



Canadian Institute of Mining, Metallurgy & Petroleum

Management and Economics Society



For its **Wednesday, January 25th** meeting, the Toronto Discussion Group of CIM's Management and Economics Society is pleased to welcome

**Paul Tim Whillans, Principal
Whillans Mine Studies Ltd.**

Underground Mining: The Difference between Optimal and Real

An underground mining study compliant with NI43-101, JORC or similar reporting code is generally assumed by the public to be representative, independent and impartial. However, it has been well documented by academics and professionals in our industry that there is a sharp difference between forecasts presented in these underground studies and the actual costs when a mine is put into production. For underground mines, the risks associated with obtaining representative information are much greater than for surface mining and the cost of accessing underground ore is also proportionally much greater. There is a pressing need to align expectations, by improving the accuracy of projections leading to reduced risk to mining companies and investors and provide more reliable information to government agencies, the public, and more importantly, the communities in which the proposed mine will operate. The presentation will cover

- Reasons studies tend toward over optimism
- Simple tools to identify which studies are likely to be more closely aligned with reality
- Specific points where underground mining studies are generally weak
- Practices currently in use that lead to a composite or aggregate effect of over optimism
- Effects of overly optimistic studies
- Specific changes necessary to overcome these challenges; and
- Discussion and awareness with participants leading to better standards

Paul Tim Whillans is a consultant for underground mining and is based in Vancouver. He has been in the industry for 35 years working almost exclusively with underground mines. Recently, he was General Manager of Operations for Mubadala's Gold Project in Colombia. He performs due diligence studies, operating improvement advice and audits, and has worked extensively in Latin America. He is currently writing additional articles on:

Mining Dilution and mineral losses
Alternative economic models for mining
Contingency what is it?

He dedicates volunteer time to welcoming refugees in Vancouver



Please join us!

Refreshments at 4:15pm – Presentation at 4:35 pm

Wednesday, January 25, 2017

at Borden Ladner Gervais LLP

Bay Adelaide Centre, East Tower, 22 Adelaide Street West, 34th floor, Toronto

Thank you to our sponsor, Borden Ladner Gervais LLP for again providing the space.

To assist our preparations for this event, please be sure to RSVP by email in advance to secretary@cimmes.org if you are interested in attending.



Carlos da Costa
Chair

Alicia Ferdinand
Past Chair

Lisa Ross
Treasurer

Rachel Jongsma
Secretary

Jacqueline Allison
Megan Dover
James Martin
Education

Ben Burkholder
Simona Cara
Alyson Caseley
Jessie Liu-Ernsting
Steve Suarez
Dennis Waddington
**Toronto
Discussion Group**

Keith Spence
Michael Samis
Carlos da Costa
**CIMVAL Mining
Valuation
Standards**

Simona Cara
Communications

Mark Lamoureux
**Publications - Peer
Review**

Ben Burkholder
Jessie Liu-Ernsting
Larry Smith
Jane Spooner
**Management &
Finance Day**