

Final Programme—Water Conference · 10–11 July 2017

Day 1 – Monday, 10th July 2017

- 07:30–08:30 **Early Morning Refreshments and Registration**
- 08:30–08:35 **Welcoming and Opening Address**
M. Valenta, *Conference Chairperson*
- 08:35–08:40 **Emergency Procedures Presentation**
- 08:40–08:55 **Opening Address**
S. Ndlovu, *Incoming President, SAIMM*
- Session 1**
Session Chairperson: M. Valenta
- 08:55–09:30 **Keynote: Mine water management – quo vadis?**
J.C. Wagner
- 09:30–10:05 **Keynote: Water issues in the context of mine closure**
Catherine Warburton, *Warburton Attorneys*
- 10:05–10:25 **Mid-Morning Refreshments**
- Session 2**
Session Chairperson: G. Pretorius
- 10:25–10:40 **Continuous ion exchange for value recovery from mine water**
C. Spagnuolo and J. Carr, *Multotec Process Equipment, South Africa and CleanTeQ, Melbourne, Australia*
- 10:40–10:55 **Titbits on the application of the waste regulations to mine residue deposits and stockpiles (MRDS)**
L. Ochieng, *SRK Consulting, South Africa*
- 10:55–11:10 **Sustainable reuse of water in mining – some case studies**
J.P. Tucker, M. Crozier, and S. James
WesTech Process Equipment Africa, South Africa
- 11:10–11:25 **How South Africa's acid mine drainage dilemma can positively impact the water-energy-food nexus**
T. Grewar, *Mintek, South Africa*
- 11:25–11:40 **Alternate solutions to acid mine drainage – making profit from waste**
K.L. Morton, *KLM Consulting Services, South Africa*
- 11:40–11:45 **Poster Presentation: The effect of magnesite on extraction of metal species and sulphates in acid mine solution**
K. Tshoane, P. Hlabela, V. Masindi, M.M. Ramakokovhu, R. Mbaya, and L. Maropeng, *CSIR, Tshwane University of Technology, South Africa*
- 11:45–11:50 **Poster Presentation: Adsorption of chromium species from industrial effluent using a magnesium-bentonite clay composite: kinetics, equilibrium and risk assessment study**
F.H. Tjja*, M.M. Ramakokovhu*, and V. Masindi†, *Tshwane University of Technology*, CSIR and UNISA, South Africa†*

- 11:50–11:55 **Poster Presentation: Aquifer characterization and fracture delineation using aeromagnetic data in the Bushveld Complex**
R. Gebrekristos, *Digby Wells Environmental, South Africa*
- 11:55–13:00 **Lunch**
- Session 3**
Session Chairperson: J. Wagner
- 13:00–13:15 **The design of a multivariable model predictive control law for clarifying water in Letseng Diamonds Plant 2**
K. Nqhoaki, *Letseng Diamonds, South Africa*
- 13:15–13:30 **Water use licence application success and lessons learnt**
L. Dell, *Sibanye Gold, South Africa*
- 13:30–13:45 **Poster Presentation: Removal of heavy metal ions from industrial effluent using adsorbent resins**
L. Nemadodzi and K. Sikhwivhilu, *Mintek, South Africa*
- 13:45–14:00 **The business case for accurate mine water management—illustrated with case studies**
K.L. Morton, *KLM Consulting Services, South Africa*
- 14:00–14:20 **Afternoon Tea**
- Session 4**
Session Chairperson: J. Baker
- 14:20–14:35 **Minewater management lessons learnt at the eMalahleni water reclamation plant**
N. Rein and M. Malan, *Anglo American, South Africa*
- 14:35–14:50 **Challenges in the prediction of acid mine drainage**
J. Fourie and A. Fourie, *Geostratum Groundwater and Geochemistry Consult (Pty) Ltd and Metron Laboratory, South Africa*
- 14:50–15:05 **Acid mine drainage in the Western Basin of the Witwatersrand**
M. Mpanza and P. Nelwamondo, *University of Johannesburg, South Africa*
- 15:05–15:20 **Treatment of brine for the recovery of drinking water, calcium carbonate, and sodium sulphate**
J.P. Maree* and T. Mtombeni†, *ROC Water Technologies* and FlowCentric†, South Africa*
- 15:20–15:35 **Water reuse in the mining industry - a resource, financial and socio-economic imperative, the BRPM case study**
J.J. van der Walt, *Bigen Africa, South Africa*
- 15:35–16:15 **Discussion Forum**
- 16:15–16:30 **Day 1 Close**
M. Valenta, *Conference Chairperson*
- 16:30–19:30 **Network Cocktail**

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Day 2 – Tuesday, 11 July 2017

- 08:00–08:30 **Early Morning Refreshments and Registration**
- 08:30–08:45 **Welcoming and Opening Address**
M Valenta, *Conference Chairperson*
- 08:45–08:55 **Emergency Procedures Presentation**
- Session 5**
Session Chairperson: T. Grewar
- 08:55–09:30 **Keynote: Towards re-visioning mine water and water in mining: integrating the needs of mine, environment, and community**
S.T.L. Harrison, *University of Cape Town, South Africa*
- 09:30–10:05 **Keynote: What's stopping us? Treatment and reuse of mine water**
J.E. Burgess, *Water Research Commission*
- 10:05–10:25 **Mid-Morning Refreshments**
- Session 6**
Session Chairperson: Y. Govender
- 10:25–10:40 **Water as a wicked problem: a South African AMD case study**
J. Broadhurst, *University of Cape Town, South Africa*
- 10:40–10:55 **The use of ion exchange resins in purifying process and waste water streams**
J. van Deventer, *Purolite, South Africa*
- 10:55–11:10 **Case Study: utilizing underground settlers as precipitation reactors for the removal of metals from the mining water circuit**
J.C. Wagner and G.R. Pretorius, *Sibanye Gold, South Africa*
- 11:10–11:25 **Evolution of the SAVMIN™ process for treatment of AMD**
M. van Rooyen and Y. Govender, *Mintek, South Africa*
- 11:25–11:40 **Pervasive metering of minewater flows and process water using distributed acoustic sensor technology**
D. Finfer*, P. Newman†, N. Rein†, C. Naicker†, and M. Amir*, *Silixa Ltd* and Anglo American PLC†, South Africa* †
- 11:40–11:45 **Poster Presentation: Environmental monitoring at Mintek**
S.M. Graham, *Mintek, South Africa*
- 11:45–13:00 **Lunch**
- Session 7**
Session Chairperson: M. van Rooyen
- 13:00–13:35 **Keynote: Federation for a sustainable environment**
M. Liefferink,
- 13:35–13:50 **Technology options for the treatment of water and soil sediments impacted by acid mine drainage at Robinson Lake: a Case Study**
Y. Govender and M. van Rooyen, *Mintek, South Africa*

- 13:50–14:05 **Coal mine pit lakes in South Africa**
A. Johnstone and L. Kennedy, *GCS, South Africa*

14:05–14:25 **Afternoon Tea**

Session 8

Session Chairperson: M. Valenta

- 14:25–14:40 **Assessment of capillary ultrafiltration membranes for acid mine drainage (AMD) treatment**
P. Matabola, B. Mlasi, and K. Sikhwihilu, *Mintek, South Africa*
- 14:40–14:55 **Adapting a minerals thickener to acid minewater treatment application**
G. Taylor and R. Holmes, *Tecroveer, South Africa*
- 14:55–15:10 **Case Study: Softening of underground fissure water through Crystalactor® fluidised bed precipitation for potable consumption**
G.R. Pretorius* and J. Wagner†, *Sibanye Gold*, Sibanye Gold Group Water Consultant, South Africa* †
- 15:10–15:25 **Questions and Answers**
- 15:25–15:40 **Conference Close**