# PRELIMINARY PROGRAM

(7 plenaries + 49 presentations = 56 presentations as of August 12)

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<th>Represented Countries (11): Argentina, Australia, Brazil, Canada, Chile, Germany, New Zealand, Peru, Spain, UK and USA</th>
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### Inauguration Ceremony, Wednesday, September 9

**Words of Welcome**

- **Mimy Mackenzie**, Conferences and Publications Manager, Gecamin, Chile
- **Joanne Heyes**, Planning for Closure 2020 Chair; Head of Resource Engineering, BHP Technical Centre of Excellence, Australia
- **Glen Corder**, Associate Professor, Sustainable Minerals Institute, The University of Queensland, Australia
- **Juan Palma**, Academic, Pontificia Universidad Católica de Valparaíso, Chile

**Opening Addresses**

- **Title to Be Confirmed**
  - **Joanne Heyes**, Planning for Closure 2020 Chair; Head of Resource Engineering, BHP Technical Centre of Excellence, Australia

**Integrated Mine Closure: from Guidance to Good Practice on the Ground**

- **Aidan Davy**, Chief Operating Officer, ICMM, UK

### Plenary Session 2, Thursday, September 10

**Social Aspects and Stakeholder’s Involvement in Mine Closure Planning**

- **Katherine Nolan**, Social Performance Principal, Anglo American, UK; and **Ursula Weber**, Corporate Relations Manager and Social Development Copper, Anglo American, Chile

**Title to Be Confirmed**

- **Paul Maidstone**, Environment Manager, Glencore, Chile

### Plenary Session 3, Friday, September 11

**Closing and Rehabilitating Before the Closure: The Benefits of Progressive Mine Closure**

- **Kim Ferguson**, Global Practice Lead Closure, BHP, Australia

**Are We Asking Enough off the ‘Right Questions’ When We Use Modelling to Predict Closure Performance?**

- **Mike O’Kane**, President, O’Kane Consultants, Canada
Panel Discussion, Thursday, September 10

“Design and Construction of the Closure Plan: A Task for All”

- Chair: Petri Salopera, Country Manager Ecuador y Chile, Newcrest Mining, Ecuador
- Introductory Presentation by Special Speaker:
  - Estrategias de Codelco para involucrar a las distintas áreas del negocio minero en el cierre (TBC)
    Eduardo Sanzana, Corporate Mine Closure Director, Codelco, Chile (TBC)

- Panelists:
  - Eduardo Sanzana, Corporate Mine Closure Director, Codelco, Chile (TBC)
  - Gonzalo Padilla, Senior Specialist Asset Resource Management – Secondment, BHP, Chile
  - Alejandra Vial, Corporate Environment Manager, Antofagasta Minerals, Chile
  - Eva Tobar, Permit Manager, Lundin Mining, Chile
  - Jorge Campos, Senior Mining Consultant, Arcadis, Chile

Session 1 - Design of Mining Operations for Closure

(A15) Closure Plan, the Right Moment to Start
Ana Lima, Nexa Resources, Brazil

(A22) Integrating Closure to Life of Asset Planning through Anglo American’s ICPS–Los Bronces Case Study
Eduardo Salfate, Golder, Chile; and Eduardo Loo, Anglo American, Chile

Luanna Di Guimarães, Aika Miura, Antônio Gentini, Lucas Fonseca, Daniel Anton and Karin Formigoni, Arcadis, Brazil

(A58) Progressive Mine Closure –Define this Sustainable Development Practice for your Mine Rock Stockpile
Terryn Kuzyk, Miriam Clark, Chris Mills, Andrew Baisley and Mike O’Kane, O’Kane Consultants, Canada

(A60) GIS Planning for Mine Closure Management
Francisco Sepúlveda and Rodrigo Cádiz, Arcadis, Chile

(A72) Enabling Public Participation in Mine Closure Planning
Sarah Mackenzie, Kamila Svobodova, Jo-Anne Everingham and Kathy Witt, Sustainable Minerals Institute, The University of Queensland, Australia
### Session 2 - Closure Risk Assessment

**A07** Closure Risk Modeling: A Management and Planning Tool  
Germano Araújo and Thiago Oliveira, DF+ Engenharia Geotécnica e Recursos Hídricos, Brazil; and Isabela Diniz, Vale, Brazil

**A08** A Risk-based Management in Mine Closure – Practiced Examples in Brazil  
Ana Taveira, Hace Consultoria, Assessoria e Treinamento, Brazil; and Luis Sánchez, University of São Paulo, Brazil

**A30** Reviewing the Impact Produced In Air Quality Due To Infrastructure Decommissioning and Mine Closure Activities  
Valentina Zolezzi, Andrés López, Camila Soler and Javier Mancilla, Wood, Chile

**A34** A Rational Method of Risk Assessment for Mine Waste Storage Facilities  
Michael James, Michel Julien, Pascal Lavoie, Edouard Masengo, Thomas Lepine, and Edouardine Ingabire, Agnico Eagle Mines, Canada; and Karen Choven, Enviro Integration Strategies, Canada

**A36** Integrating Operational Reports of Tailings Deposits with Mine Closure Risk Assessment: A Proposal for Sernageomin Report Contents  
Andrés López, Valentina Zolezzi, Abraham Figueroa and Juan Carlos Torrejón, Wood, Chile

### Session 3 - Mine Closure Regulations and Standards

**A16** Mine Closure and Legal Adequacy: The Aguas Claras Mine Case  
Amanda Pereira, Prefeitura Municipal de Mariana, Brazil

Paulina Riquelme, Jorge Brower and Ignacio Funes, Eelaw, Chile

**A53** Critical Comparison between International Standards and Chilean Practice related to Physical Stability of Mine Waste Dumps in Mining Closure  
Daniela Puma, Priscilla Torres, Leonardo Dorador, Eloy Santos, José Campaña and Rodrigo Cádiz, Arcadis, Chile

**A73** New Mine Closure Standards Required By Sernageomin  
José Correa and Andrés León, Sernageomin, Chile

**A74** Title to Be Confirmed  
Alfonso Domeyko, Sernageomin, Chile
Session 4 - Chemical Stability of Mine Wastes

(A12) Ion Exchange Resistant GCLs for Exposed Liners and Capping for Mine Closure
Michael Donovan, Minerals Technologies, USA; and Dennis Wind and Barbara Gebka, CETCO, USA

(A40) Waste Rock Dumps and Tailings Facility Cover Depth Definition Using Numerical Models
Fernanda Baladrón, Kevin Vidal, José Miguel Espinoza and Arnaldo Santander, Golder, Chile; and Gabriel Lóez, Minera Alumbrera, Glencore, Argentina

Carla Gonçalves, Luanna Di Guimarães, Lucas Fonseca and Karin Formigoni, Arcadis, Brazil; and Mauricio Gómez, Arcadis, Chile

(A52) Challenges of Chemical Stability Analysis for Mine Closure
May-Lin Almendras and Carolina Gómez, Arcadis, Chile

Óscar Benavente, Joled Nur and Lilian Valdebenito, SRK Consulting, Chile; and Francois Swanepoel and Yerko Delgado, Salares Norte, Gold Fields, Chile

Session 5 - Closure of Tailings Deposits

(A04) De-Characterization and Closure of TSF: Concepts of the Brazilian Legislation and International Criteria
Débora Schaper, Ricardo Lessa and Antônio Freitas, Golder, Brazil; and Björn Weeks, Golder, Canada

(A19) Structured Decision-Making: Tailings to Landform Design for the Closure of Legacy Tailings Storage Facilities
Rahul Peroor, Sasha Schuck and Terry Braun, SRK Consulting, USA; and Trevor Chesal, BHP, USA

(A29) Draindown Estimation Analysis from Tailings Facilities Depending On Modeling Approach
Fernanda Baladrón, Kevin Vidal and José Espinoza, Golder, Chile

(A46) Tailings Dam Decommissioning and Closure in Consideration of Erosion Risks
Neeltje Slingerland, Golder, Canada; Diego Barra, Golder, Chile; Chris Waygood, Golder, Australia; and Adam Auckland, Golder, Canada
### Session 6 – Mine Closure, Good Practices and Case Studies

**A55** Globe Progress Pit Closure Planning  
Stephanie Hayton, Duncan Ross, Jeff Nyenhuis and Megan Williams, OceanaGold, New Zealand; Luke Matheson, PDP, New Zealand; Calvin Wu, Engineering Geology, New Zealand; and Will Olds and Paul Weber, Mine Waste Management, New Zealand

**A06** Innovative Passive Mine Water Treatment Case Studies  
Ryan Schipper, Golder, Peru; and Eric Blumenstein, Neal Gallagher and Paige Pruisner, Golder, USA

**A56** Passive Treatment for Elevated Iron and Arsenic in Circum - Neutral Mine Affected Water  
Stephanie Hayton, Duncan Ross, Jeff Nyenhuis, Megan Williams and M. Clarke, OceanaGold, New Zealand; D. Trumm, Verum Group, New Zealand; Will Olds and Paul Weber, Mine Waste Management, New Zealand; and Travis Horton, University of Canterbury, New Zealand

**A20** Recovery of Byproducts from Pit Lake Waters  
John Schubert, Chloe Grabowski and Julie Horan, HDR, USA; and Sriram Ananthanarayan, BHP, USA

**A64** Mine Closure – Special Civil Engineering for Effective and Permanent Closure of Mines  
Peter Banzhaf, BAUER Spezialtiefbau, Germany

**A78** Colquirrumi: From being Mining Environmental Liabilities to Mining Assets  
Mario Cedron, Pontificia Universidad Católica del Perú

### Session 7 - Post Closure Land Use

**A02** Feasibility Evaluation of Mining Post-Closure Uses Using Risk-Based Management Methodology  
Fernanda Guabiroba, Alexandre Matos and Alessandro Nepomuceno, Kinross Brasil Mineração, Brazil; Ana Taveira, Hace Consultoria Assessoria e Treinamento, Brazil; Solange Sánchez, Baturité Consultoria, Brazil; and Luis Sánchez, University of São Paulo, Brazil

**A41** Post Closure Land Use Study Using A Multi-Criteria Decision Approach  
Antônio Freitas and Ricardo Lessa, Golder, Brazil

**A63** The Challenges of Sustainable Use of Abandoned Underground Flooded Mines as Geothermal Resources  
Ramón Díaz, Universidad de Concepción, Chile; and Paulino Fernández and Lorena Álvarez, Universidad de Oviedo, Spain

**A70** Thinking Beyond Closure: Why Bother?  
Anna Littleboy, Guy Boggs, Glen Corder, Fiona Haslam-McKenzie, Bruce Kelley, Jason Kirby and Bryan Maybee, Sustainable Minerals Institute, The University of Queensland, Australia

**A68** Mining as a Temporary Land Use: A Global Scoping Project on Transitions and Repurposing  
Sarah Holcombe and Julia Keenan, Sustainable Minerals Institute, The University of Queensland, Australia
Session 8 - Post-Closure, Monitoring and Maintenance

(A17) Satellite InSAR Applications for Long-Term Displacement Monitoring of Closed Sites
Jonas von Ruette, Jaime Corredor and David Holden, 3vGeomatics, Canada

(A37) Evaluation of the Terrestrial Vegetation Bioaccumulative Effect on the Trifolium Repens “Clover” and Calamagrostis Sp. “Ichu” Species in Abandoned Mining Areas
Lizardo Cahuana and Osvaldo Aduvire, SRK Consulting, Peru

(A18) Assessment of the Erosional Performance of a Semi-Arid Rehabilitated Mine Site and Development of a Predictive Model
Jon Pelletier and Nathan Abramson, University of Arizona, USA; Terry Braun, David Ludwick and Rahul Peroor, SRK Consulting, USA; Satya Chataut, BHP, USA; and Evan Howard, Landloch Pty, Australia

(A54) Developing Geomorphic Design Guidelines for Closure Landforms at the Mount Polley Mine
James Ogilvie, Rowland Atkins and Katy de Rego, Golder, Canada

Session 9 - Reclamation and Rehabilitation

(A03) Mining Waste Reclamation: Transforming a Dump site to an Ecological Park- Design and Feasibility Study
Asieh Hekmat, Ramón Díaz and Francisca Rodríguez, Universidad de Concepción, Chile; and Mansour Edraki, The University of Queensland, Australia

(A45) Pilot Restoration Project in Loma for the Purpose of Closure in the Operation of the Cristina Quarry-UNACEM
Julio César and Marisela Huamán, J. Cesar Ingenieros & Consultores, Peru; and David Cueto and Juan Carlos Mesías, UNACEM, Peru

(A25) Reclamation and Soil Coverage Assessment through Satellite Imagery
Silmara Silva, Fernanda Guabiroba, Alexandre Araújo, Alexandre Matos, Osmar Ferreira and Alessandro Nepomuceno, Kinross Brasil Mineração, Brazil; and Kele Craveiro and Vinicius Rissoli, Santiago & Cintra Consultoria, Brazil

(A69) Indigenous Groups, Mined Land Rehabilitation and Mine Closure: Exploring the Australian Terrain
Rodger Barnes, Sarah Holcombe and Joni Parmenter, Sustainable Minerals Institute, The University of Queensland, Australia

(A65) Ecosystem Carbon Storage in the Mining and Smelter Impacted Landscape of Sudbury, Ontario, Canada
Peter Becket, Laurentian University, Canada
(A09) Governance Provision Model for Assets Decommissioning
Richardson Faria, Isabela Diniz, Adriana Rocha, Ana Silva, Tayane Castilho and Paulo Ribeiro, Vale, Brazil

(A11) Importance of Asset Closure Planning in the Long - Term Viability of a Mining Business
Jussara Januário and Fabiano Mendanha, Vale, Brazil

Jorge Brower, Paulina Riquelme and Ignacio Funes, Eelaw, Chile
## ABSTRACT DISTRIBUTION

### Mining Companies

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