### Advancing Science and Discovery

# SIC NEWSLETTER



www.segweb.org

October 2007 Number 71

## A Preliminary Quantitative Mineral Resource Assessment of Undiscovered Porphyry Copper Resources in the Andes Mountains of South America

Charles G. Cunningham (SEG 1976 F), 1.\* Donald A. Singer, 1.\* Eduardo O. Zappettini, 2.\* Waldo Vivallo S, 3.\* Carlos Mario Celada, 4 Jorge Quispe, 5.\* Joseph A. Briskey, 1.\* David M. Sutphin, 1 Mariano Gajardo M., 3 Alejandro Diaz, 3 Carlos Portigliati, 3 Vladimir I. Berger, 1.\* Rodrigo Carrasco, 3 and Klaus J. Schulz 1.\*

### INTRODUCTION

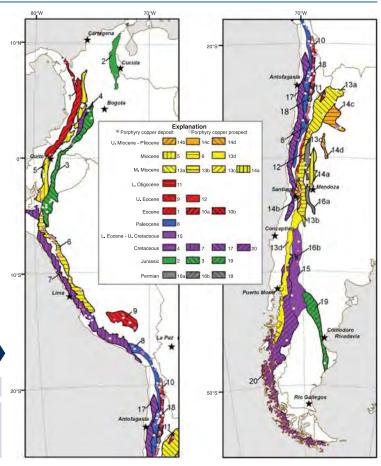
Quantitative information on the probable locations and amounts of undiscovered porphyry copper resources of the world is important to international exploration managers, land-use and environmental planners, economists, and policy makers. The U.S. Geological Survey is organizing and facilitating a cooperative assessment, in collaboration with interested geological surveys and geological organizations, of the likely global distribution, quantity, and quality of selected undiscovered nonfuel mineral resources. This report on undiscovered porphyry copper deposits of the Andes Mountains was produced jointly with the geological surveys of Argentina, Chile, Colombia, and Peru, and is a summary of the more extensive report (>300 pages) that will be published soon. Reports on undiscovered copper resources of other regions of the world are being prepared and will be followed by assessments of the global undiscovered resources of platinum-group minerals and potash.

#### ASSESSMENT METHODOLOGY

The methodology used to quantitatively assess the undiscovered porphyry copper deposits of the Andes is called the "Three-Part Form." It was

1–5,\*All affiliations: see p. 13.

**FIGURE 1.** Map showing tracts permissive for the occurrence of porphyry copper deposits in the Andes Mountains by age. Tracts are numbered. Known porphyry copper deposits and prospects are shown; see text for details.









SEG-GSSA 2008 Conference Misty Hills, South Africa • July 5-9, 2008 www.seg-gssa2008.org