Tania Hidalgo

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Brief Summary

Currently the minerals industry is investigating novel, effective and profitable approaches of commodity recovery, particularly copper. Hydrometallurgical metal extraction, known as in-situ recovery (ISR) or solution mining, is regarded as one potential pathway towards effective metal extraction at high recovery rates and a reduced overall cost also from geologically challenging deposits. Although lixiviants have been evaluated in previous studies for conventional mining, limited information is available regarding their behaviour at conditions relevant for ISR including lixiviant stability and ore and gangue solubility. Cost, environmental concerns and gaps in the fundamental understanding of lixiviant, oxidant and matrix responses at high-temperature and -pressure conditions have prevented the industrial application of ISR for copper mining. This study will investigate experimentally the thermal stability of a variety of lixiviants and their dissolution efficiency at temperature, pressure and pH conditions relevant to ISR.

Education: B. Eng at America University (Colombia), MSc at Barcelona University (Spain).

Research interests: Mineral resources, Hydrometallurgy, reservoir Geophysics, fluid-rock interaction, Geochemistry, Oil and Gas.

Thesis title: "Understanding fluid–rock interactions and lixiviant/oxidant behaviour for the in-situ recovery of metals from deep ore bodies"

Supervisors: Prof. Andrew Putnis, Dr Andreas Beinlich and Dr Laura Kuhar

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