

Silver Production in Ancient Greece

Maxwell Boots

SMEDG Meeting Sydney

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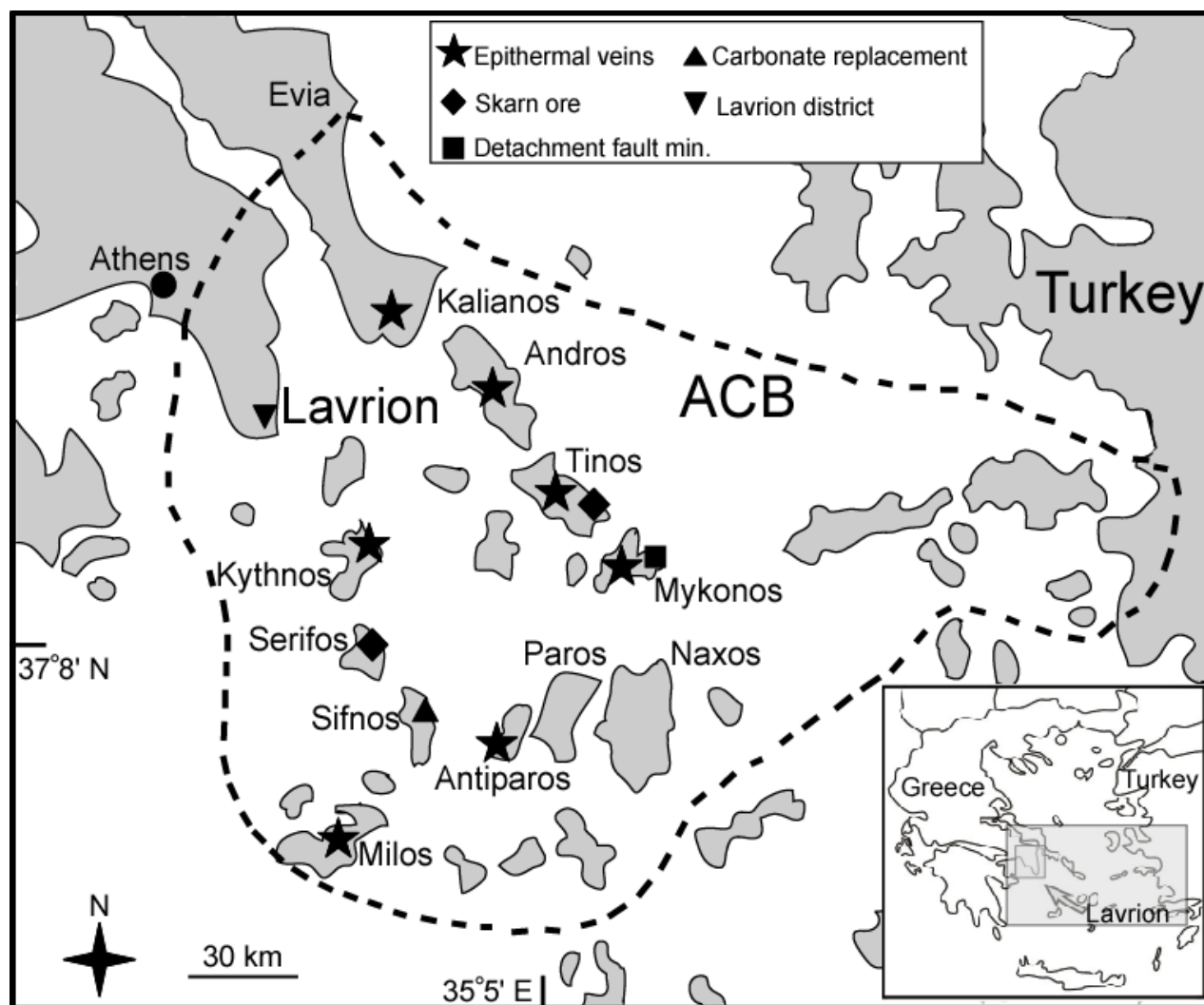


Figure 1. The location of the Attic-Cycladic Crystalline Belt (modified from Brocker and Pidgeon, 2007; Skarpelis, 2007). The following symbols show the locations of a given style of mineralization: stars – epithermal vein; diamonds – skarn; squares – detachment fault base metal mineralization; triangles – carbonate replacement; and inverted triangle – Lavrion.

Location of Laurion and the Mines



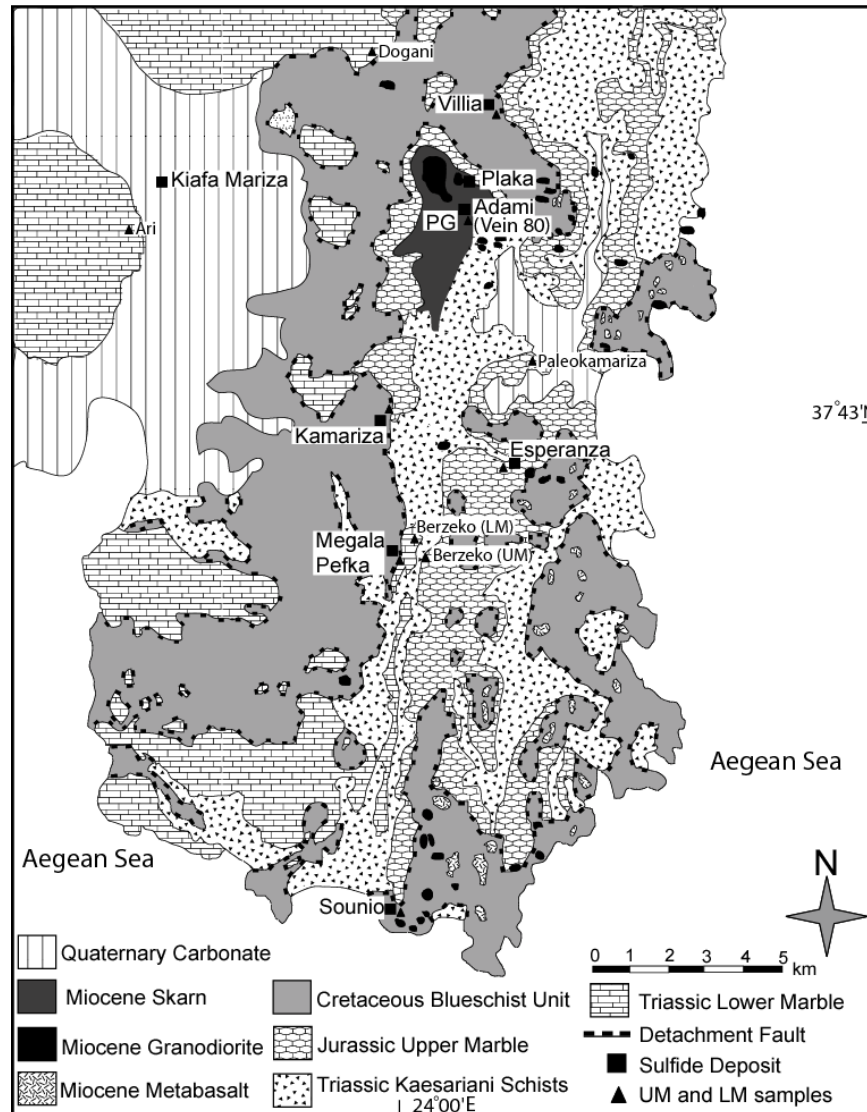


Figure 2. Geologic map of Lavrion. A dot shows the location of the mines sampled in this study while triangles represent the locations of samples obtained from the Lower (LM) and Upper marble (UM).

Early Greek Owl Coins





Figure 10. The ore floatation plant of the Greek company at the beginning of 20th Century. With a 3350 m² surface area it was then one of the biggest in the world. Unfortunately, only a small part of it was saved. (Image from the book "Historical and technological equipment in Greece")

Figure 11. The French companies plant in 2000, well after production ceased.

Examples of concentrating tables which have survived about 2500 years



Another concentrating table



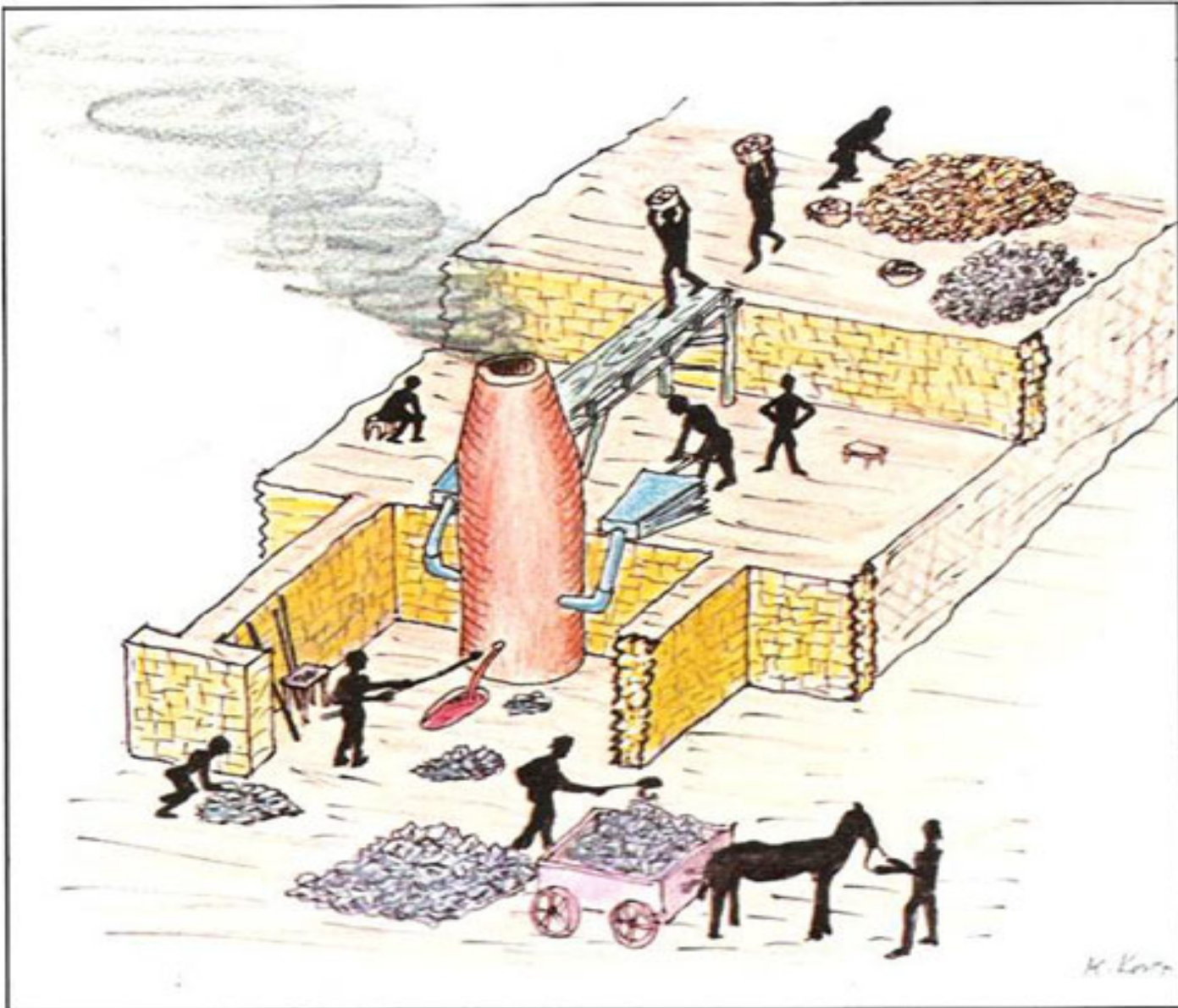
Example of water storage cistern that has survived



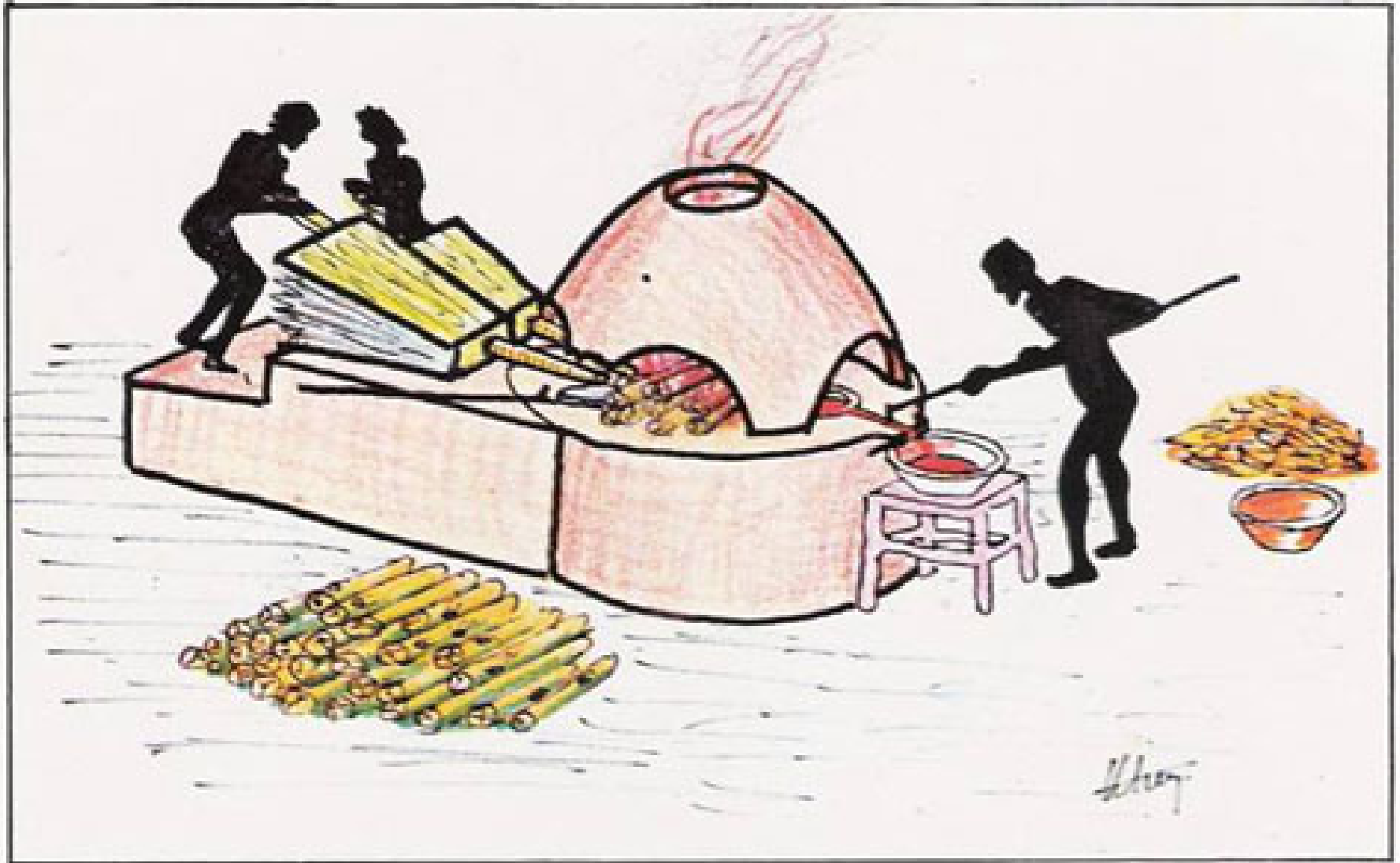
Another cistern, this time rectangular



Sketch showing smelting of ores to obtain lead



Sketch showing retorting of lead to produce silver



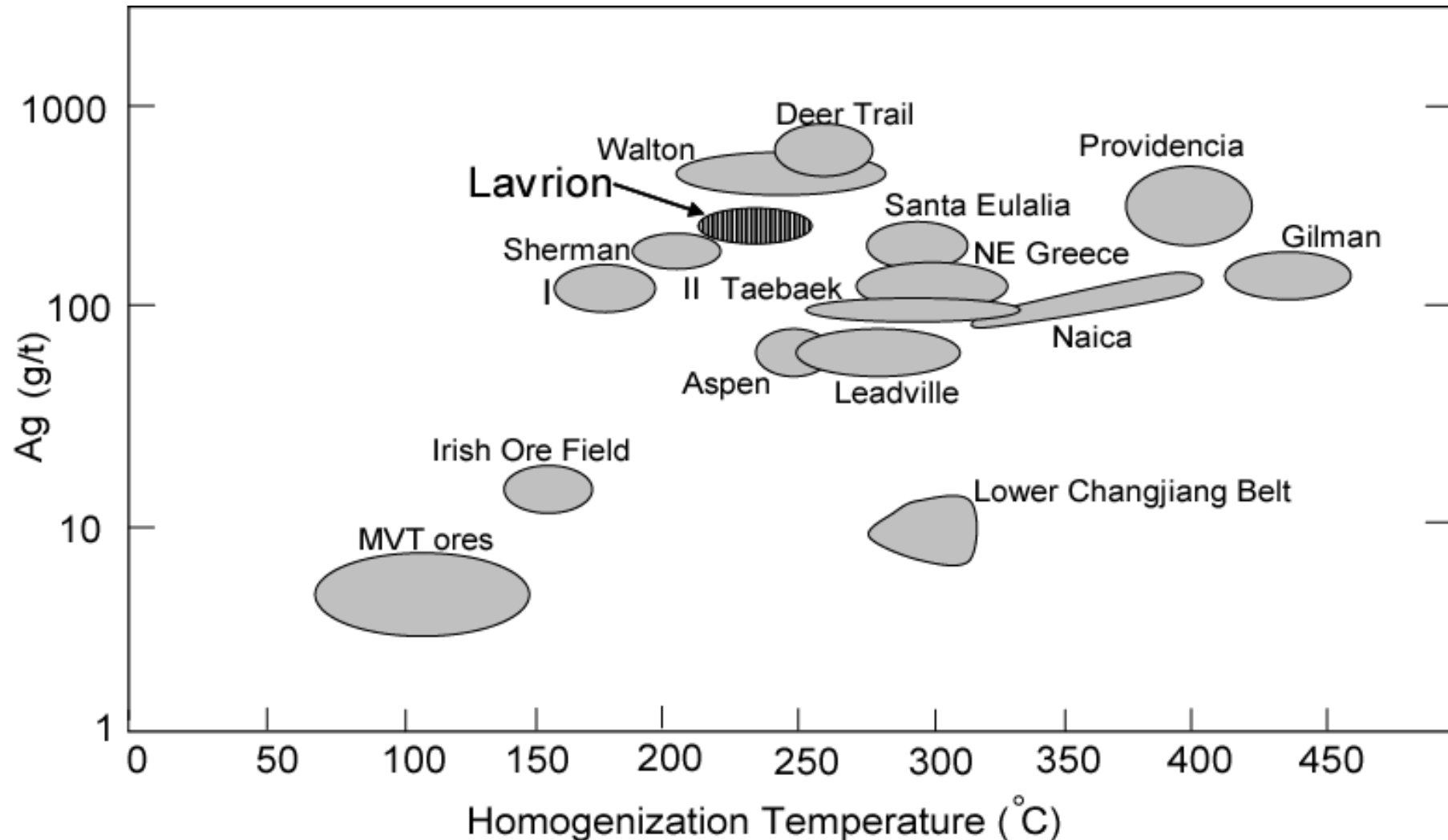


Figure 15. T_h vs. silver grade plot of carbonate replacement deposits world-wide including high temperature carbonate-replacement deposits, Mississippi Valley-type (MVT) and Irish ore field (modified after Titley, 1996). A shaded area for the Lavrion carbonate-hosted Pb-Zn-Ag deposits is indicated and shows that it has values of T_h and silver grade.

A Trireme



View of the Parthenon at the top of the Acropolis



Another view of the Parthenon at the top of the Acropolis



The Erechtheion (a Temple to both Athena and Poseidon) built between 421-406 BCE



A more complete view of the Erechtheion



The Temple of Athena Nike built between 427 and 420 BCE



The other side of Temple of Athena Nike



Propylaea (The Entrance) was built between 437 BCE-431 BCE



Artist impression of original structure of the Propylaea



The Temple of Hephaestus with its Doric columns is in the Agora of Athens and was built c 450 BCE



Cape Sounian and the Temple of Poseidon (God of Sea for Ancient Greeks)



The current Temple of Poseidon at Cape Sounian



A Quote Found in Researching

Let us bring crashing down another of those myths: the ancient Greeks were nice folk. Seems they got most of the money to support their poetry, philosophy, development of “democracy,” and sundry other habits from mining. It appears that ancient Greece was a society founded on mining, and the money from mining supported a small upper class that had time (and slaves) to sit around thinking, talking, writing, and leaving a legacy to impress future generations. Certainly, I like many others, was taught of the glories of the Greeks in literature, theatre, and learning. Nobody ever told me this was made possible by large-scale mining.