

Gold deportment using LA-ICP-MS for high resolution elemental microscopy

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Understanding the distribution of gold in an ore body is essential for making practical decisions about resource economics, mining methodologies, economic feasibility, milling and metallurgy. Gold found in silicate minerals requires a different milling procedure than native gold or gold occurring in sulfides. Ore that has toxic coproducts requires specific environmental management techniques, and may result in penalties at the smelter.

Recent developments in laser ablation ICP-MS allow the rapid generation of high resolution elemental maps for use in gold deportment. Example thin sections and concentrates are mapped to demonstrate the technique.