

Deep Mining 2014 Conference report

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Delegates dined underground amongst the rocks in the Vale Cavern, Science North

The Seventh International Conference on Deep and High Stress Mining (Deep Mining 2014), hosted by the ACG, took place in Sudbury, Canada, 16–18 September 2014. Deep Mining 2014 was the first international geotechnical mining event in Canada hosted by the ACG and was highly successful, with over 300 mining industry professionals attending the conference.

Deep Mining 2014 comprised a three-day focussed technical programme that included 61 presentations and brought together leading visionaries, strategists and experts from local and global industries to discuss and document their experience of deep mining. The objective of this series of international seminars is to promote discussion and documentation of the latest technologies and practices of mining in deep and high stress environments.

Deep Mining 2014 attracted significant international interest and the conference chair for Deep Mining 2014, Associate Professor Marty Hudyma, Laurentian University and the ACG team were pleased to welcome delegates from over 120 companies from countries including: Australia, Belgium, Canada, Chile, Colombia, Finland, Germany, Ireland, Japan, Norway, Poland, P.R. China, South Africa, Sweden, Switzerland, UK and USA.

The ACG has enjoyed a long and proud association with the Canadian mining industry since our inception in 1992, and collaborated with the University of Toronto and the University of the Witwatersrand to host Deep Mining 2014 in Canada. Sudbury was a particularly relevant location for the Deep Mining Conference, with 12 currently active underground mines within 50 km of the conference venue, six of which are operating at depths greater than

1,500 m. Over 50 delegates attended from the city of Greater Sudbury, and over 180 conference attendees were from Canada.

Deep Mining 2014 followed on from previous events held in Perth, 2012; Santiago, 2010; Perth, 2007; Quebec City, 2006; Johannesburg, 2004; and Perth, 2002. The past events often had a strong focus on ground conditions, ground support and mining-induced seismicity, which were discussed at this conference, with the addition of strong technical contributions in the areas of mine productivity, mine planning and ventilation, along with several deep mine case studies.

Deep Mining 2014 opened with an address from Samantha Espley, Vale Canada Ltd., Canada; *Learning from each other*. Following this, David Counter, Glencore Canada Corp., presented the first keynote address; *Kidd Mine – dealing with the issues of deep and high stress mining – past, present, and future*. Keynote presentations opened the second and third days of the conference; Ray Durrheim, University of the Witwatersrand and CSIR, South Africa delivered his address titled, *Has research and development contributed to improvements in safety and profitability of deep South African mines?*; and Stephen Hardcastle, Canmet Natural Resources Canada, Canada, discussed, *The continuing challenges to provide adequate ventilation and a safe environment in deep mines*.

The ACG is appreciative of the support received from the Deep Mining 2014 sponsors, namely the major sponsor ArmorPIPE® Technologies and industry sponsors SRK Consulting (Canada) Inc. and Vale Canada Ltd.

Alongside Deep Mining 2014, delegates had access to a number of associated events prior and post conference. A Practical Rock Mechanics

in Underground Mines Course took place from 13–14 September 2014, presented by Drs Will Bawden and Kathy Kalenchuk, Mine Design Engineering, Canada.

An Applications of Seismic Monitoring in Mines Course, also held on the 13 September, was presented by Drs Dmitriy Malovichko and Daryl Rebuli, Institute of Mine Seismology, Australia and South Africa.

Getting the Most from a Seismic System Workshop was presented by Dr Dave Collins, Dr Yuzo Toya, Tony Butler and Alexander Mataseje, ESG Solutions, Canada on 14 September.

The ACG's Ground Support Subjected to Dynamic Loading Workshop was held on 15 September. The workshop was facilitated by Winthrop Professors Yves Potvin and Phil Dight.

Following the conference on 19 September was the Practical Calibration of Numerical Models for Meaningful Predictions of Ground Behaviour Course, presented by Drs Bawden and Kalenchuk.

Two site visits took place on the 19 September 2014: Glencore Company's NiRim South Mine of Sudbury Integrated Nickel Operations, and Creighton Mine, operated by Vale Canada Ltd.

The proceedings of the Seventh International Conference on Deep and High Stress Mining, edited by Professors Marty Hudyma and Yves Potvin, provide documentation on the latest technologies and practices of mining in deep and high stress environments. These proceedings feature 62 technical papers, and are accompanied by a CD of colour figures from the publication. Deep Mining 2014 proceedings and individual papers are available to purchase; visit www.acg.uwa.edu.au/shop.