

SPECTRAL EVOLUTION

Uranium Exploration

NIR spectroscopy is an important tool for uranium exploration of all types of deposits as a non-contact, non-destructive method for identifying specific clay minerals that can indicate proximity to uranium. Whether a geologist is looking for unconformity related uranium deposits (familiar from Canada's Athabasca Basin) or other types of deposits, a rugged NIR field spectrometer like the oreXpress™ and oreXpress Platinum can significantly increase the speed, accuracy, and profitability of the mineral identification process. Using an oreXpress spectrometer and SPECTRAL EVOLUTION'S EZ-ID™ software can result in fewer drill holes and better results.

In addition to unconformity related deposits, geologists can search for other types of deposits that include:

- ◆ Hematite breccias
- ◆ Sandstone
- ◆ Quartz-pebble
- ◆ Surficial
- ◆ Vein
- ◆ Volcanic and caldera-related
- ◆ Intrusive
- ◆ Metasomite
- ◆ Phosphorite
- ◆ Black shale

An oreXpress or oreXpress Platinum™ spectrometer can be easily used by one person in the field to identify distinct geochemical signatures and alteration halos associated with uranium mineralization. The following minerals are a few of those that can be identified and associated with alteration halos:

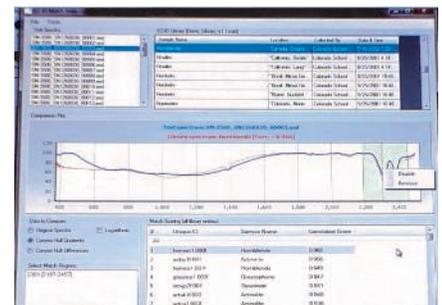
- ◆ Uraninite
- ◆ Sericite
- ◆ Chlorite
- ◆ Kaolinite
- ◆ Illite
- ◆ Dickite
- ◆ Pyrite
- ◆ Chalcocopyrite

Using EZ-ID with the USGS spectral library, or the SpecMIN™ library available from Spectral International, the software quickly provides accurate matching of an unknown target with a known mineral spectra. With an oreXpress spectrometer and EZ-ID software, a geologist can identify minerals indicating uranium in real-time, take a lot of samples, cover more ground, and provide better targeted drilling. In the core shack, faster scanning, more accurate logging and data collection can save on assay costs.

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oreXpress and oreXpress Platinum spectrometers are ideal for core logging applications.



EZ-ID software identifies minerals in real-time by matching your target spectra against a known spectral library such as the USGS library, or the SpecMIN library.

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