



9TH INTERNATIONAL
PGM CONFERENCE

Preliminary Programme

27 - 28 OCTOBER 2025 - CONFERENCE
29 OCTOBER 2025 - TECHNICAL VISIT
VENUE - SUN CITY, RUSTENBURG, SOUTH AFRICA

PGMs - Enabling a cleaner world



Sunday, 26 October 2025

17:00-19:30 Welcome Networking Cocktail (Sponsored by Qotho Minerals)
Venue: Exhibition Hall -Kings Ballroom, Dress Code: Smart Casual



17:00–17:30	Registrations	17:35–17:40	Welcome	17:50–18:30	Quiz
17:30–17:35	Safety Briefing	17:40–17:50	Sponsor presentation (cocktail)	18:30–19:30	Networking cocktail

Monday, 27 October 2025 (Conference Day 1)

07:00–08:00 Registration Opens & Early Morning Refreshments
08:00–08:05 Safety Briefing
Venue Official
08:05–08:10 Welcome and Opening Address
B.S. Xakalashe, Conference Chairperson, Mintek, South Africa
08:10–08:25 SAIMM Presidential Address
G.R. Lane, Vuuma Collaborations, SAIMM President

OPENING SESSION

Session Chair: I.J. Geldenhuys, Independent Consultant, South Africa

08:25–08:55 Plenary:
M.I. Mthenjane, Minerals Council, South Africa
08:55–09:25 Opening Address: PGM supply and demand outlook
H. de Hoop, SFA (Oxford), UK
09:25–09:55 Keynote Address:
A. Singh, Valterra Platinum, South Africa
09:55–10:00 Sponsor Presentation
Intocast, South Africa 
10:00–10:05 Sponsor Presentation
Tenova, South Africa 
10:05–10:25 Mid-morning Refreshments and Networking

SESSION 1: MARKET OUTLOOK AND STRATEGIC POSITIONING

Session Chair: G.R. Lane, Vuuma Collaborations, South Africa

10:25–10:55 Keynote Address: Northam's processing journey
A. Mulder, Norplats, South Africa
10:55–11:00 Sponsor Presentation
Hatch Africa, South Africa 
11:00–11:40 Panel Discussion: Selling the PGM metals – strategic metal marketing insights shared by the experts
Chairperson
H. de Hoop, CEO, SFA (Oxford) Ltd

SESSION 3A: ESG

Session Chair: S. Louw, Metix, South Africa

14:55–15:25 Keynote Address:
M.H. Solomon, University of Cape Town (Main Room)

15:25–15:30 Sponsor Presentation
Stone Three, South Africa 

15:30–15:35 Sponsor Presentation
Valterra Platinum, South Africa 

Panel members

K. Otto, Northam Platinum, South Africa
S. Sibiya, Impala Platinum, South Africa
D. Seke, SibanyeStillwater, South Africa

11:40–11:55 Platinum's strategic positioning and economic importance in South Africa
A.A. Mkonde, I.P. Dikgwatlhe, UNISA, South Africa
11:55–12:10 State of the PGM Industry in South Africa
T.K. Bungane, Mintek, South Africa
12:10–12:25 People, the critical link in realising value from a digital solution implementation
G.R. Lane, Vuuma Collaborations, South Africa
12:25–12:40 Reimagining community development as a strategic lever in the PGM value chain
L.N. Ntanzí, Gerson Lehrman Group, South Africa
12:40–12:50 Q&A
12:50–12:55 Sponsor Presentation
AECI Mining Chemicals, South Africa 
12:55–13:00 Sponsor Presentation
Mintek, South Africa 
13:00–14:00 Networking Lunch

SESSION 2: APPLICATIONS

Session Chair: B.S. Xakalashe Mintek South Africa

14:00–14:15 Platinum Group Metal-Based fuel cell technology in the development of a supercapacitor-based independently-powered electric multiple unit
N. Xavier¹, A.F. Mulaba-Bafubiani^{1,2}, ¹University of Johannesburg, South Africa
²Universite de Mbuji-Mayi, DRC
14:15–14:30 The use of ultrasonic atomisation methods to produce PGM and alloy powder for 3D printing at Mintek
K. Dyal Ukabhai, L. Mampuru, R. Diale, M.J. Phasha, S.J. Moema, Mintek, South Africa
14:30–14:45 Powder production of pre alloyed PGMs for jewellery applications
K. Dyal Ukabhai, D. Mkhonto, L. Mampuru, R. Diale, M.J. Phasha, S.J. Moema, Mintek, South Africa
14:45–14:55 Q&A

SESSION 3B: CHARACTERISATION AND HYDROMETALLURGY

Session Chair: A. Majavu, Sibanye Stillwater, South Africa

BREAKAWAY TO PARALLEL SESSIONS

15:35–15:50	An exploration of the working conditions of women employed in mining operations at a platinum mine in South Africa, G. Noge, D. Botha, North West University, South Africa	15:35–15:50	Determination of rhodium (Rh) from fire assay using lead collection with the addition of co-collector, followed by acid dissolution to enhance recovery and analytical accuracy R. Tshilidzi ^{1,2} , A. Mkhohlakali ¹ , J. Sehat ¹ ,N. Ntsasa ^{1,2} , J. Tshilongo ^{1,2} , Mintek, University of the Witwatersrand, South Africa
15:50–16:05	Gendered dimensions of mine closure: Risks, and opportunities for women K. Mathonsi, Sibanye Stillwater, South Africa	15:50–16:05	Enhanced recovery of PGM and associated aase aetal Sulphides using various thiol co-collectors D.K. Ramalepe, W. Nheta, University of Johannesburg, South Africa
16:05–16:20	Afternoon Refreshments and Networking	16:05–16:20	Afternoon Refreshments and Networking
16:20–16:35	The Implats Group's decarbonisation strategy T. Mthombeni, Implats, South Africa	16:20–16:35	Quantitative spectroscopic analysis of co-existing Platinum Group Metals (PGMs) and Iron T. Ncedo, A. Mkhohlakali, R. Letsoalo, J. Sehata, H. Mabowa, N. Ntsasa, J. Tshilongo, Mintek, South Africa
16:35–16:55	Decarbonising the platinum group metals value chain to lower the carbon footprint of energy transition technologies D. van Wyk, Hatch, South Africa	16:35–16:55	Fundamental characterisation of sperrylite leaching behaviour in cyanide systems using XPS K. Shaik ¹ , H. Kolev ² , Z. Cherkezova-Zheleva ² , J. Petersen ¹ , University of Cape Town, Bulgarian Academy of Sciences, South Africa
16:55–17:10	Implementation of High frequency power supplies and dual flue gas conditioning in particulate matter abatement in the PGM industry B.P. Havenga, E.Eichler, H. Heller, South Africa	16:55–17:10	Quantification and mineral association of rhodium in low concentration ores using inductively coupled plasma optical emission spectrometry (ICP-OES) R. Letsoalo, A. Mkhohlakali, J. Sehata, N. Ntsasa, J. Tshilongo, Mintek, South Africa
17:10–17:25	Zimplats SO ₂ abatement plant design S. Matutu, J. Bezuidenhout, G. Erasmus, Hatch, South Africa	17:10–17:25	Comparative mineralogical and geochemical assessment of ug-2 and Merensky Reefs at Two Rivers Platinum Mine: Implications for beneficiation and tailings management S. Motha, L.S. Mokhahlane, University of the Witwatersrand, South Africa
17:25–17:40	Innovative Solutions for SO ₂ Abatement: The role of the WSA process in the PGM industry C. Frandsen, Denamark	17:25–17:40	Comparison of dissolution methods for ICP-OES analysis of PGMs from printed circuit boards A. Mkhohlakali, J. Sehata, R. Letsoalo, N. Ntsasa, J. Tshilongo, Mintek, South Africa
17:40–17:55	Transforming PGM tailings into valuable resources for a cleaner world R.A. Madiba, B.F. Mphahlelea, O. Muswadzia, N.J. Shackletonb, AECI Mining Chemicals, South Africa	17:40–17:50	Q & A
17:55–18:05	Q & A		
18:05–18:30	Time at leisure	18:05–18:30	Time at leisure
18:30–20:30	Conference Dinner: Brew Monkey Valley of the Waves, Dress Code: Smart Casual	18:30–20:30	Conference Dinner: Brew Monkey Valley of the Waves, Dress Code: Smart Casual



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Tuesday, 28 October 2025 (Conference Day 2)

07:00–08:00	Registration Opens & Early Morning Refreshments	08:40–08:55	The Integrated mine of the future: How five global trends are driving integrated and intelligent mining operations C. Bleazard ¹ , M. Dwyer ² , ¹ Hatch, South Africa, ² Hatch, Abu Dabi
08:00–08:05	Safety Briefing <i>Venue Official</i>	08:55–09:10	So how long is your processing pipeline? S. Mavimbela, P. Lessing, Hatch, South Africa
08:05–08:10	Welcome and Opening Address B.S. Xakalashe, Conference Chairperson, Mintek, South Africa	09:10–09:15	Sponsor Presentation METIX, SMS Group, South Africa
08:10–08:40	Keynote Address: Two metals, one mine: unpacking the market dynamics linking chromium and PGMs in a South African context T. Schultz, Project Blue, South Africa	09:15–09:20	Sponsor Presentation Sylvania Platinum, South Africa

BREAKAWAY TO PARALLEL SESSIONS

PYROMETALLURGY SESSION 4A: Modelling and Digitalisation Session Chair: B.S. Xakalashe Mintek South Africa		MINERALS PROCESSING SESSION 5A: Flotation Session Chair: M. Safari, Mintek, South Africa		MINING SESSION 6A: Cost Management Session Chair: M.H. Solomon, University of Cape Town	
09:20–09:35	Plasma arc behaviour in DC arc furnace smelting of PGM-bearing materials: a modelling study on the effect of reductant choice Q.G. Reynolds ^{1,2} , B.S. Xakalashe ¹ , S.P. Tsebe ¹ , M.W. Erwee ³ , I.J. Geldenhuys ⁴ , R.T. Jones ⁴ , ¹ Mintek, ² Stellenbosch University, ³ Samancor Chrome Ltd, ⁴ Independent consultant, South Africa	09:20–09:35	Beyond recovery rethinking reagent strategies for sustainable middle group ore processing P.C. Siwela, M.M. Ramakokovhu, Tshwane University of Technology, South Africa	09:20–09:35	Comparison of technical operating flexibility and operating cost performance at selected underground platinum mines for long-term operational viability B.M. Grobbelaar ¹ , C. Musingwini ² , L.J. Mohloki ³ , B. Mutandwa ⁴ , ¹ Anglo-American Platinum Joint Venture Operations (now Valterra Platinum), ² University of the Witwatersrand, South Africa
09:35–09:50	Material Selection and campaign life optimisation of electrode sleeve seal components in pgm furnaces: A case study from Anglo American Waterval N. Sujee, F. Hanneman, S. Haley, HATCH, South Africa	09:35–09:50	The Impact of microbes on the flotation efficiency of Platinum Group Metals M.B. Chabala, B. Raswiswi, D.N. Makaula, M. Safari, Mintek, South Africa	09:35–09:50	Optimisation of proportional influence of mining and processing costs on the production of an open pit mine R.G. Thage, F.K. Mulenga, UNISA, South Africa
09:50–10:05	Optimal control of electric arc furnaces in platinum smelting operations J. Siecker, J. van Rensburg, L. Mathevula, N. Kotze, L. Mukengeshayi, N. Wanblad, North-West University, South Africa	09:50–10:05	Flotation of MG chromite tailing from the Western Limb of the bushveld complex M. Safari, Mintek, South Africa	09:50–10:05	The impact of data quality on budget development and reporting in mining operations Z. Mqoqi, H.P.R. Joubert, J.H. Marais, A.E. Lebuschagne, ETA Operations (Pty) Ltd, South Africa
10:05–10:20	Assessing the performance of a PGM smelting furnace W.A. Roos ¹ , M. Rajh ¹ , A.E.J. Bogaers ^{1,2} , J.H. Zietsman ^{1,2} , ¹ Ex Mente Technologies ² University of Pretoria, South Africa	10:05–10:20	Froth stability a key indicator for shallow platreef ores flotation performance M. Chauchau, R. Moelets, M. Safari, Mintek, South Africa	10:05–10:20	Optimising PGM value chains through integrated lean mining and processing strategies T.M. Chagwedera, Hatch, South Africa
10:20–10:35	Data driven anomaly detection as a process and integrity monitoring application for a furnace T. Moodley, W. Smith, J. Yelland, Hatch, South Africa	10:20–10:35	The flocculation and coagulation of PGM ore flotation tailings under degrading water qualities <i>Authors</i> , Mintek, South Africa	10:20–10:35	Case study: Unlocking maintenance efficiency and supply chain resilience in mining through digital integration and spare parts optimisation W. du Plessis, M. Joubert, HybridFuzion, South Africa
10:35–10:40	Q&A	10:35–10:40	Q&A	10:35–10:40	Q&A
10:40–11:00	Mid Morning Refreshments and Networking	10:40–11:00	Mid Morning Refreshments and Networking	10:40–11:00	Mid Morning Refreshments and Networking
PYROMETALLURGY (continued) SESSION 4B: Furnace Containment Session Chair: X.C. Goso, Mintek, South Africa		MINERALS PROCESSING (continued) SESSION 5B: Flotation Session Chair: N. Patterson, Sylvania, South Africa		Mining (continued) SESSION 6B: Technology for efficient production - compressed air Session Chair: I.M. Dikgwatlhe	
11:00–11:15	Assessing refractory degradation in a base-metal furnace hearth: A post-mortem study K.C. Maluleke, H. Joubert, G. de Villiers, E. Mokgwamme, P. Nkosi, T. Goff, Tenova, South Africa	11:00–11:15	PGM ore flotation using simulated long water cycles M. Safari, M.F. Moya, Mintek, South Africa	11:00–11:15	Improving compressed air network efficiency in South African PGM mines through continual monitoring and reporting C.M. van der Walt, H.J. Groenewald, J.F. van Rensburg, North-West University, South Africa
11:15–11:30	Comparative study into the interaction of alumina-chrome refractories with PGM smelter slag N. Fotoyi, Y. Thakurdin, X.C. Goso, D. Chetty, Mintek, South Africa	11:15–11:30	PGM ore flotation under degrading water qualities M.F. Moya, T. Koadibane, M. Safari, M. Manono, K.C. Corin, L. October, Mintek, South Africa	11:15–11:30	Improving compressed air system efficiency using Life of Mine planning J.H. Marais, P. Burger, North-West University, South Africa
11:30–11:45	Factors influencing campaign life of PGM furnace hearths M. Nagorski, M. vd Merwe, G. Mulder, M. DeGorter, T. Kingsley, Hatch, South Africa	11:30–11:45	Revisiting the role of pH and process water Ions in Cu-Ni-PGM ore flotation with a keen interest on effects at the solid-water interface: Does the choice of pH modifier matter M.S. Manono, University of Cape Town, South Africa	11:30–11:45	A method to reduce compressed air usage through half-level control and usage scheduling W. Bekker, J.H. Marais, S. van der Walt, A. Labuschagne, Siphumelele, South Africa
11:45–12:00	Evaluation of an alternative furnace cooling medium for enhanced operational safety K.C. Maluleke, H. Joubert, G. de Villiers, E. Mokgwamme, P. Nkosi, T. Goff, Tenova Pyromet, South Africa	11:45–12:00	Understanding the nature of challenges posed in the reprocessing of PGM tailings B. McFadzean ¹ , M. Becker ¹ , S. Geldenhuys ¹ , N. Patterson ² , ¹ University of Cape Town, ² Sylvania Platinum, South Africa	11:45–12:00	The impact of condensate on mine compressed air systems powered by clustered standalone screw compressors J.C. Vosloo, J.F. van Rensburg, M. Sithole, C. Martin, H. Modau, North-West University, South Africa
12:00–12:15	Cooling innovation in practice: A case study on composite copper-graphite cooler performance before and after a PGM furnace partial sidewall rebuild P. Bezuidenhout ¹ , G. de Villiers ¹ , H. Joubert ¹ , E. Mokgwamme ² , P. Nkosi ² , T. Goff ² , P. Stratt ² , M. Mvalelwa ² , ¹ Tenova, ² Sibanye-Stillwater, South Africa	12:00–12:15	Investigation of the effect of microbial community in flotation of Platinum Group Metals (PGMs) B. Raswiswi, Mintek, South Africa	12:00–12:15	Energy savings achieved through compressed air control valves W. Biermann ¹ , J. van Rensburg ¹ , T. Deyse ² , L. Mukengeshayi ² , M. Barlow ² , ¹ North-West University, ² Valterra Platinum (Pty) Ltd, South Africa
12:15–12:30	Refractory and process efficiency challenges encountered during refining of a PGM-bearing iron alloy M.S. Moholwa, S. Tsebe, E. Matinde, Mintek, South Africa	12:15–12:30	Optimising blend ratios and reagent schemes to recover PGMs from LG reef spiral tailings T.L. Moodley ^{1,2} , I. Govender ^{1,2,3} , S. Pikinini ¹ , J. Sehata ¹ , J. Tshilongo ¹ , M. Raedani ⁴ , ¹ Mintek, ² University of Kwazulu-Natal, ³ University of Cape Town, ⁴ Dwarsrivier Chrome Mine, South Africa	12:15–12:30	Simulation-driven support for compressed air operations in deep-level mines J.F. Jansen van Rensburg ^{1,3} , H.J. Groenewald ^{1,3} , J.F. van Rensburg ^{1,3} , K. Mabe ² , ¹ ETA Operations (Pty) Ltd, ² Impala Platinum, ³ North-West University, South Africa
12:30–12:35	Q&A	12:30–12:45	Genfroth 200: An economical frother with enhanced metallurgical synergy in UG2 flotation – add to flotation session G.S. Mosia, N. Shackleton, V. Malysiak, S. Engelbrecht, AECI Mining Chemicals, South Africa	12:30–12:35	Q&A
		12:45–12:50	Q&A		
12:50–13:50	Lunch	12:50–13:50	Lunch	12:50–13:50	Lunch

Tuesday, 28 October 2025 (Conference Day 2 continued)

BREAKAWAY TO PARALLEL SESSIONS					
PYROMETALLURGY <i>(continued)</i> SESSION 4C: Sustainability Session Chair: G. Mulder, <i>HATCH, South Africa</i>		MINERALS PROCESSING SESSION 5C: Communion and Classification Session Chair: R. Moletsi, <i>Mintek, South Africa</i>		MINING <i>(continued)</i> SESSION 6C: Water and Energy Session Chair: E. Townshend, <i>Impala Platinum, South Africa</i>	
13:35–13:55	Optimising reverts addition in PGM smelting: Strategies for enhanced furnace stability and efficiency C. Sikiotis ¹ , G. Mulder ¹ , J. Bezuidenhout ¹ , G. Janse Van Vuuren ¹ , D. Wright ¹ , S. Matutu ² , T. Sisy ² , ¹ <i>Hatch, Johannesburg, South Africa</i> , ² <i>Selous Metallurgical Complex, Zimbabwe</i>	13:35–13:55	The influence of impellor geometry on stirred media mill performance C. Lekgoro, S. Nkwanyana, N. Lameck, I. Govender, M. Ramakokovhu, <i>Mintek, South Africa</i>	13:35–13:55	In-stope water handling strategies to achieve a dry mine J.F. van Rensburg, J.C Vosloo, S.M. Sithole, K.P. Petja, D.N. Morare, A. Heydenrych, <i>North-West University, South Africa</i>
13:55–14:10	Reductive matte smelting of UG2 concentrate using Al, FeSi, and SiC reductants S.B. Nkosi, X.C. Goso, <i>Mintek, South Africa</i>	13:55–14:10	Comminution behaviour of the middle group ores P.C. Siwela, M.M. Ramakokovhu, <i>Tshwane University of Technology, South Africa</i>	13:55–14:10	Automating energy baseline development for energy-intensive mining systems in South Africa N.T. Tshitenge, J.A. Swanepoel, H.P.R. Joubert, J.H. Marais, E.A. Labuschagne, T. Mthombeni, <i>Tshwane University of Technology, Impala Platinum, South Africa</i>
14:10–14:25	Commissioning the Zimplats smelter expansion M. Crafford, M. Monobe, G. Erasmus, S. Matutu, <i>South Africa</i>	14:10–14:25	Particle size-driven flotation of pgms: comparative performance of fine vs. coarse fractions M. Safari, <i>Mintek, South Africa</i>	14:10–14:25	Time, water and energy to clean a stope panel using water jetting P.D. Fraser, <i>Hydropower Equipment (Pty) Ltd, South Africa</i>
14:25–14:40	Afternoon Refreshments and Networking	14:25–14:40	Afternoon Refreshments and Networking	14:25–14:40	Afternoon Refreshments and Networking
14:40–14:55	An overview of Mintek's pyrometallurgical research in PGM processing: From conceptualisation to demonstration X.C. Goso, S.P. Tsebe, B.S Xakalashe, E. Matinde, <i>Mintek, South Africa</i>	14:40–14:55	Improving PGM recovery through optimised solid liquid separation M. Hove, N. Nhleko, S. Mhlongo, <i>Anglo American Valterra Platinum Solenis, South Africa</i>	14:40–14:55	Evaluate water performance on platinum mine shafts by applying benchmarking techniques J. Korkie, C.S.L Schutte, J.H. Marais, J. van Laar, A.G.S. Gous, A. Labuschagne, <i>Stellenbosch University, South Africa</i>
14:55–15:10	Overview of furnace start-up with a case study from the zimplats smelter expansion project M. Mutshaeni ¹ , M. Sitefane ¹ , P. Lu ¹ , T. Isaacs ¹ , F. Stober ² , M. Mosnier ² , G. Mulder ¹ , T. Kingsley ¹ , T. Sisy ³ , S. Matutu ³ , <i>HATCH, South Africa</i> , ² <i>HATCH, Canada</i> , ³ <i>Zimplats, Zimbabwe</i>	14:55–15:10	Investigating the effect of stirred milling for PGM tailings reprocessing - The IsaMill K.I. Mohapi ¹ , A.N. Mainza ¹ , M. Becker ¹ , K.C. Corin ¹ , D. Makhubele ² , T. Pienaar ² , ¹ <i>University of Cape Town</i> , ² <i>Tailings Technology, South Africa</i>	14:55–15:10	A framework for technology selection in large scale systems: Case study of mining technology selection applying system dynamics modelling C. Mukonoweshuro, <i>University of the Witwatersrand, South Africa</i>
15:10–15:20	Q&A	15:10–15:25	Control strategy for blower system improvement in platinum group metal concentrators W.H. Sterrenberg, H. Janse van Vuuren, J.H. Marais, P. du Toit, <i>North-West University, South Africa</i>	Mining <i>(continued)</i> SESSION 6D: Safety Session Chair: M.A. Mello, <i>Vuuma, South Africa</i>	
		15:25–15:35	Q&A	15:15–15:30	Elevating safety and efficiency in mining with vision AI: From object detection to LLM-driven decision intelligence Y. Zhang, Z. Mohammed, T. Moodley, <i>Hatch, South Africa</i>
				15:30–15:45	Quantifying pressurisation and gas composition in refuge bays: A multivariable modelling approach K.D. Silent, H.J. Groenewald, J.H. Marais, J.J. van Rensburg, <i>ETA Operations (Pty) Ltd, North-West University, South Africa</i>
				15:45–15:55	Q&A
15:55	Conference Close				