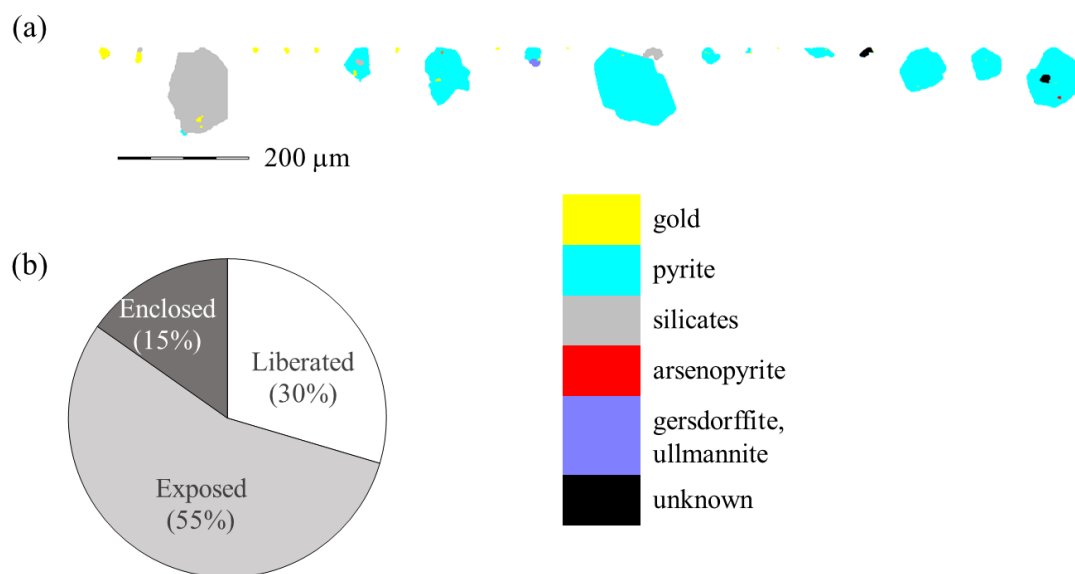
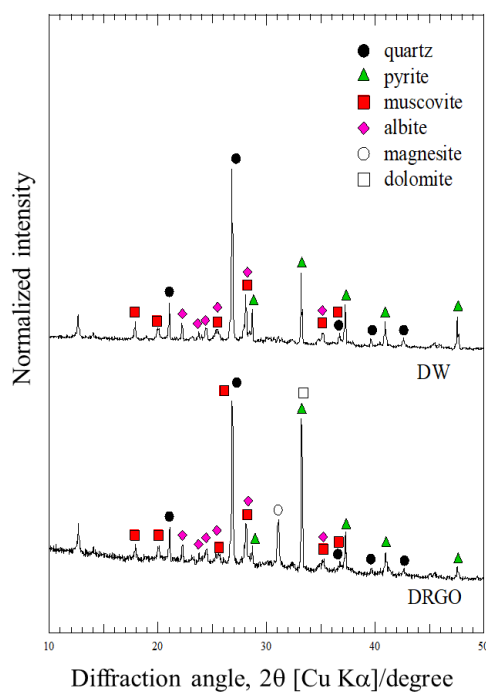


## Supplementary information



**Figure S1.** Mineral liberation analytical results for DRGO, (a) mineralogical 2D mapping of liberated Au and Au-bearing grains, (b) distributions of classified Au grains.



**Figure S2.** XRD patterns of DRGO and DW.