Workshop Schedule (Preliminary)

WS02 - Integrating Hyperspectral Technologies and Geochemistry through the Mining Value Chain

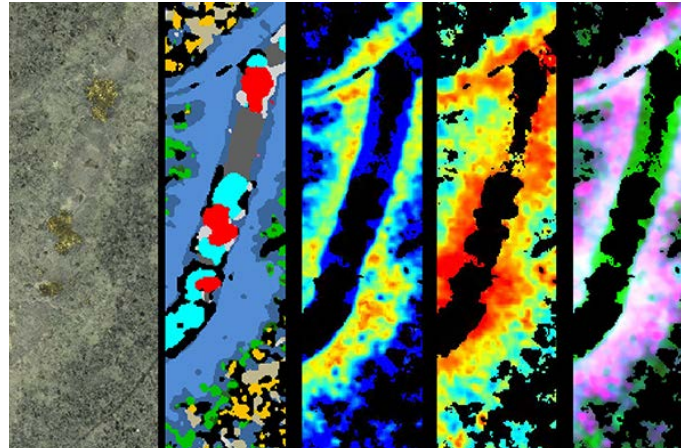www.seg2019.org/workshops.html#2

Date: Sunday, October 6, 2019

Time: 8:30am - TBD

Location: Solace Hotel

Presenters: Sam Scher, *Corescan*
Federico Cernuschi, *Eclectic Rock*

Language: Spoken: Spanish
Slides: English

Hyperspectral and geochemical data require exploration and mining professionals to become increasingly sophisticated and efficient in data handling and analysis; however, as increasing data challenge existing models, it is important to recall foundational geochemical and geological principles. This workshop will explore current challenges to existing epithermal and porphyry models and how these challenges are being addressed with scientific curiosity and practical adjustments to exploration strategies and mine models. Furthermore, the workshop will teach attendees strategies for utilizing geochemical and hyperspectral datasets to their full potential.

Workshop objectives are two-fold: To investigate and integrate large hyperspectral and geochemical datasets in light of geological observations, as well as to introduce the inherent multivariate nature of geological systems that lends them well to advanced data analytical tools. There is commonly a disconnect between large geochemical and spectral datasets and geologic observations that hinders the potential for realistic modeling and prediction. Thus, the secondary goal of the workshop is to highlight that rather than only use a small portion of the pipeline of data coming out of exploration prospects and mines, trained algorithms can help sift through and analyze large volumes of data, and ultimately enhance geological and metallurgical models.

WS02 - Schedule

Sunday, October 6, 2019

- 8:30am - 9:00am: The role of mineralogy and geochemistry in the mine cycle

- 9:00am - 9:45am: Hyperspectral basics

- 9:45am - 10:30am: Geochemistry basics of magmatic-hydrothermal alteration systems

- 10:30am - 10:45am: Break

- 10:45am - 11:30am: Porphyry geology

- 11:30am - 12:00pm: Integrating datasets to understand porphyry PTX space

- 12:00pm - 12:45pm: The evolving porphyry alteration model

- 12:45pm - 1:45pm: Lunch

- 1:45pm - 2:00pm: Defining questions and goals for successful program execution

- 2:15pm - 3:00pm: Integrated hyperspectral-geochemistry soil program

- 3:00pm - 3:30pm: Leveraging hyperspectral and geochemical data to created more quantitative 3D models

- 3:30pm - 4:15pm: Maximizing value of hyperspectral and geochemical data collected during drill campaigns

- 4:15pm - 4:30pm: Break

- 4:30pm - 5:00pm: Applying hyperspectral and geochemical data to geometallurgical programs

- 5:00 - 5:30pm: Reaping the rewards of systematic data collection; Big Data applications

- 5:30pm - 5:45pm: Future outlooks: The evolving role of geochemists and geologists in exploration and mining