

## **USE OF FLUOSPAR ORE TEXTURES TO PREDICT POTENTIAL BENEFICIATION PROBLEMS AT OKORUSU, NAMIBIA**

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The recognition of certain megascopic textures in the fluorspar ores at Okorusu, Namibia provide evidence for the character of the host rocks that were replaced and for the prediction of potentially important beneficiation problems. Where the ores have replaced pegmatitic carbonatite, the fluorite concentrates have high phosphorus contents as binary locked apatite-fluorite particles. Those fluorite replacements are characterized by the presence of titaniferous magnetite rims at the orebody margins, and goethite pseudomorphs after equant magnetite, prismatic aegirine-augite, and platy pyrrhotite-pyrite throughout the fluorite orebodies and especially toward its margins. Locally, partly replaced remnants of pegmatitic carbonatite attest to the replacement process. In contrast, where the fluorspar ores have replaced biotite schists and marbles with quartz and feldspar, binary locked potash feldspar-fluorite, and to a lesser extent free quartz, may cause excessive amounts of silica to be present in the fluorite concentrates. At other producing carbonatite-related fluorspar mines, such as Amba Dongar, India, and Mato Preto, Brazil, where the ores have replaced carbonatite, their concentrates may contain excessive amounts of lime in the form of binary locked calcite-fluorite particles. The recognition of original rock types replaced by fluorspar ores associated with carbonatite complexes forms valuable insights into potential problems in their beneficiation.