Comparison of Gold Deportment Study Using QEMSCAN and Tradition Optical Microscopy

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Abstract

The main purposes of gold deportment study are to determine the gold minerals' size, species, liberation and association, esp. for microscopic gold, and the gold bearing minerals' liberation and association, esp. for submicroscopic gold. Quantitative evaluation of mineralogy by scanning electron microscope (QEMScan) analysis and tradition optical microscopy method can meet the need. In this paper, the properties of QEMScan analysis modes are summarized. The comparison of gold deportment study results by QEMScan and by tradition optical mineralogy are made and discussed in data collection, data processing, data properties and visualization, and detecting limitation in the investigation of gold minerals and gold bearing minerals. Finally, some suggestions and comments are made that these two methods have their own advantages and can be complementary with each other in gold deportment study.

Key words: gold, gold bearing minerals, QEMScan, optical microscopy