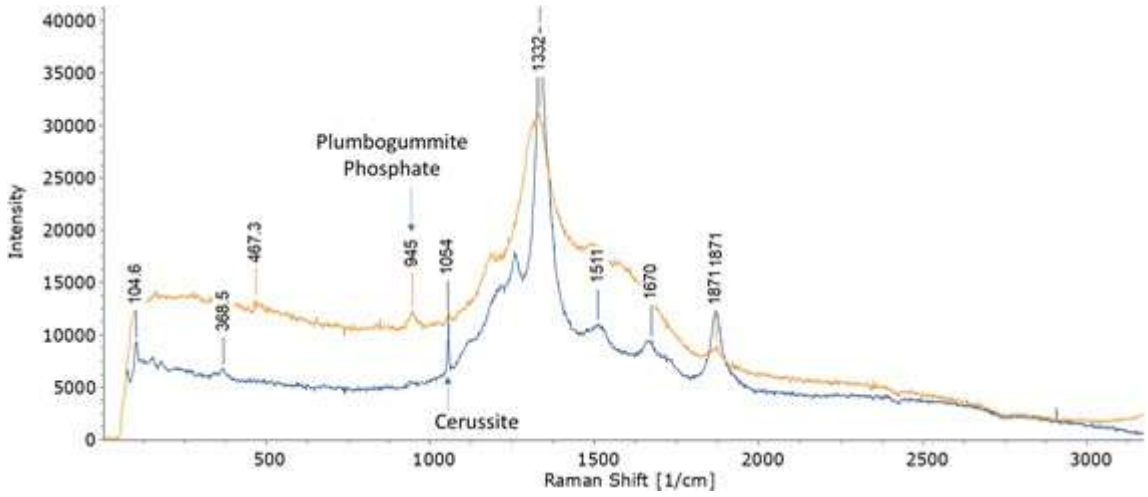
Wulfenite and plumbogummite from Sidi Ayed (Morocco)

May 2021

Jordi Fabre (Fabre Minerals) sent to the lab an interesting specimen from the lead deposit of Sidi-Ayed (Morocco). The specimen consisted on a big galena crystal, with quartz and barite crystals attached.

The interest about this specimen relies on the greyish crust that mostly covers the galena. The stereomicroscope examination of the crust showed that is composed by a layer of very small crystals covered by a powdery layer. Finally, bigger (but still sub-millimeter sized) caramel-brown crystals sprayed the galena alteration crust. Although the size is very small, it still show beautiful views under the microscope:

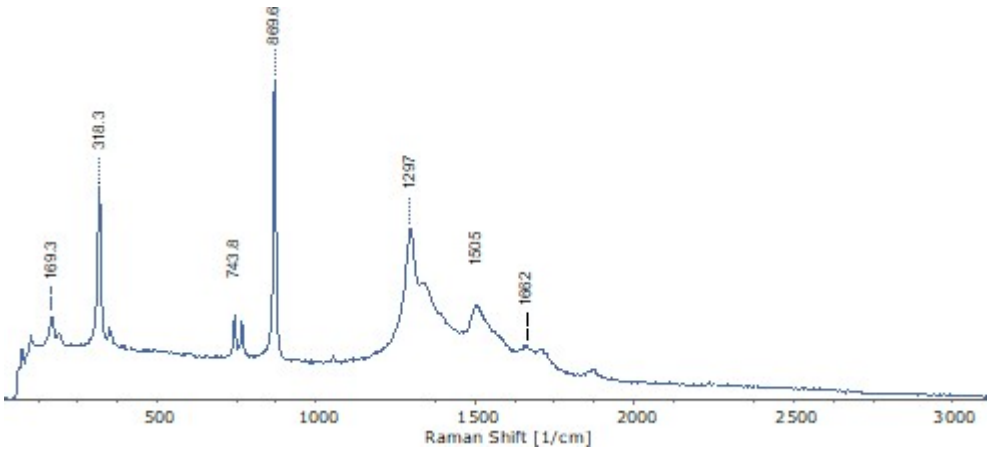
The analysis suggested that these crystals are wulfenite on a layer of very tiny cerussite crystals covered by plumbogummite.



Raman analysis of the alteration crust, showing the cerussite carbonate band (1054 cm-1) and the phosphate of plumbogummite (945 cm-1)

Usually, dull alteration crusts are a boring mixture of phyllosilicates and alteration products, but this is not the case, forming a beautiful, yet tiny-sized, crystal association.

Wulfenite on cerussite-plumbogummite. Field of view 1 mm.



Confirmation of wulfenite identity by Raman spectrometry