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Claudia L. Stewart<sup>1</sup>, Larry J. Reimann<sup>1</sup> (1) Power Resources, Inc, Glenrock, WY

## **Using Mineralogy to Enhance Mining and Restoration**

Detailed mineralogy analyses via SEM of uranium roll front deposits can provide valuable information for developing optimal mining and restoration strategies. Several in-situ carbonate leach uranium mines in Wyoming and Nebraska, while still actively mining, are also entering the restoration phase for at least a portion of their mines. Examining roll front mineralogy, including uranium speciation, access and other reactive phases such as pyrite and clays, allows for better assessment of lixiviant effects on and restoration of uranium ore bodies. Combining mineralogy with water chemistry also provides the basis for predictive geochemical modeling of post-mine waters.