



International Fault Slip Control Research Initiative (IFSCRI)

Experimental Design Workshop: Modeling, Data Integration, Mine Planning

April 23, 2010 | Kingston, Ontario | Four Points Sheraton Hotel

AGENDA

07h30 - 08h00 **BREAKFAST (Provided)**

Introduction

08h00 - 08h30 Workshop objectives | **P. Kaiser, D. Duff**

08h30 - 08h45 Background: High level summary of workshops to date | **D. Duff**

08h45 - 10h15 **The biggest challenges we face in controlling fault-slip in underground high stress ore bodies**

- Challenges faced in controlling fault slip rock bursting at Xstrata Nickel's Craig Mine- A review | **B. Simser**
- Do we know how to assess the amount of stored energy in faults and fault systems? | **R. Brummer**
 - Coming to terms with the problem of energy release associated with fault slip
- How do we currently identify or characterize relevant structures or systems?
- How do we determine the potential for fault propagation, fault re-mobilization, fault system disturbance or "failure", and rock mass failure? | **M. Diederichs**
- How do we determine our "position" on the full stress-strain (or stress-displacement) curve? | **W. Bawden**

10h15 - 10h30 **COFFEE BREAK**

10h30 - 12h30 **Mine design and planning optimization when dealing with fault slip energy release issues in underground mines**

- What are the current approaches to mine design and planning issues when dealing with fault slip problems or fault-slip prone ground? | **S. Carlisle**
- How do we engineer to control energy build up on faults or within fault systems? | **W. Blake**
- How do we engineer or control energy release on faults? | **W. Blake**
- Are the current rules of thumb sophisticated enough?
- What numerical tools help us today? | **M. Cai**
- What opportunities are there to create greater flexibility from a mine design and then mine planning standpoint when addressing fault slip energy release issues (if improved analysis allows for option analysis)? | **B. Buss**
- What if our design fails and we still have unreasonable energy release during mining? | **A. Henderson**

12h30 - 13h00 **LUNCH (Provided)**

13h00 - 1500 **Our current modeling deficiencies**

Review of the character and nature of what we are trying to achieve in mines with a fault slip problem and of the capability (or lack thereof) of our current modeling approaches to dealing with it

- How do we currently model for expected behaviour? | **M. Board**
- How to translate fault characterization (measurements) and properties data into fault behavior models
R. Bewick
- How do we recreate more complex fault systems or realistic fault geometry | **S. McKinnon**
- How can non-conventional use of numerical models help to derive realistic (potentially heterogeneous) initial conditions? | **S. McKinnon**
- Do we adequately consider mine stiffness issues? | **P. Kaiser**
- Are new approaches needed? | **G. Swan**

15h00 - 15h15 **COFFEE BREAK**

15h15 - 16h00 **Where are the research gaps and opportunities in what we've heard today?**

16h00 - 16h30 **Wrap Up and Next steps | S. McKinnon, M. Diederichs**

16h30 - 16h45 **Concluding remarks | P. Kaiser**