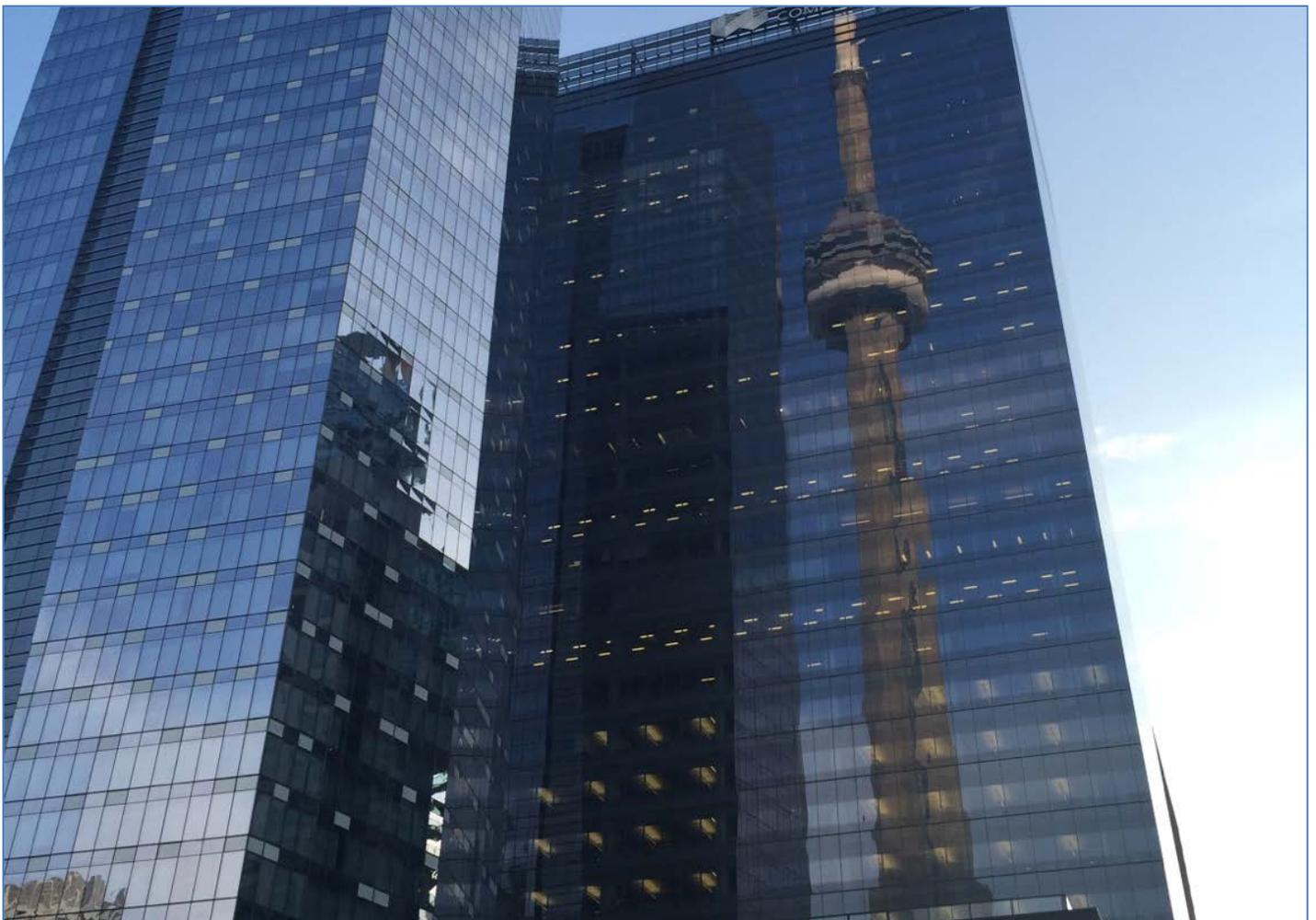


**The Prospectors and Developers  
Association of Canada (PDAC)  
Convention 2016  
Toronto**

**Highlights from ERM**



# Introduction

The Prospectors and Developers Association of Canada (PDAC) hosts one of the world's leading annual conventions for individuals involved in mineral exploration. This year it brought more than 22,000 attendees and 900 exhibitors from over 100 countries to Toronto, Canada.

Four years into the downturn, we see the following overarching trend — over supply and reduced demand have resulted in continued pressure on the mining sector as it navigates the new normal. Stakeholders demand more transparency, operators look to sell assets and/or reduce operating costs to finance debt, and new projects remain unfinanced.

Today's commodity and priced-driven environment calls for more focused approaches. This is especially true in the realm of risk management, where recent fatal and environmental catastrophic events have impacted the industry's credibility.

As a leader in the global mining sector, Environmental Resources Management (ERM) facilitated and participated in a variety of conversations on this topic. During PDAC, we spoke on the importance of stakeholder and community engagement, addressed business critical risks around water management, and facilitated discussions on how companies can manage their risks both at a corporate and operational level.

This document contains our observations and insights from the PDAC Convention 2016. While it is not exhaustive, we hope it brings an understanding to new concepts and/or reinforces some of your own thinking.



**Louise Pearce**  
Global Managing Partner, Mining Sector, ERM

# Observations and Insights

## *Readying for the Rebound*

Companies have accepted that the rebound remains elusive. Those still in the market are working hard to balance long-term planning and supply pipelines, with many companies selling or merging assets to survive the downturn. The anticipation is that 2016 will be a year of market-changing deals.

## *Risk Integration and Aggregation*

Mining companies are looking to better integrate and aggregate their risks. Recent events have highlighted how risks need to be understood and managed across both the lifecycle of a mine and the entire portfolio of mining assets. Likewise, the management of these risks needs to be integrated – and implemented – consistently.

## *Staying Out of the Spotlight*

Certain stakeholders and the media are quick to highlight environmental and safety events. Risk management is a hot topic at both the corporate and asset levels. Companies are beginning to understand the importance of working collaboratively to manage hazards. Key to its success is clear communication and implanting risk protocols at all levels of an organization.

## *Resource Localism*

Resource localism means that communities are now demanding a voice (indeed, often a choice) in how and whether a project goes forward. Project-affected communities expect to see benefits from resource development, and now have impactful strategies to demand their involvement in the decisions that will affect their lives.

Social issues that the industry continues to struggle with are therefore the direct result of companies' failure to manage and meet communities' expectations. The resulting project delays and cancellations are a foreseeable outcome that can, and must, be proactively managed.

Following the conference, we have developed a paper on how 'Resource Localism' is reshaping the relationship between mines and the communities in which these mines operate. Access the paper [here](#).

*The focus of projects needs to shift to resource localism, ensuring that resource development will create sustainable benefits to local people and communities.*

## ERM Panel: Managing Catastrophic Hazards



ERM hosted a panel that examined how recent high-profile catastrophic events have affected industry practices in maintaining secure and credible assets. Facilitated by Louise Pearce, Global Managing Partner for ERM's Mining Sector, the panel comprised:

- **Claude Ferron**, *Independent Director, Falco Resources*
- **Jonathan Molyneux**, *Partner, ERM*
- **Jerry Danni**, *Senior Vice President, Sustainability, Goldcorp Inc.*
- **Graeme Burt**, *Managing Partner, rePlan (an ERM Group Company)*

### Setting the stage

Louise opened the discussion by shining a spotlight on recent catastrophic events. She explained how many have resulted in fatal consequences to workers, contractors, and community members. These events can reach far beyond physical outcomes, often damaging stakeholder trust and/or value and generating socio-economic challenges for affected communities.

Louise then turned to Graeme who had recently returned from Brazil. He described confronting the images he witnessed while flying over the Mariana dam crest two days after the embankment failure - a disaster that claimed 17 lives. He brought to life the magnitude of the destruction and the good fortune that had it not been for the time of day that the event occurred, the loss of life might have been significantly amplified.

Louise posed a number of questions to the panel in an effort to understand what approaches organizations have taken or can take to manage such hazards.

### Key Take-Aways

- **Business disruption and loss of revenue.** While characterized as unlikely, a catastrophic hazard has the potential to render a site or operation incapable of delivering critical business functions.
- **Causes for rate increase.** As territorial and labor boundaries are pushed, the occurrence of a catastrophic event heightens.
- **The effect of media.** When a catastrophic hazard occurs, daily media coverage keeps the issue top-of-mind for stakeholders and communities. Social media further disseminates the event across geographies at lightning speed – bringing an event that took place far away, into our own backyard.

### Understanding stakeholder expectations around catastrophic events

Claude set the scene by discussing stakeholder expectations and how media affects perception, “*The media paints a consistent picture of the planet being under more stress than it was 10 to 15 years ago.*” He pointed to headlines on greenhouse gases, global warming, the scarcity of water, and new regulations. Society sees these protocols as protective measures, meaning that when they are not met and a disaster does occur, the tolerance for these events is much lower. Technological advances have also helped companies develop more expansive operations. Mines are now built at higher altitudes, and workers are on-site in rotating shifts that allows for 24-hour workdays – pushing territorial and labor boundaries.

## Blind spots around potential high-consequence events

There is a blind spot in risk management, and it doesn't represent the value at stake. This is further complicated by some sites that 'put a lid' on potential risks that could have material risk. The lack of transparency and desire for a 'good news culture' shields the disclosure of these risks, not allowing each individual up and down the chain to always address what they need.

Jonathan discussed a conversation he had with a CEO who had multiple assets in his portfolio, *"It's simple," the CEO said, "if there is risk that has a high magnitude, I'm not interested in how probable it is. Ultimately, I want people to tell me it's not going to happen."*

## The investment case around risk management in a downturn

*"In relation to a catastrophic event, having the appropriate level of expenditure is not negotiable"* Jerry stated. He continued, *"Are you going to put less rock bolts in an underground mine due to budgets constraints and risk a fall-of ground? No, you're not going to do that."*

A downturn cannot change how a company manages risk. In fact, they should consider increasing their investment given that they may be distracted by the bottom line. That said, Jerry stressed that new technologies, such as remote sensors, or innovation introduced through student programs can help the industry be more efficient.

Many of the measures required ultimately don't cost companies a lot of money. These tactics then need to be embedded in the way companies do business, and the related governance should go all the way up to the boardroom. The vision needs to be clear, with the goal to be "this is how we run our business, versus we're doing it to meet a sustainability goal."

### Risk Assessment Considerations

- A dynamic process that's conducted by those knowledgeable in the area and scheduled quarterly or when change occurs.
- Good standards can be trained, implemented, and then measured against with low cost, as can maintaining an Operating Management System (OMS).
- These tactics need to be embedded in the way companies do business.

## Changes in thinking around risk management and the challenge of embedding this into operations

Jonathan stressed that he has seen a huge shift in thinking *"We have evolved from the Bird Triangle to the realization that strategies for fatality prevention need to be different."* The debate has further evolved to catastrophic hazards and the specific controls needed to manage these events. However, we still need to destigmatize the concept of risk management. The perception needs to move beyond 'it's the role of risk teams' to 'how do we embed risk management into how operators run their processes?'

## Closing thoughts

The panel reinforced the importance of looking at issues from a macro level.

- Are risk management concepts top-of-mind throughout the whole organization, and is it a core value?
- How will the local communities be affected?
- What is the next generation of ideas, and how do they help us move forward?

As an industry, we need to continue to look at issues on the periphery and feed them back into the conversation. Improvement, if it's a dynamic action, is never finished

# ERM Sessions at PDAC 2016



## **Preparing for the Rebound – Strategic Stakeholder Engagement**

When money is tight and project timelines are uncertain, what messages and approaches should companies use to build and maintain constructive relationships with their stakeholders? ERM facilitated a panel discussion to discuss what companies can do now at both the exploration and production stages to prepare for the eventual rebound.



## **The Beyond Zero Harm Framework – Measuring Community Well-Being**

This framework was designed as a participatory process for discussing, defining, measuring, and analyzing community well-being. This session laid out the framework's phases, which are designed to complement existing company initiatives for baseline data collection (such as Social Impact Assessments) as well as existing community planning and development processes.



## **Exploring key issues in company-community engagement and Aboriginal participation in the mineral industry**

Clem Pelletier, Managing Director of RTEC and Senior ERM Technical Advisor, presented a case study that examines joint venture models and strategic alliances relating to the Tahltan and mineral projects. He discussed the formation and governance structure for the RTEC joint venture, through to how they measure success and manage benefits sharing.



## **Mining & Integrated Water Management – Managing Business Critical Water Risks**

Derek Chubb, a Senior Partner, demonstrated how the development of a strategic framework can provide management principles for businesses, while allowing site operations the flexibility to tailor solutions to their particular water risk profile.



## **ERM Workshop: Untying Bowties – Identifying and Using Critical Controls to Manage Risk**

ERM facilitated a workshop that demonstrated how a structured bowtie process can support the identification of critical controls and management requirements to effectively reduce related risks at the asset level.

# About ERM

With over 5,000 people in 40 countries, ERM has been advising mining sector clients for more than 40 years in the areas of entering new markets, capital project support, and operating in a safe, compliant and sustainable way. This includes using information solutions to improve transparency and corporate reporting, as well as advising on a firm's social performance, and asset retirement strategies. The range of work we do for our clients gives us a broad based and hands on perspective to many of the more pressing issues facing the extractive sector and hence a wealth of insights and advice we are happy to share.



## Contact Us

We welcome feedback on our participation at PDAC 2016. You can find details of our various presentations [online](#).

Please contact Louise Pearce, Global Managing Partner, Mining Sector, at [louise.pearce@erm.com](mailto:louise.pearce@erm.com) or visit [www.erm.com](http://www.erm.com) for more information on how ERM can help you.

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received, or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation. ERM would be pleased to advise readers how the points made within this document apply to their circumstances. ERM accepts no responsibility, or liability for any loss a person may suffer for acting or refraining to act, on the material in this document.

© 2016