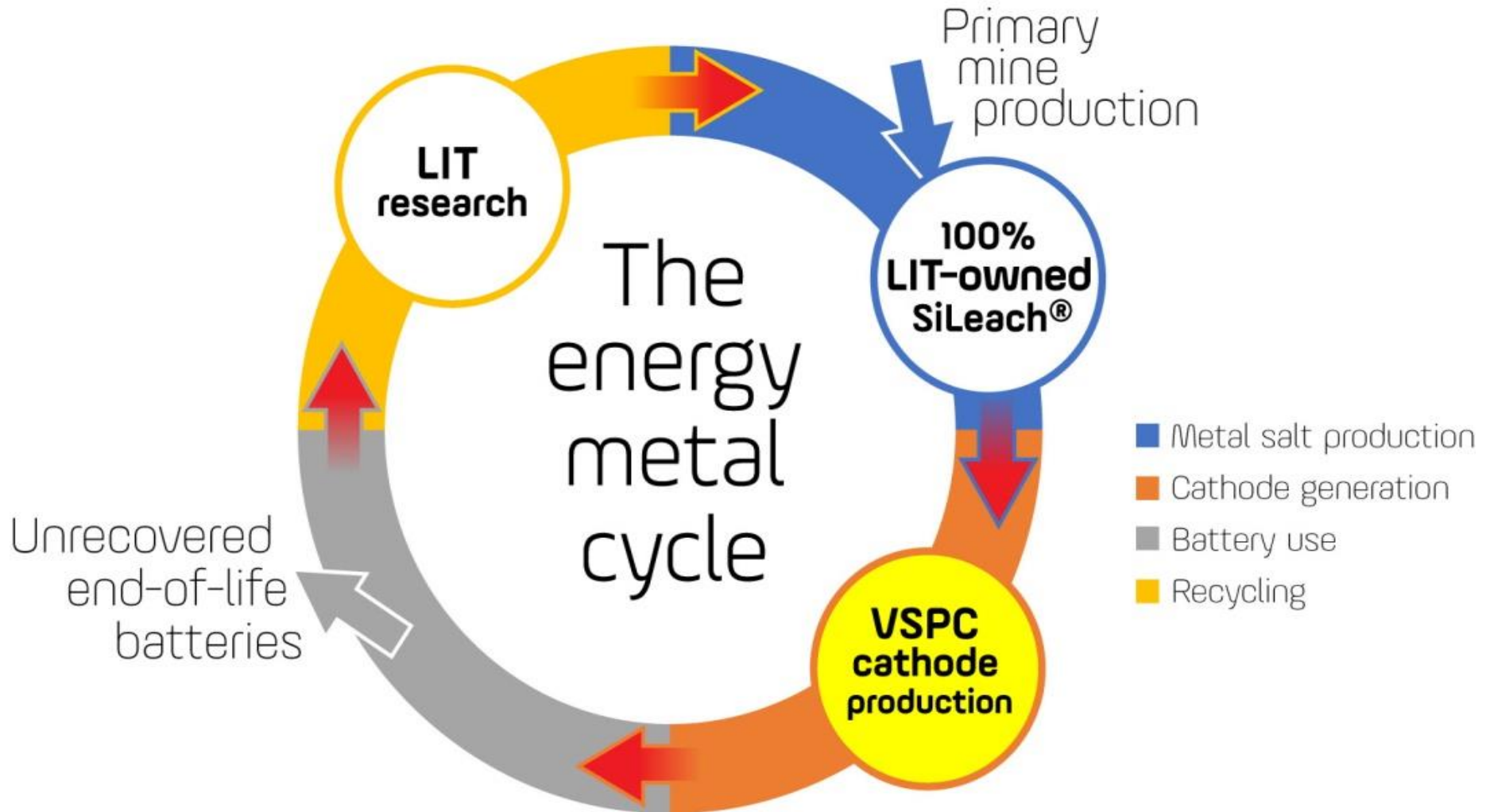
- **Transfer** to other industries the **knowledge** and potential of raw materials towards **new forms of use**.
- This allows to benefit the traditional processes with innovative raw materials.
- Public education campaigns for better **social acceptance** of the mining industry and working **jobs related to the area**
- **To enrich priority to quality and not only quantity.**

What is your communication objective?

- **To improve** the knowledge of the mining reserves of each concession with the support of a service to be created of the state's "*mining development*" together with the schools of mines and local polytechnic institutes;
- **To adapt** procedural requirements to the size of the concessionary company;
- **To use** company scale, for *pilot testing* , not feasible in large scale companies;
- **To preserve** the business fabric, keeping it from small to large companies;
- **To recreate** the concept of *public utility* and mediation of conflicts between issues of public utility;
- **To manage** conflicts arising from the deficient private property registry (cadastral register);
- **To increase** public visibility of the mining sector;

- **To invest** in public education for greater knowledge about the importance of the sector in the daily lives of families for a greater acceptance of the sector among local populations with negative records of past practices;
- **To make a list** of technologies: "high power computing/cloud", "big data/machine learning/ data mining", "remote control", "ore sorting" and "Internet of things (IoT)/connectivity" to provide a 3D perspective of the mining environment
...
- **To collect** private *associative experience* of the management between mining concessionaires and regulator;
- **To value** the gender in positions of leadership of mining companies;
- **To manage**, more efficiently, the mine dumps of the past as well as those produced nowadays;
- **To focus** the current processes of mining extraction control, in a more friendly way to the environment, in a circular economy;

Take into account that:





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Thank you!

Questions welcome

