

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, oreXplorer and oreXpert can significantly increase the speed, accuracy, and profitability of the mineral identification process. Using an oreXpress, oreXplorer or oreXpert 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, oreXplorer or oreXpert 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
- ◆ Chalcopyrite

Using EZ-ID with the USGS, SpecMIN™ or GeoSPEC library, the software quickly provides accurate matching of an unknown target with a known mineral spectra. With an oreXpress, oreXplorer or oreXpert 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, oreXplorer and oreXpert 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, SpecMIN or GeoSPEC libraries.

26 Parkridge Road ♦ Suite 104
Haverhill, MA 01835 USA
Tel: 978 687-1833 ♦ Fax: 978 945-0372
Email: sales@spectralevolution.com
www.spectralevolution.com

