

**Building effective mineral system models; the importance of merging geophysical observation
with geological inference**

By Ken Witherly, Condo Consulting, Lakewood, CO.

Abstract

The minerals system approach is based on concepts that have been largely germinating for the past 20 years but are now becoming a major component of efforts to rejuvenate minerals exploration into the next decade. Geophysical mapping will take on a far more critical role in this effort as it offers very often the most cost effective means to explore the subsurface, especially when the overlying rocks are unrelated to the targets at depth. This review will examine what might be called the 'state-of-play' in how geophysics is currently being used to start to build an understanding of what mineral systems look like in the real world. While much remains to be done, there is encouragement in what has been achieved to date, although most of it typically without the benefit that the overarching concept of developing a mineral system model.