



Mining and Metallurgical Society of America

P.O. Box 810, Boulder, CO 80306-0810

Phone: (303) 444-6032

Web site: www.mmsa.net

OFFICERS:

President, Michael Blois
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EXECUTIVE DIRECTOR:

Betty L. Gibbs
contactmmsa@mmsa.net

President's Message "A Fragmented Industry?"

"A Boom or Not A Boom, that is the Question." Like so many other things in life, I believe that the answer is a "it depends" or "maybe" or somewhere in between the two opening phrases (with apologies to the Prince of Denmark!).

As 2018 draws to a close, it is worth reflecting on what happened to a year that started with such promise. There was even talk that the industry may be entering a new "super-cycle".

Generally, commodity prices had a strong first half of 2018. However, according to S&P Global Market Intelligence, from February to September the copper price is down 13% and the zinc price is down 31%.

We have been in either a super-cycle or in a trough since the early 2000's. It is sometimes difficult to remember the cycles that the mining industry went through before the turn of the century. That seems so long ago now! As we all know the mining industry is, by its very nature, a cyclical industry. However, I recall there was an extended period towards the end of the last century, when the industry was counter-cyclical. Either gold and precious metals were up and base metals (especially the bellwether, King Copper) were down; then the cycles reversed, base metals were up and precious metals were down.

These counter-cycles seemed to get in



Michael D.S. Blois
MMSA President, 2017-2018

sync with each other in 2002 when exploration expenditure dropped to its lowest level from 1996 to 2018. The global mining industry then had a period of sustained growth from 2003 to 2008 when the global financial crisis hit all of us. Using non-ferrous exploration budgets as a benchmark (more on the impact of this benchmark later), the super-cycle resumed in 2010 and lasted until 2013/14. Exploration expenditure then bottomed out in 2016, at a level close to that of 2006. For most of this century, it appears the mining industry was in sync around the globe. Most sectors were either all up or all down.

Exploration budgets for 2018 were 20% greater than those for 2017 which in turn were 15% greater than 2016. S&P Global Market Intelligence forecasts that the exploration budget for 2019 will be 10-15% greater than 2018. Whilst this is clearly a good sign, S&P does caveat

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Have you paid your dues yet?

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the forecast with potential headwinds in geopolitical tensions and expanded trade wars. I wonder if next week's G20 Summit in Buenos Aires will manage any reduction in the global tensions (especially those with China which continues to play an ever larger role in the global mining industry); I am not holding my breath.

Today, as I write this Newsletter, the EU has approved the Brexit deal. I believe that getting the "deal" approved by Parliament in Westminster will be far from plain sailing.

It is worth noting that the lithium exploration budgets for 2018 are 55% higher than those for 2017. For the same time frame, the 2018 budgets for Latin America are double the 2017 forecasts. I acknowledge that the lithium market is significantly smaller than some of the other metals markets and that it could almost be called a niche, or even trendy, market. Further, the price for the benchmark lithium carbonate has dropped back in the past couple of months. Nevertheless, the lithium

example is indicative of how the global mining industry is becoming fragmented.

Exploration budgets can be regarded as a "leading indicator" for the overall state of the industry. As we all know, given the risks associated with exploration, there can be no guarantees that increased exploration activity will result in increased mining activity.

I mentioned in my August Newsletter that the major mining houses believe that the recovery is under way and conditions will only improve. I used Anglo American's \$5.3 billion Quellaveco project in Peru as an example.

The traditional centers for financing in both North and South America, Vancouver and Toronto, have just about dried up as far as investing in the Junior Mining Companies. Financing from Canada is now focused on marijuana and crypto-currencies. Not that I know much about either, but I am told that the payback periods for both can be significantly

shorter than for mining projects. On the other hand, these new investment vehicles, like mining, are not without their risks; the Bitcoin has lost about 60% of its value in a year. Clearly it is not just the mining industry that is subject to "boom and bust" cycles.

The Australian investment community appears to be willing to invest in mining projects both large and small. As a result, the Australian based companies, both operating mining companies and the service companies seem to be further along the recovery curve. I believe that the state of the South American industry lags that of Australia and is in turn followed by North America.

Usually, exploration is at the very beginning of the "project life cycle". Exploration is often followed by in-house studies for the larger mining companies. These are then followed by early stage studies executed by external consultants. More detailed feasibility studies are likely to be carried out by engineering companies.

I have recently seen an increase in the number of feasibility studies: the "dusting off" of previous projects, the updating of feasibility studies for 2019 budgeting purposes and new projects. I have also seen a recent increase in sustaining capital and equipment replacement expenditures, for example in truck fleet replacements; the increase in this type of expenditure for 2018 is likely to be 25-28% higher than in 2017. However, with the overall lack of financing for the Junior Mining Companies, the completed feasibility studies have not, in general, progressed into purchase orders for the Original Equipment Manufacturers (OEMs). In many cases the upturn does not seem to have reached the OEMs and these companies continue to lag behind and lose experienced staff. This is a usual part of the "life cycle" of projects.

However, when the upturn does reach the OEMs, the critical staff are likely to have been recruited away by both

Membership Applications

New Regular and QP Member Applications:

The following individual(s) have submitted membership applications and or changes to their membership status. They have either received approval of the Membership Committee as candidates or are currently under review:

If any member of MMSA has good cause to believe that any of the applicant(s) should not be granted Regular membership or QP membership, as appropriate, you are requested to make known your objections, in writing, to **Betty Gibbs**, Executive Director, within 30 days from issue of this Newsletter. In the absence of any objections and after receiving approval of the various committees, the candidate members and those members requesting a change of status will be confirmed as Regular Members or QP Members, as provided by the ByLaws.

Applicant

Endorsers

No new applications

QP Applications

David E Drips

Warren Rehn
Jeff Clevenger
John Thompson

Area of Special Expertise

Add QP for Mineral Valuation and Finance; Minerals Project Costing, Infrastructure, Management

the engineering companies and the client mining companies themselves. The OEMs could well find themselves asking “Where Have All The Grey Hairs Gone...” (Newsletter, August 2018).

I believe that the above paragraphs describe some examples of increased fragmentation within the industry.

Is this more fragmented market the “new normal”? Or is it more realistically reverting back to what used to be the “old normal”?

In conclusion, I believe that the global mining industry is on the upturn, just that the pace of the upturn may appear different in various segments of the global industry.

Membership Update

The following changes in membership have taken place since the last newsletter, with the authority of the respective membership committees.

Regular Member Additions:

James Hesketh
Jeffrey Parshley
Walter Weinig

QP Members Confirmed:

James Hesketh, Mineral Valuation and Finance, and Mineral Costing, Infrastructure, and Project management

Walter Weinig, Environmental Permitting and Compliance

Membership Deletions:

Richard W. Banghart, Resigned
Joseph G. Wargo, Resigned

MMSA presently has a total of **350** members, **1** in process. Currently, **204** members are QP members

Additions, deletions and routine changes to the Society’s data base and member biographies are accessible through the Members Only page in our web site, at www.mmsa.net. This data base is the best source for information on any particular member.

Thank you for your on-going support of The MMSA.

I would like to close by wishing a safe and joyful Christmas / Holiday Season to all members and your families.

MMSA News

Council Retreat

The 2019 Council Retreat will be held January 12, 2019 at the Golden Hotel in Golden, Colorado. Discussions about the future of MMSA will continue. A highlight will be a report from the Exploratory Committee about the proposal submitted suggesting collaboration and/or merger opportunities with other organizations. Strategic planning for ongoing and new MMSA activities is also on the agenda. The Council will review and approve the nominations for 2019-2020 officers and councilors.

A member survey will be ready soon. This is your opportunity to make suggestions about MMSA and how we can improve the Society. You are also encouraged to submit topics to the Council to be considered at the retreat.

Committee Updates

The **Membership Recruitment Committee** is beginning to work on a brochure that can be given to prospective members.

Ad Hoc Exploratory Committee. The Committee will meet in Denver on January 11, 2019 to finalize the report and define talking points to be presented at the Council Retreat on January 12.

Next Big Thing—AML Conference Committee. The committee is actively working on plans for a spring conference to be held at the University of Nevada Reno.

Nominations Committee. Announcements of the nominees will be

made in January. A new slate of officers will be presented for election at the 2019 Annual Meeting. In early January you will receive the ballots for voting on the candidates.

Other MMSA News

MMSA member Dick Bullock wrote the first volume of his memoir: *‘From Hard Knocks to Hard Rocks: A Journey in My Shoes’*

The new e-book details Dick’s journey from a rural Ozarks boy to world-renowned mining engineer. The book is currently available on Amazon Kindle and will be available at bookstores in January 2019. If you know Dick—or even if you don’t—this book is a fascinating glimpse into how his experiences formed his life and solidified his character to make him a successful mining engineer. To find the e-book, go to Amazon.com and enter the title in the search box. A copy of the press release is on the MMSA Web page.

News from SME

SME and NMA—SEC Acts to Modernize Resource Disclosure Standards for Mining

The Society for Mining, Metallurgy & Exploration Inc. (SME) and the National Mining Association (NMA) today issued a joint statement on the Securities and Exchange Commission’s (SEC) announcement that it has voted to adopt amendments to modernize the property disclosure requirements for mining registrants, and related guidance, under the Securities Act of 1933 and the Securities Exchange Act of 1934.

The new rules can be downloaded at:

<https://www.sec.gov/rules/final/2018/33-10570.pdf>

SME’s 7th annual Current Trends in Mining Finance Conference (CTMF) 2019 Connecting Mining, Finance & Engineering Executives

New York City April 28 to May 1, 2019

Meet all and hear mining, finance, investment and engineering experts evaluating, advising and financing mining projects world wide

Hear about the latest trends from leaders advising miners and explorers with managing non-technical, social, technical and financial issues and risks to raise capital.

<http://community.smenet.org/currenttrendsminingfinance/registration?ssopc=1>

SME Short Course:

One of the short courses being held at the SME 2019 Annual conference is:

Comparison of NI 43-101 Reporting Standards with the JORC Code.

The course includes PDH credits.

**Beyond Closure –
Repurposing Mined Lands.
CSM - Nov 7 2018**

The summit was held in Golden, Colorado. The goal was to move the focus on successful mine closure as the endpoint of mining to the ultimate beneficial repurposing of mined lands. There were over 100 attendees to this one day meeting.

The first presentation was by Mary Jane Loevlie and Dana Crawford who are working on development of the Argo Mill Superfund site in Idaho Springs, Colorado. A resort, shopping area, and connecting to a hiking trail system are planned.

The Argo Mill is presently open for tours and has a museum. The development will not include cleaning up the old mine dumps.

The day included two panels related to closure and repurposing mined lands: one with an industry perspective and the with the agency perspective. The industry perspective panel talked about mineral processing and refining sites, open pits and quarries, tailings and storage facilities, and underground mines.

The agency perspective panel discussed repurposing to municipal water supply, the French Gulch redevelopment, and identifying repurposing opportunities. Representatives of the U.S. Geological Survey and the Colorado Department of Health and Environment were on the panel.

Two breakout sessions gave the participants a chance to comment about repurposing open pit and underground mines, tailings storage facilities, heavy industrial operations including slag and overburden, company towns, and rock quarry/borrow areas. Participants in the breakout sessions talked about particular properties, objectives of the reclamation plan and discussed challenges, successes, and lessons learned.

Student teams from the Colorado School of Mines also presented posters on suggested plans for repurposing the Henderson Mine site.

When the summary is released, it will be posted at:

<https://mining.mines.edu/mine-summit/>

**Member Profile
Laura Skaer**

The American Exploration & Mining Association announced that Executive Director Laura Skaer will retire effective March 31, 2019, after more than 22 years of service. “I have had the pleasure and honor of being AEMA’s Executive Director for 22 years. It has been the most rewarding and personally satisfying part of my 44-year professional career since I graduated from law school. Mining is the greatest industry on the planet and AEMA members are the best of the best,” Skaer said.

President Bob Comer glowingly recognized this leadership, stating, “Laura is renowned within the mining community for her passion, knowledge and countless contributions to the industry that have established her among the most respected advocates for mining in the Nation.” In 2013, Laura was named one of *100 Global Inspirational Women in Mining* by Women in Mining UK.

For the rest of Laura’s impressive biography, visit:

<https://www.miningamerica.org/american-exploration-mining-associations-laura-skaer-to-retire/?>

Mark Compton, currently Executive Director of the Utah Mining Association and former AEMA Government Affairs Manager, will be taking over as the new AEMA Executive Director.

QP seals are available from MMSA.

The seal comes as a self-inking rubber stamp and the stamp is about 1 high by 2.6 inches wide. The stamp has the MMSA logo, member name, and member number. The cost is \$35, including shipping. To order a QP seal, contact the MMSA office or order directly from the MMSA Web site (www.mmsa.net/payments). The QP seal is in the Products category.

2008 MMSA Centennial Medallions are available for the great price of \$40. The coin has 1 oz of silver and 24 carat gold plating. Contact MMSA office to order.

