Continued Assessment of Acid Mine Drainage Treatment Systems in the Greater Kumurana Valley, Bolivia[1]

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Abstract: The Greater Kumurana Valley in Bolivia, which is just south of Cerro Rico de Potosí, is host to multiple wildcat mines as well as legally permitted operations. These Ag-Pb-Sn-Zn mines produce net-acidic mine drainage with elevated Al, As, Cd, Fe, Mn, Pb, and Zn, among other metals. The water quality in this basin has been monitored since 2006 as mines have closed and opened, and treatments systems came online. Currently, there are two open limestone channels, one anoxic limestone drain, and one lime-dosing active treatment system in the valley. Despite some new wildcat mines opening in the valley, downstream water quality has been protected somewhat by the excess alkalinity generated by the active treatment system. Questions remain about the performance of all the treatment systems in the valley, and the effects of continued wildcat mining expansion.

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