

Bubbles (Not Fluid Inclusions – But Students Take Note!)

Bubbles seem to be in the news these days. The housing “bubbles” that may collapse and lead to global economic problems. The China “bubble” that is certainly of concern to us in the resource industry—will China’s political and economic policies allow for continued growth or could we see major disruptions? The exploration “bubble” that is attempting to locate the resources to keep up with the economic bubbles.

Questions about these bubbles are certainly important for the Society. We operate within an industry that has a history of boom and bust related to global economic conditions. This will probably not change in the near future, though one always hopes that the major mining companies will take a longer-term view to short-term market forces.

The other type of “bubble” that I have become more concerned about is a bubble of our own making. While our Society is the premier professional organization for mining and exploration geoscientists, it is still relatively small, at about 4,000 members in 80 countries. Even assuming that the Society includes only half of geoscience professionals associated with mining worldwide, we can see that on a worldwide basis we are a very small group—we live in a very small bubble.

Most of us, whether in industry, government, or academia, are very aware of the business and importance of mining. We recognize that the products the industry produces are necessary for the world’s economy. It is obvious to us that the standard of living in the world could not be maintained without metals and other rock-derived materials.

I recently presented a talk at a professional meeting on the future of mining, stressing the need to develop new mining techniques that are more environmentally and socially acceptable. Reaction to the talk was generally favorable but several of the students indicated that they still regard mining as a “bad” industry—one that only hurts the environment and people in communities near mining operations. They suggested I look at the websites of nongovernmental organizations opposed to mining to get outside of my own “bubble.”

I spent last weekend doing just that—an exercise I also have my introductory

economic geology students undertake each year. Every time I delve into these proliferating websites I become more discouraged. While there is good information on some of the sites, there is much that is biased or downright wrong—advocacy rather than reason. But an objective examination of mining company and mining advocacy group websites shows they are not much better—they are also message, rather than science, driven.

These web sites are bubbles—both ours in the industry and profession and those of the critics. Neither group seems to really understand or value the opposing perspective. Popping these bubbles to allow meaningful communication between the residents of each will be a very difficult task.

Perhaps the best we can do in the short term is to try to ensure that our own bubbles are transparent. The Society’s mission is not advocacy—our mission is to provide the best science possible. As Stephen Kesler and Mark Hannington wrote in the March-April 2005 introduction to the 100th Anniversary Papers in *Economic Geology*, “we strive to communicate the results of our research to other scientists, exploration geologists, miners, and regulators alike.” They conclude, “This is a big responsibility and one that should keep our journal, its contributors, and its readers busy for another century.”


Our journal is the flagship for our science and is rightly world renowned within the scientific community. The science we in the Society produce is fundamental to how mining is undertaken, and ultimately to how the industry is understood by society at large. However, we must ensure that what we do is not only understandable within our bubble, but that the conclusions and the implications of our work are transparent and communicated to those outside—not only to the scientists, mining engineers, financiers, and regulators whom we generally consider, but also to nontechnical people in society at large and especially to individuals affected by mining in local communities.

How do we achieve this? Exploration geologists are often the first into an area, seeking to determine if mineral potential exists—but how do we also evaluate the social and environmental risks in these

areas? Are we properly trained to do this? How do we ensure our scientific findings are utilized properly? How do we establish trustworthy communication with people outside our technical “bubble”? Beyond being honest and open with our data—what we know, what we don’t know, what the implications are of our data for both environmental and social concerns—what tools can an exploration geologist use to prevent the development of mutually exclusive bubbles?

These are important questions that I do not believe we can yet answer in their entirety. Dealing with the issue of social license, from the exploration stage, to mining, through closure, will be one of the significant challenges for us as individuals, and for the Society, in the 21st century. At the moment we do not even have the tools to evaluate these challenges properly. We have not yet developed techniques to formulate such tools, nor do we have an equivalent to the journal where such “nonscientific,” but critically important, issues can be rigorously and rationally assessed. We are, in effect, trapped in a nontransparent bubble.

The SEG 2006 conference on “Wealth Creation in the Minerals Industry” will have these issues as part of its focus. The first international SEG student chapter conference will be held in conjunction with the 2006 SEG meeting. We hope that this student conference will bring together student leaders from all of the SEG student chapters worldwide, as well as students from countries currently lacking student chapters, to discuss their scientific research and to explore how the Society can better serve student members. The results of this forum by students who represent the future of the Society will provide SEG with crucial guidance as we move forward.

I urge all SEG members, students and professionals alike, to think deeply about the bubbles you may be in but not fully recognize. Come to Keystone so that we can help pop these bubbles, or at least make them somewhat more transparent. 



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