

Abstract

Economical Viability of Responsible Small-Scale Mining

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Artisanal (ASM) and Small-Scale Mining (SSM) are well-known sources of concern, but they can play a positive role in the sustainable development of an area. It has been demonstrated that SSM can be performed responsibly. Capital investment is needed for this. We propose an approach based on investment risk reduction: proving, in the early stages of the business, a minimum mineral reserve (MMR) able to rapidly return the investment committed. We show a practical methodology for the estimation of the MMR and we undertake a realistic analysis of economic feasibility for a SSM unit in Ecuador, through a cash flow analysis of various scenarios of investment strategy. Results show that the MMR approach is always more attractive in terms of NPV, IRR, and payback time.