

HEADING REPORT(H)A: Environmental Stories

ORE WASHING AND THE NEW GOLD RUSHES

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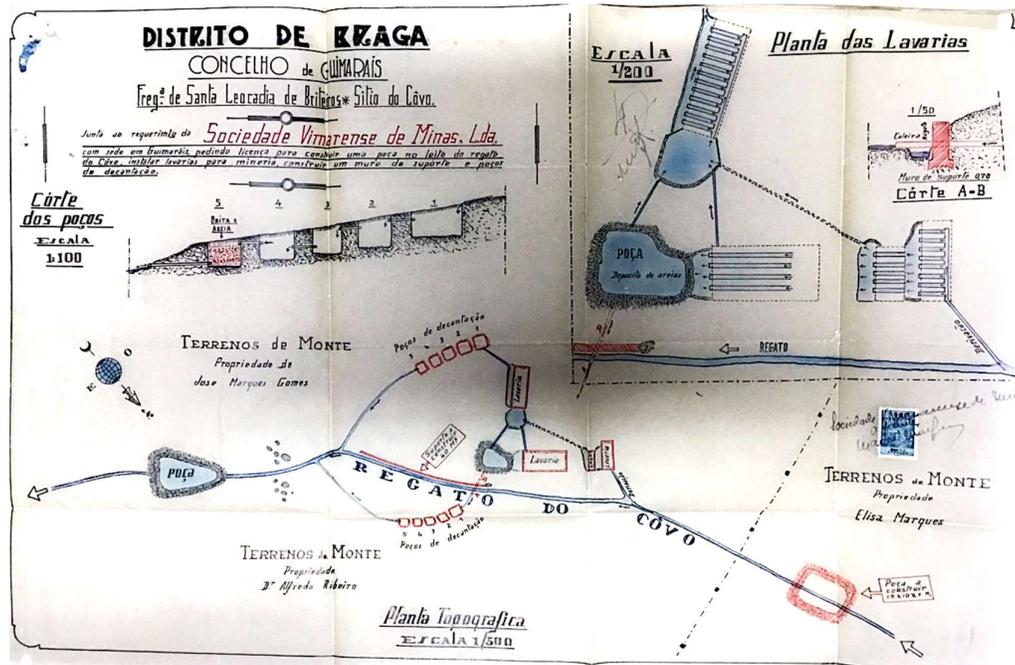


Figure 1 - Casa de Sarmento, Arquivo da Agência Portuguesa do Ambiente - ARH do Norte, Processo de Obras n.º 112-1944, não paginado.

Ore prospecting is the order of the day. Keeping up with the international competition to guarantee the supply of raw materials has been a concern of political powers, which do not want to lose their place on the podium of present and future technological revolutions. The discovery and possibility of treating lithium deposits in Portugal fueled this debate, which highlights the conflict of different interests such as the economic, but also the landscaped and the environmental.

Dating from 1944, the image shown above is a topographical plan associated with a project of the Sociedade Vimarãense de Minas to carry out a series of works aiming ore washing, after being previously explored in contiguous lands in the

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municipality of Guimarães, in the north of Portugal. This document is held at the Hydraulic Services archives (accessible at Casa de Sarmiento, in Guimarães - <https://www.csarmiento.uminho.pt/en/archivave/>), and is just one demonstrative case of the enthusiasm to invest in mineral exploration, in short concession cycles, allowing investors to access a lucrative market in the early years of the Second World War. The explored ore was wolfram, also known as tungsten: a metal with interesting properties, ranging from high density to high melting point, and allowing multiple applications, ranging from weapons to electricity.

Although the Hydraulic Services' jurisdiction was related only to rivers and streams, throughout their long inspection activity (from the Constitutional Monarchy till the Carnation Revolution in 1974) they mediated numerous licensing processes and disputes, namely those associated with several industrial activities. In this case, the water would be dammed and diverted, and then used in four washing plants, presumably by the gravitational effect of hydraulic washing. From this point, it would move to ten settling wells, five on each bank, to reduce the risk of contamination. In fact, the designated chambers had the objective of progressive accumulation of suspended solids, and the last one of each chain would be properly filled with gravel and sand. Finally, this decanted water would return to the mainstream, desirably harmless to aquatic life. The company would also ensure the construction of retaining walls that would hold up debris and sand resulting from the output and prevent the water body silting. Although this is a very rich pictorial testimony, it should not be forgotten that a significant number of these drawings would not guarantee, in practice, the purpose for which it was designed, as frequently resulted in processes of transgression based in fines or even in coercive demolition.

These technical solutions were part of the architectural repertoire to prevent water pollution and allow us to imagine the landscape impact of industrial mining. It will certainly be one of many cases that figure in history for the marks they left in communities and territory. In fact, how many washing plants do not lie today in the open field, scar-like, with their structures to be dismantled or rusting, recounting the memories of a very own 'gold rush'?

Nowadays, as in the past, contamination of surface and underground water remains a risk remembered by communities living in the same locations of the

exploration platforms. Considering the difficulties in energy supply, the uncertainty of geopolitical realignments, and the increasing prominence of the information and communication technologies sector, it is expected that the treatment of ores will continue to be a key issue for the world — or, better, a vein of complex composition.

Reading suggestion:

NUNES, João Paulo Avelãs - *O estado novo e o volfrâmio (1933-1947): actividade mineira, "grande depressão" e segunda guerra mundial*. Imprensa da Universidade de Coimbra: Coimbra, 2010. Available on: https://digitalis.uc.pt/pt-pt/livro/o_estado_novo_e_o_volfrâmio_1933_1947_actividade_mineira_grande_depressão_e_segunda_guerra . Accessed on: 21st February, 2022.

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