



**Sustainable Mineral Exploration and Development**  
Windhoek, Namibia | September 27–30, 2024  
**CONFERENCE PROGRAM**

[seg2024.org](http://seg2024.org)



*Progressive rehabilitation of the Otjikoto waste rock dump*

## Planning with **THE END IN MIND**

**PLANNING FORMS A CRUCIAL PART OF ANY PROJECT, NO MATTER WHAT SIZE. PLANNING OF REHABILITATION RISKS AND CRITERIA IN THE EARLY PHASES OF THE LIFE OF MINE CAN IMPROVE DECISION MAKING TO REDUCE OPERATION COSTS AND MAXIMIZE SUSTAINABLE BENEFITS.**

At Otjikoto Mine, rehabilitation planning has been part of our responsible mine planning strategy long before operations commenced. Long-term plans have been developed for the type of landscape we will leave behind at the end of life of mine. A comprehensive progressive rehabilitation plan has been developed for Otjikoto Mine and took into account various considerations. The plan addresses issues that include: hydrology, geotechnical geochemical, landform design, rehabilitation approaches, flora, revegetation techniques, engagements with communities, and regulatory compliance.

The plan includes resource identification and allocation to ensure that sufficient resources are available for the duration of the life of mine. From the start of operations, it was planned to harvest and stockpile topsoil from disturbed areas for future rehabilitation activities. Some of our oldest topsoil stockpiles date back to 2013 and are being used in the rehabilitation of previously disturbed areas. As part of continuous planning, the stockpiles are regularly assessed to determine the bio-physical and chemical properties of the soils. This is to ensure their full functionality in the rehabilitation process.

Planning has allowed Otjikoto Mine to implement a good progressive rehabilitation program where the operation has been able to;

- Develop an environmental monitoring program that keeps track of any changes in environmental aspects.
- Continuously improve on rehabilitation approaches and develop success completion criteria.
- Make informed decisions on financial provision for rehabilitation.
- Detect rehabilitation risks and develop corrective actions early.

Planning has further provided Otjikoto Mine the opportunity to take a leading stance in mine rehabilitation approaches by developing an integrated and progressive rehabilitation program that ensures that areas are rehabilitated while resources are still available. Additionally, the operation has adopted leading international practices where there is opportunities for long-term sustainable benefits for B2Gold and Namibia.



*Topsoil collection and stockpiling for rehabilitation*

### Conference Hotel

Safari Conference Centre at the Mercure / Mövenpick Hotels  
Corner of Auas and Aviaton Road | Windhoek, 9000 | Namibia  
Phone: +264 61 296 8000

 Wi-Fi details at registration

### Speaker Ready Room (Gamsberg)

Thursday, September 26: 3:00 pm – 6:00 pm  
Friday, September 27: 7:00 am – 5:00 pm  
Saturday, September 28: 7:00 am – 5:00 pm  
Sunday, September 29: 7:00 am – 5:00 pm  
Monday, September 30: 7:00 am – 5:00 pm

### Parent's room: Huab

### Registration

Friday, September 27: 6:30 am – 6:00 pm  
Saturday, September 28: 6:30 am – 6:00 pm  
Sunday, September 29: 6:30 am – 6:00 pm  
Monday, September 30: 6:30 am – 12:00 pm

The information in this program is current through **September 1, 2024**. Please refer to the online platform for updated information: [seg2024.org/virtual](http://seg2024.org/virtual)



All sessions and events listed are at the conference hotel.  
[www.seg2024.org/venue](http://www.seg2024.org/venue)

## FRIDAY

9:30 am-4:00 pm

Student and Early Career  
Professionals Events

4:30 pm-5:00 pm

Opening Performance – African  
Cultural Diversity Dance

5:00 pm-5:15 pm

Welcoming Remarks  
*Inge Zaamwani-Kamwi*

5:15 pm-6:30 pm

Panel Discussion  
Geoscience Capacity Building  
for the Future – the African  
Perspective

6:30 pm-7:00 pm

Presidential Address  
*Steve Piercy, SEG President 2024*

7:00 pm-9:00 pm

Welcome Reception

## SATURDAY

8:00 am-8:15 am

Opening Comments  
*Anna Nguno and Laurence Robb,*  
*Conference Chairs*  
*Jennifer Craig, SEG Executive Director*

8:15 am-10:00 am

- Plenary Sessions:
- Fostering Sustainable Development – Opportunities for the Extractive Industry
  - Enhancing Perceptions and Building Trust in the Mining Industry
  - The Impact of the Pan-African Reporting Code on the Future of Mining in Africa

10:00 am-11:00 am

Posters and Speed Talks

11:00 am-12:30 pm

**Trifecta 1: Gold in Africa**

12:30 pm-2:00 pm - Lunch

2:00 pm-3:30 pm

**Oral Session 01**  
Gold: Enhanced Discovery and  
Development I

**Oral Session 02**

Innovative Technology Develop-  
ments in Mineral Deposit Science I

3:30 pm-4:00 pm - Break

4:00 pm-5:30 pm

**Oral Session 03**

Gold: Enhanced Discovery and  
Development II

**Oral Session 04**

Innovative Technology  
Developments in Mineral  
Deposit Science II

5:30 pm-7:30 pm

Exhibit and Poster Reception,  
Speed Talks

7:30 pm-10:00 pm

SEG Awards Ceremony  
(Ticket Required)

## Exhibits and Posters (Exhibit Hall, Poster and Speed Talk Tent)

Date	Time	Event
Thursday, September 26	3:00 pm - 6:00 pm	Exhibit Move In (Poster and Exhibitor Only Access)
Friday, September 27	8:00 am - 3:00 pm	Exhibit Move In (Poster and Exhibitor Only Access)
	6:00 pm - 6:30 pm	Exhibitor Only Access
	7:00 pm - 9:00 pm	Posters and Exhibits Open - Welcome Reception
Saturday, September 28	9:00 am - 10:00 am	Exhibitor Only Access
	10:00 am - 7:30 pm	Exhibits Open
	5:30 pm - 7:30 pm	Exhibit and Poster Reception
Sunday, September 29	9:00 am - 10:00 am	Exhibitor Only Access
	10:00 am - 7:30 pm	Poster and Exhibits Open
	5:30 pm - 7:30 pm	Exhibit and Poster Reception
Monday, September 30	9:00 am - 10:00 am	Exhibitor Only Access
	10:00 am - 2:00 pm	Posters and Exhibits Open
	2:00 pm - 4:00 pm	Exhibits Dismantle (Exhibitor Only Access)

## SUNDAY

8:00 am-10:00 am

**Trifecta 2: Central African  
Copperbelt**

10:00 am-11:00 am

Posters and Speed Talks

11:00 am-12:30 pm

**Oral Session 05**  
Resource Development: ESG from  
Exploration to Remediation

**Oral Session 06**

Vital High-Volume Base Metals I

12:30 pm-2:00 pm - Lunch

2:00 pm-3:30 pm

**Oral Session 07**

Africa's Iconic Ore Deposits

**Oral Session 08**

Vital High-Volume Base Metals II

3:30 pm-4:00 pm - Break

4:00 pm-5:30 pm

**Oral Session 09**

New Discoveries and Developments I

**Oral Session 10**

Vital High-Volume Base Metals III

5:30 pm-7:30 pm

Exhibit and Poster Reception, Speed  
Talks

7:30 pm-10:00 pm

Industry Outlook Dinner (Ticket  
Required)

*Mfikeyi Makayi, CEO KoBold Metals  
Zambia*

## MONDAY

8:00 am-10:00 am

**Trifecta 3: The Bushveld  
Complex**

10:00 am-11:00 am

Posters and Speed Talks

11:00 am-12:30 pm

**Oral Session 11**

The Energy Transition: Metals of the  
Future I

**Oral Session 12**

New Discoveries and Developments II

12:30 pm-2:00 pm - Lunch

2:00 pm-3:45 pm

**Oral Session 13**

The Energy Transition: Metals of the  
Future II

**Oral Session 14**

Specialty Metals and Materials I

3:45 pm-4:15 pm - Break

4:15 pm-4:45 pm

Motivating Future Geoscientists:  
NGEA Survey Insights

4:45 pm-5:15 pm

Conference Reflections and Future  
Perspectives (Panel Discussion)

5:15 pm-6:00 pm

Closing Ceremony and Concluding  
Remarks

*Anna Nguno and Laurence Robb,*  
*Conference Chairs*

*Anne Thompson, 2025 SEG President*  
*Rick Valenta and Mark Noppé, SEG*  
*2025 Conference Chairs*

6:00 pm-8:00 pm

Closing Social (Ticket Required)

## Welcome to the SEG 2024 Conference!

Thank you for joining us as we explore this year's theme, Sustainable Mineral Exploration and Development. The SEG 2024 Conference will feature an engaging in-person technical program highlighting the need for metals of the future, the logistical challenges of exploration and development, innovative developments and exploration discoveries, and the critical significance of world-class ore districts.

The technical program promises to showcase groundbreaking research and facilitate vibrant discussion. Each day will begin with a trifecta session that focuses on a key topic: Gold in Africa, the Central African Copperbelt, and the Bushveld Complex. Technical sessions will then delve into eight key themes with oral contributions from academia and industry speakers representing a wide diversity of background and geography. Conference attendees will also have the opportunity to explore a record number of poster presentations.

In addition to this exceptional technical program, pre- and post-conference field trips will explore key areas in Namibia, Zimbabwe, and Zambia and highlight important resources such as diamonds, rare earth elements, base metals, gold and iron oxide copper-gold, copper, lithium, uranium, pegmatites, and chromite and platinum group metals. Workshops, a robust social program, and networking opportunities specifically geared toward students and early career professionals round out the offerings.

The venue is the Mercure (Safari) Hotel Conference Centre in Windhoek, Namibia—a country renowned for spectacular geology, unique ore deposits, and leadership in mineral resource sustainability. SEG 2024 is organized in collaboration with the Society of Economic Geologists, the Geoscience Council of Namibia, and the Geological Society of Namibia, and we are grateful for their partnership.

We look forward to this chance to network with friends and colleagues old and new!

Anna Nguno and Laurence Robb  
*Co-Chairs, SEG 2024 Organizing Committee*  
Jennifer D. Craig, *SEG Executive Director*



Anna Nguno



Laurence Robb



Jennifer D. Craig

## Conference Information

### Conference Organizing Committee

Conference Chairs:	Anna Nguno, Laurence Robb
SEG Executive Director:	Jennifer D. Craig
Advisory, Logistics:	Gabi Schneider
Technical Program:	Judith Kinnaird, Paul Nex, Ester Shalimba
Poster Program:	Richard Manyanga, Claudia Mutongolome
Early Career Program:	Halleluya Ekanjo, Absai Vatuva
Workshops:	Mary Barton, Samuel Nengola
Field Trips:	Roger Swart, Robert Kaemba, Patrick Redmond
Social Program:	Kaarina Ndalulilwa
Sponsorships and Exhibitors:	Stephen Frindt, Vilho Shafombabi
Marketing and Media:	Inge Mbidi, Josephine Uushona

### SEG Contact Information

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The information in this program is current as of September 1, 2024, and is subject to change before conference events begin. Please check the SEG 2024 app for updated information.

[seg2024.org/virtual](https://seg2024.org/virtual)



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## Organizational Partners

SEG 2024 is organized in partnership with the Society of Economic Geologists, the Geoscience Council of Namibia, and the Geological Society of Namibia.

### The Society of Economic

**Geologists** (SEG) is an international scientific association devoted to advancing the science, discovery, and responsible development of mineral resources. Our members come from industry, academia, and government institutions, creating a unique, diverse network of professionals.



[segweb.org](http://segweb.org)

### The Geoscience Council of

**Namibia** (GSCNam) was established to serve as a regulatory juristic body for geoscientists in Namibia. GSCNam works to promote the geoscience profession in Namibia and to ensure that geoscientists are fully engaged in the transformation of their profession; a profession that is increasingly relied upon by the public to provide expert opinion and service, and to safeguard the public interest.



[geocouncil.org.na](http://geocouncil.org.na)

### The Geological Society of

**Namibia** aims to promote the study of geosciences in Namibia and do all things conducive to the advancement of geological science. The Society hosts regular talks on geological topics from across the world and organizes field excursions to mines and geologically interesting sites across Namibia.



[geolsocnamibia.org](http://geolsocnamibia.org)

## SEG Awardees for 2024

The SEG Awards ceremony will be Saturday, September 28, 2024, at 7:30 pm. The event will be held at the Safari Conference Centre.

### R.A.F. PENROSE GOLD MEDAL

HOLLY J. STEIN  
AIRIE Program

### SEG SILVER MEDAL

MASSIMO CHIARADIA  
University of Geneva

### SEG WALDEMAR LINDGREN AWARD

BERTRAND ROTTIER  
Université Laval

### RALPH W. MARSDEN AWARD

DOUGLAS J. KIRWIN  
Independent Consultant

### BRIAN J. SKINNER AWARD

FEDERICO CERNUSCHI  
Eclectic Rock

### HONORARY FELLOW

REID KEAYS  
Monash University

### SEG DISTINGUISHED LECTURER

ADAM C. SIMON  
University of Michigan

### INTERNATIONAL EXCHANGE LECTURER

MOIRA T. SMITH  
Liberty Gold

### SEG THAYER LINDSLEY LECTURER

SARAH A.S. DARE  
Université du Québec à Chicoutimi

### REGIONAL VICE PRESIDENT LECTURER

REIMAR SELTMANN  
Natural History Museum

## Student and Early Career Program

### Thursday, September 26

8:00 am-2:00 pm Matchless Mines Field Trip  
6:00 pm Joe's Beerhouse Social Event—  
Sponsored by iCrag

### Friday, September 27

9:30 am-4:00 pm Student and Early Career  
Professionals Events

## Pre-Conference Field Trips

### September 19-25

Diamond Excursion – A Visit to the Namibian Diamond  
Mega-Placer

Leaders: *Gottfried Grobbelaar, John Ward, Jana Jacob,  
and Roger Swart*

### September 21-26

REE Deposits of Northern Namibia

Leaders: *Rainer Ellmies and Pete Siegfried*

### September 21-26

Base Metal Deposits of Southern Namibia

Leaders: *Patrick Redmond and Eckhart Freyer*

### September 21-26

A Transect Through Gold Deposits and Prospects of  
the Damara Belt, Namibia

Leaders: *Emmanuel Shilongo, Josia "PJ" Shilunga, Jeremie  
Lehmann, and Alexander Kisters*

### September 21-26

Zimbabwe - Lithium

Leaders: *Adam Moodley and Gayle Hanssen*

### September 22-26

Zambian Copperbelt - Classic Copperbelt

Leaders: *Murray Hitzman, Elijah Mwelwa, and Robert  
Kaemba, and Timothy MacIntyre*

## Pre-Conference Workshops

### September 26

Technical Writing for Emerging Geoscience  
Professionals

Presenter: *Jacob Hanley*

### September 27

Structural Geology and Exploration Insights Applied to  
Orogenic Gold Systems

Presenter: *Miguel Nassif*

## Post-Conference Field Trips

### October 1

The Iron Oxide Copper-Gold (IOCG) Vein System of  
the Onganja Mine, Windhoek District

Leader: *Robert Carr*

### October 1-7

Uranium, Pegmatites, and Critical Raw Materials  
in Namibia

Leaders: *Gabi Schneider, Judith Kinnaird, and Paul Nex*

### October 2-5

Zimbabwe - Great Dyke

Leaders: *Caston Musa and Andrew Du Toit*

### October 2-6

Zambian Copperbelt – Domes Region

Leaders: *Murray Hitzman, Elijah Mwelwa, Tim  
MacIntyre, and Robert Kaemba*

## Post-Conference Workshops

### October 1

DroneSOM - Mineral Exploration Mapping Tools Using  
Machine Learning and Drone Geophysics

Presenters: *Ina Storch, Andreas Knobloch, Johanna Pesonen,  
Longying Xiao, Ari Saartenoja, and René Forsberg*

### October 1

Critical Minerals: Geological Perspectives for  
Discovery and Recovery

Presenters: *Richard Herrington, Maria Boni, Reimar  
Seltmann, Frances Wall, and Francesco Putzolu*

### October 2

Fluid and Melt Inclusions in Ore Systems:  
Fundamentals and Practical Applications

Presenters: *Jacob Hanley and Tobias Fusswinkel*

**IVANHOE**  
MINES

**Mining with a greater purpose.**

# Technical Program

## DAY 1 – FRIDAY, SEPTEMBER 27, 2024

### Opening Event

- 4:30 pm - 5:00 pm    **Opening Performance – African Cultural Diversity Dance**
- 5:00 pm - 5:15 pm    **Welcoming Remarks**  
*Inge Kameeja Zaamwani (Invited Speaker)*
- 5:15 pm - 6:30 pm    **Geoscience Capacity Building for the Future - the African Perspective (Panel Discussion)**  
*Anne Thompson (Chair), Kurt House, Benjamin Mapani, Kombada Mhopjeni, Franck Twite*
- 6:30 pm - 7:00 pm    **Presidential Address**  
*Stephen Piercey (2024 SEG President)*
- 7:00 pm - 9:00 pm    **Welcome Reception**

## DAY 2 – SATURDAY, SEPTEMBER 28, 2024

### Welcome and Plenary Sessions

- 8:00 am - 8:15 am    **Opening Comments**  
*Jennifer Craig, Anna Nguno, Laurence Robb*
- 8:15 am - 8:45 am    **Fostering Sustainable Development – Opportunities for the Extractive Industry**  
*Thabisile Phumo (Invited Speaker)*
- 8:45 am - 9:15 am    **Enhancing Perceptions and Building Trust in the Mining Industry**  
*John Roos (Invited Speaker)*
- 9:15 am - 9:45 am    **The Impact of the Pan-African Reporting Code on the Future of Mining in Africa**  
*Deng Ngang Deng (Invited Speaker)*
- 9:45 am - 10:00 am    **Q&A**
- 10:00 am - 11:00 am    **Poster Viewing and Speed Talk Session**

### TRIFECTA 1: GOLD IN AFRICA *Lynnette Greyling, Chair*

- 11:00 am - 11:30 am    **First Major Ore-Grade Gold Concentration on Earth's Surface: Why, When, and Where?**  
*Hartwig Frimmel (Invited Speaker)*
- 11:30 am - 12:00 pm    **Gold in Africa – History, Endowment, and Discovery**  
*Mike Robertson (Invited Speaker)*
- 12:00 pm - 12:30 pm    **Beyond the State-of-the-Art Geophysical Surveys for Mineral Exploration: Where Do We Go Next?**  
*Musa Manzi (Invited Speaker)*
- 12:30 pm - 2:00 pm    **Lunch Break**



## DAY 2 – SATURDAY, SEPTEMBER 28, 2024

	<b>Oral Session 01 Gold: Enhanced Discovery and Development I</b>	<b>Oral Session 02 Innovative Technology Developments in Mineral Deposit Science I</b>
2:00 pm - 2:15 pm	Large Gold Systems of Central Asia: Geodynamics and Metallogeny Revisited <i>Reimar Seltmann</i>	The Transformative Impact of Enhanced Geoscience Data Collection and AI-Powered Modeling on the Mining and Exploration Industry <i>Patrick Redmond</i>
2:15 pm - 2:30 pm	Permeability Evolution Within an Orogenic Disseminated Gold Deposit: Evidence from Liba Gold Deposit, Central China <i>Pengcong Zhang (Student)</i>	Synergies of Drone-Borne and Satellite Data for Noninvasive Mineral Exploration in Namibia <i>René Booysen</i>
2:30 pm - 2:45 pm	New Genetic Type of Gold Deposit for Timok, Serbia: the High-Grade Gold Skarn Mineralization at Coka Rakita Project <i>Mladen Zdravkovic</i>	Geochemical Signatures of Magmatic Hydrothermal Alteration in Carbonate Rocks Around the Basin Porphyry in the Drum Mountains of West-Central Utah <i>Michael Kirschbaum (Student)</i>
2:45 pm - 3:00 pm	Insights into the Metallogenic Evolution of the Timmins Gold Camp Using Quartz-Hosted Melt Inclusions from the Porcupine Intrusive Suite <i>Sarah Speight</i>	Development of New Exploration Vectors by Quantitative Mineralogical Analysis at the Spremberg-Graustein-Schleife Cu-Ag Kupferschiefer Deposit, Lusatia, Germany <i>Yonghwi Kim</i>
3:00 pm - 3:15 pm	Source of Fluids in Orogenic and Intrusion-Related Gold Deposits: Insights from Trace Elements in Pyrite <i>Dominique Genna</i>	Do Mineral Systems Have Fingerprints? (Yes, and They Can Be Used to Find World-Class Orebodies!) <i>Paul Hodkiewicz</i>
3:15 pm - 3:30 pm	Orogenic Gold Grain Coarsening from Colloidal Precursor by Ostwald Ripening <i>Bjorn von der Heyden</i>	Influence of Mineral Microinclusions on Vectoring and Fertility Assessment Tools in the Green Rock Environment: A Case Study from Batu Hijau Porphyry Cu-Au Deposit, Indonesia <i>Axel Cima (Student)</i>
3:30 pm - 4:00 pm	Break	
	<b>Oral Session 03 Gold: Enhanced Discovery and Development II</b>	<b>Oral Session 04 Innovative Technology Developments in Mineral Deposit Science II</b>
4:00 pm - 4:15 pm	Petrography, Ore Mineral Paragenesis, and Gold Department of the Twin Hills Gold Deposit, Central Namibia <i>Johannes Sales</i>	Mineral Systems: A Discussion on the Continuing Challenges and Emerging Opportunities <i>Joel Hrominchuk</i>

**DAY 2 – SATURDAY, SEPTEMBER 28, 2024**

4:15 pm - 4:30 pm	U-Pb Geochronology of the Archaen Tati Greenstone Belt Gold deposits, NE Botswana: Evidence of Two Post-Archean and Post-Metamorphic Mineralization Events. <i>Charles Geraud Kono (Student)</i>	Hydrothermal Alteration and Volcanic Stratigraphy at the Paleoproterozoic Kay Mine Volcanogenic Massive Sulfide Deposit, Black Canyon City, Arizona USA <i>Aaron Adsit (Student)</i>
4:30 pm - 4:45 pm	Intrusion-Associated Au Mineralization in the Archean Mooshla Intrusive Complex, Doyon-Bousquet-LaRonde Mining Camp, Abitibi Greenstone Belt, Québec, Canada <i>Kevin Neyedley (Student)</i>	DrillDown: An Open-Source Python Package for “Drilling Down” Into Ore Deposits Datasets <i>Robert Collar (Student)</i>
4:45 pm - 5:00 pm	Valley – A High-Grade Reduced Intrusion Related Gold System in Yukon, Canada <i>Thomas Branson</i>	Perkins Discontinuities: Structurally Controlled Grade Patterns Diagnostic of Epigenetic Mineralization at the Deposit-Scale <i>Jun Cowan</i>
5:00 pm - 5:15 pm	Distribution and Partitioning of Trace Elements During Hydrothermal Sulfidation of Magnetite by Pyrite, KCD Gold Deposit, DRC <i>Yann Waku Mpaka (Student)</i>	Mineral Prospectivity Mapping on Point Data using Graph Deep Learning Regression: Case Study of Copper Occurrence in Northern Ireland <i>Felix Sihombing (Student)</i>

SEG 4:15 pm - 5:15 pm

SATURDAY

5:15 pm - 5:30 pm	Bi-Pb Melts as Highly Efficient Agents for Au-Ag Enrichment in Epithermal Ore Systems <i>Néstor Cano (Student)</i>	One Person’s Trash is Another’s Treasure; Extracting Additional Information on Fluid Rock Interaction from Disturbed Isotopic Systems <i>Lucy Mathieson (Student)</i>
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SEG 5:15 pm - 9:15 am

5:30 pm - 7:30 pm Exhibit and Poster Reception, Speed Talks

7:30 pm - 10:00 pm SEG Awards Ceremony (Ticket Required)

**DAY 3 – SUNDAY, SEPTEMBER 29, 2024****TRIFECTA 2: CENTRAL AFRICA COPPERBELT** *Murray Hitzman (Session Chair)*

8:00 am - 8:15 am	Morning Comments
8:15 am - 8:45 am	Mitigating the Streetlight Effect: Stepping Into the Darkness is an Important Step in Understanding the Copperbelt <i>David Selley (Invited Speaker)</i>
8:45 am - 9:15 am	Using Mg-Carbonates, Kyanite, and Immobile Elements as Pathfinders for Technology Metals in the Central African Copperbelt <i>Anna Bidgood (Invited Speaker)</i>

SATURDAY-SUNDAY

**DAY 3 – SUNDAY, SEPTEMBER 29, 2024**

9:15 am - 9:45 am Provenance of the Katangan Basin in Zambia and the Implications for Basin Evolution and Exploration Search Space  
*Munshya Zimba (Invited Speaker)*

9:45 am - 10:00 am Q&A

10:00 am - 11:00 am Poster Viewing and Speed Talk Session

**Oral Session 05  
Resource Development: ESG from Exploration to Remediation**

11:00 am - 11:15 am Redefining Viability: Integrating Social and Environmental Dimensions into Mineral Exploration Success  
*Matthew Grimshaw*

11:15 am - 11:30 am Charting Sustainable Resource Development: ESG Perspectives in the DRC Mining Sector  
*Innocent Mufungizi (Student)*

**Oral Session 06  
Vital High-Volume Base Metals I**

Framboids, Fluids, and Field Mapping: Understanding Sedimentary-Rock-Hosted Metal Prospectivity Across 11 Orders of Magnitude  
*Elizabeth Turner (Invited Speaker)*

Evolution of the Neoproterozoic Katangan Basin in the Kipushi Mine Area, Southern DRC and Northern Zambia: The Importance of Halokinesis, Global Glacial Events, and Tectonics  
*Helen Twigg (Student)*

11:30 am - 11:45 am An Effective Formalization of Artisanal Mining Will Improve the Public Acceptability of the Mineral Extraction Industry in Mozambique  
*Manuel Nopeia*

11:45 am - 12:00 pm Exploration, Mining and Biodiversity in Angola: A New Business Model  
*Luis Chambel*

12:00 pm - 12:15 pm Effective Bottom-Up Social and Environmental Strategies for Exploration Teams: Lessons from an Orphaned Mine  
*Robin Armstrong*

12:15 pm - 12:30 pm The Benign Nature of Tailings from the Tumas Uranium Project, Namibia: Aligning Environmental Safeguards with Economic Outcomes  
*Alex Otto*

12:30 pm - 2:00 pm Lunch Break

Exploring Geological Complexities of the Kakula Cu Deposit, Democratic Republic of Congo  
*Franck Twite*

Beyond Kamao and Kakula: Exploration in the Western Foreland  
*Yves Ilayao*

Geological Characterisation, Stratigraphic Correlation and 3D Modelling of the Musinga Copper Exploration Play, Northeast Kabompo Dome, Democratic Republic of Congo  
*George Aldiss*

Camp Creek Porphyry Alteration Mineralogy and Geochemistry: Exploring for Blind Copper Mineralization in Northern British Columbia, Canada  
*Maxwell Porter (Student)*

## DAY 3 – SUNDAY, SEPTEMBER 29, 2024

	Oral Session 07 Africa's Iconic Ore Deposits	Oral Session 08 Vital High-Volume Base Metals II
2:00 pm - 2:15 pm	Bringing 20 Years of Research and 500 Reef Intersections Together on Ivanhoe's Tier 1 Platreef Deposit: A Synthesis from the Northern Limb of the Bushveld Igneous Complex <i>Tim Dunnett</i>	Discovery of the Oak Dam West IOCG Deposit, South Australia <i>Kathy Ehrig</i>
2:15 pm - 2:30 pm	The Formation of High-Grade Iron Formation-Hosted Iron Ores of the Northern Cape Province of South Africa: Insights from Hematite Ages <i>Albertus Smith</i>	Triple-Halogen (Cl-Br-I) Signatures of Salt Melt Inclusions in Kiruna-Type Magnetite-Apatite Ore Systems – Proof of Formation Via Evaporite Anatexis <i>Tobias Fusswinkel</i>
2:30 pm - 2:45 pm	Geological and Metallogenic Characterisation of Manganocopper Mineralisation in the Tizi N'Isdid Deposits (Ounein Massif, High Atlas, Morocco) <i>Imad Aflla (Student)</i>	Using Geochemical and Petrophysical Properties to Target Sediment-Hosted Copper Deposits <i>J Porter</i>
2:45 pm - 3:00 pm	Primary-Hosted Uranium Resources, Geology, and Mineralisation in the Damara Orogen, Namibia <i>Guy Freemantle</i>	Linking the Nature and Timing of Diagenesis of Source Rocks with Hydrocarbon Migration and Copper Mineralisation Events in the Neuquén Super Basin, Argentina <i>Richard Herrington</i>
3:00 pm - 3:15 pm	Cu and Fe Isotope Contrasts Between the Paleoproterozoic Haib Porphyry Copper Deposit and Representative Phanerozoic Porphyry Systems <i>Bibi Ayesha Jogee</i>	Geometallurgical Characterization of Potential By-Products in the Spremberg-Graustein-Schleife Kupferschiefer Deposit <i>Zahra Nourizenouz (Student)</i>
3:15 pm - 3:30 pm	Petrogenesis and Structure of the UIS Pegmatites, Namibia: A New Source of Battery Metals in Africa <i>Laurence Robb</i>	Ore-Forming Processes at the Rosh Pinah Zn-Pb-Ag Deposit, Southern Namibia: Evidence from Mineralogy, Geochemistry, and Metal Distribution <i>Halleluya Ekandjo (Student)</i>
3:30 pm - 4:00 pm	Break	
	Oral Session 09 New Discoveries and Developments I	Oral Session 10 Vital High-Volume Base Metals III
4:00 pm - 4:15 pm	Epithermal Gold Discoveries in the New Khundii Metallogenic Province, Southwest Mongolia <i>Jeffrey Hedenquist</i>	Breccias in Magmatic-Hydrothermal Environments <i>David Cooke</i>

**DAY 3 – SUNDAY, SEPTEMBER 29, 2024**

4:15 pm - 4:30 pm	Structural Controls on Williams Brook Gold Mineralization, New Brunswick, Canada <i>Stefan Kruse</i>	Insights into Enhanced Brownfield Exploration Techniques at Morenci for Improved Ore Characterization and Mineral Reserve and Resource Addition <i>Paul Albers</i>
4:30 pm - 4:45 pm	Constraining Mineralization and Alteration Through New Geologic Mapping at Spring Peak Low-Sulfidation Epithermal System, Mineral County, NV <i>Marcus Angus (Student)</i>	Geological and Geochemical Evolution of the Supergiant High-Grade Resolution Cu-Mo Deposit, Arizona <i>Takeshy Coaquira (Student)</i>
4:45 pm - 5:00 pm	B2Gold's Antelope Discovery – Fresh Insights Lead to Exploration Success at Otjikoto <i>James Burse</i>	Anatomy of a Moderated Telescoped Porphyry-High-Sulfidation System: Insights of a 2-Km Vertical Profile of Alteration at Valeriano Cu-Au Deposit, Chile <i>Jaime Osorio</i>
5:00 pm - 5:15 pm	The Highbury Lithium Deposit, KwaZulu - Natal, South Africa <i>Eugene Van den Heever</i>	Prospectivity Modeling and Metallogeny of Pre-Orogenic and Orogenic Base and Precious Metals of the South Nabitah Belts, Arabian Shield <i>Arnaud Fontaine</i>
5:15 pm - 5:30 pm	Predicting Giants: The Role of Geoscientists and Mineral Systems in our World of Emerging AI <i>Nicole Januszczak</i>	

SEG

4:15 pm - 5:30 pm

SUNDAY

5:30 pm - 7:30 pm	Exhibit and Poster Reception, Speed Talks
7:30 pm - 10:00 pm	Industry Outlook Dinner (Ticket Required) Human & Social Capital Development of the World's Future Mines <i>Mfikeyi Makayi (Invited Speaker)</i>

SEG

5:30 pm - 11:00 am

**DAY 4 – MONDAY, SEPTEMBER 30, 2024****TRIFECTA 3: BUSHVELD** *Marina Yudovskaya (Session Chair)*

8:00 am - 8:15 am	Morning Comments
8:15 am - 8:45 am	The Bushveld Complex and Its Mineralization, South Africa <i>Judith Kinnaird (Invited Speaker)</i>
8:45 am - 9:15 am	Processing of the Bushveld Ores <i>Kirsten Youlton (Invited Speaker)</i>
9:15 am - 9:45 am	Platinum Group Metals: It Begins and Ends in the Market <i>Richard Stewart (Invited Speaker)</i>
9:45 am - 10:00 am	Q&A
10:00 am - 11:00 am	Poster Viewing and Next Generation Explorers Award (NGEA) Speed Talk Session

SUNDAY-MONDAY

## DAY 4 – MONDAY, SEPTEMBER 30, 2024

	<b>Oral Session 11 The Energy Transition: Metals of the Future I</b>	<b>Oral Session 12 New Discoveries and Developments II</b>
11:00 am - 11:15 am	National-Scale Critical Mineral Assessments to Support Accelerating Discovery in Australia <i>Arianne Ford</i>	The Nosib Polymetallic Mineral Deposit in the Otavi Mountain Land of Namibia – New Deposit Type or Variation on a Theme? <i>Jonathon Dugdale</i>
11:15 am - 11:30 am	Transtensional Tectonics Control Emplacement of Lithium-Tin Granites in the Eastern Erzgebirge (Germany/Czech Republic) <i>Jan Cerny</i>	The Eureka Gold Deposit: Latest Gold Discovery in an Emerging Gold District in the Northern Zone, Damara Belt, Namibia: Alteration, Mineralization and Structural Controls <i>Wynand Slabbert</i>
11:30 am - 11:45 am	Structural Controls on the Emplacement and Mineralization of Lithium-Bearing Pegmatites <i>Lot Koopmans (Student)</i>	A Potential Mafic-Ultramafic Magmatic Phase of the Kunene Complex in Angola and Namibia and Its Ni-Cu-PGE Fertility <i>Ben Hayes</i>
11:45 am - 12:00 pm	End-Orogenic, Granite-Hosted Uranium Mineralisation: A Solution from Namibia <i>Paul Nex</i>	The Geology of the Mingomba Deposit in the Zambian Copperbelt <i>Sitwala Mulonda</i>

SEG 11:00 am - 12:00 pm

MONDAY

12:00 pm - 12:15 pm	Evolution of the Magmatic System Associated with a Supergiant Porphyry Cu Deposit from Trace Element Profiles in Zircons <i>Massimo Chiaradia</i>	The Discovery and Geology of the Boundary Zone Zn-Pb-Ag Deposit, Yukon, Canada: New Perspectives on Mineralizing Processes in Sediment-Hosted Base Metals Deposits <i>Jack Milton</i>
12:15 pm - 12:30 pm	Mineralogy and Petrology of the Petalite-Subtype Prof Pegmatite, Revelstoke, British Columbia, Canada <i>Catriona Breasley (Student)</i>	Diamonds from a New Witwatersrand-Like Gold Deposit Show Evidence of Archaean Subduction in the Slave Craton, Canada <i>Rory Changleng (Student)</i>
12:30 pm - 2:00 pm	Lunch Break	

SEG 12:00 pm - 2:15 pm

MONDAY

	<b>Oral Session 13 The Energy Transition: Metals of the Future II</b>	<b>Oral Session 14 Specialty Metals and Materials</b>
2:00 pm - 2:15 pm	Iron Oxide-Copper-Gold Deposits: A One-Size-Fits All Genetic Model Does Not Work <i>Adam C. Simon (SEG Distinguished Lecturer)</i>	Primary Rare Earth Elements Mineralization of the World-Class Mt Weld Carbonatite Deposit, Western Australia <i>Arthur de Oliveira (Student)</i>

**DAY 4 – MONDAY, SEPTEMBER 30, 2024**

2:15 pm - 2:30 pm	Iron Oxide-Copper-Gold Deposits: A One-Size-Fits All Genetic Model Does Not Work, cont'd <i>Adam C. Simon (SEG Distinguished Lecturer)</i>	A Revised Model for High Grade Ni-Co-As-Ag-U-Sb-Bi Deposits: The Product of Heating and Oxidation of Marine Evaporite Brines and Hydrocarbons from Intracratonic Basins <i>Jacob Hanley</i>
2:30 pm - 2:45 pm	Is There a Link Between Orogenic Collapse and Lithium-Bearing Pegmatites? <i>Tarryn Cawood</i>	Paragenetic Evolution of Sn-dominant Lode Systems in the Pool Mining District, Cornwall <i>Kiara Brooksby (Student)</i>
2:45 pm - 3:00 pm	Petrography and Geochemistry of the Okohongo Copper-Silver Deposit, Kaoko Belt, Kunene Region, Namibia <i>Abner Nghoongoloka (Student)</i>	Micas as Tracers of Tungsten Mineralization Case Study: Santa Comba and Fontao Deposits NW Spain <i>Candela Pita Díaz (Student)</i>
3:00 pm - 3:15 pm	A Recipe for Copper-Rich Fluids: The Importance of Sulfide Resorption and Water-Rich Magmas <i>Olivia Hogg (Student)</i>	Controls on Germanium Enrichment in Zn-Pb Sediment-Hosted Mineral Deposits <i>Juan Bello Rodriguez (Student)</i>

3:15 pm - 3:30 pm	Temporal Evolution of Miocene-Pliocene Magmatic Suites Fertile for Porphyry Cu Deposits: Preliminary Results from the Tres Cerrillos Porphyry Cu Prospect, Ecuador <i>Hugo Carrasco (Student)</i>	Indium in Mine Wastes: Geochemistry, Mineralogy, and Microbiology <i>Olivia Mejías (Student)</i>
3:30 pm - 3:45 pm	The Birth of a World-Class Komatiite-Hosted Ni District: 35 Ma of Crustal Fertilisation, Gestation, and a Violent Short-Lived Labour <i>Anne Virnes (Student)</i>	Critical Metals in Base Metal Mineralization of the Otavi Mountain Land and the Kunene Region, Namibia <i>Ester Shalimba</i>

3:45 pm - 4:15 pm **Break**

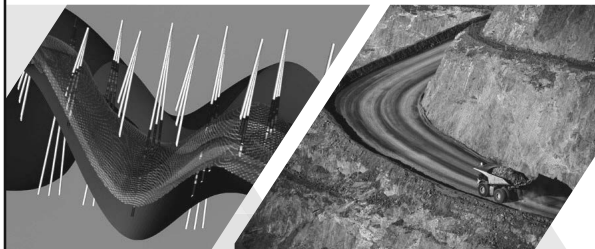
**CLOSING EVENTS**

4:15 pm - 4:45 pm	Motivating Future Geoscientists: NGEA Survey Insights <i>Tim Dobush</i>
4:45 pm - 5:15 pm	Conference Reflections and Future Perspectives in Memory of Brian G. Hoal (Panel Discussion) <i>Richard H. Sillitoe (Chair)</i>
5:15 pm - 6:00 pm	Closing Ceremony and Concluding Remarks <i>Anna Nguno, Laurence Robb, Anne Thompson, Richard Valenta, Mark Noppé</i>
6:00 pm - 8:00 pm	Closing Social (Ticket Required)

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## Invited Speakers

**Anna Bidgood** is an exploration geologist with KoBold Metals working on their copper discovery team. Anna was previously a Fulbright Scholar at the Carnegie Institution for Science and a postdoctoral researcher at the Ireland Research Centre in Applied Geosciences (iCRAG). Her research explores metamorphism, mineral growth, and mineralization in the Central African Copperbelt, a large sedimentary basin that contains economic concentrations of critical elements required in the transition from hydrocarbon- to renewable energy-based technology. Anna finished her Ph.D. in metamorphic geology and Himalayan tectonics at the University of Oxford in 2020.



**Deng Ngang Deng** is a South Sudanese-Canadian geologist based in Australia and the founder of Target Mining Resources, a mining services and training provider. He specializes in the mining and exploration of gold and base metals, with expertise in geochemical mapping. Deng is a member of the Australian Institute of Geoscientists and a coauthor of the Pan-African Resource Reporting Code (PARC), contributing to the development of resource reporting standards across Africa. His academic background includes a diploma of project management from Western Sydney Institute, an M.S. in geology from Laurentian University, and an Honours B.S. geology specialist from the University of Toronto.



**Hartwig Frimmel**, who obtained his Ph.D. in geology at the University of Vienna, is a professor and Chair of Geodynamics and Geomaterials Research at the University of Würzburg, Germany. He is also associated with the University of Cape Town, where he previously climbed the academic ladder from lecturer to associate professor. He was leader of the Earth Science subprogram within the South African National Antarctic Program, president of the Society for Geology Applied to Mineral Deposits (SGA), and director of Lithoscope consultancy. He has served on several editorial boards (including *Mineralium Deposita* for the past 25 years) and as a consultant to numerous national research funding agencies, mining/exploration companies, and government bodies.





**Lynnette Greyling** has an M.Sc. for a study on MVT-type Pb-Zn deposits in South Africa and a Ph.D. from the University of the Witwatersrand characterizing the hydrothermal fluids of the Zambian Copperbelt. As an exploration geologist at Randgold Resources, she worked on Archaean and Paleoproterozoic orogenic gold deposits in Tanzania and West Africa. She is interested in how structures create pathways and traps for hydrothermal fluids, leading to precious and base metal mineralization. This was the focus of her postdoctoral research on Birimian-hosted orogenic gold deposits in northern Cote d'Ivoire at the University of Cape Town, where she became a lecturer in economic geology. She has been a vice president of exploration for Goldrange Resources, with projects in Cote d'Ivoire and Tanzania. She is currently based in the United Kingdom and works as an independent consultant.



**Murray Hitzman** is a professor in the School of Earth Sciences, University College Dublin, and director of the Science Foundation Ireland Research Centre in Applied Geosciences (iCRAG). He previously served as associate director for energy and minerals at the U.S. Geological Survey, Charles Fogarty Professor of Economic Geology at Colorado School of Mines, a policy analyst in the White House Office of Science and Technology Policy and the U.S. Senate, and an exploration geologist conducting mineral exploration worldwide. Hitzman has B.A. degrees in anthropology and geology from Dartmouth College, an M.S. in geology from the University of Washington, and a Ph.D. in geology from Stanford University. He currently serves as a technical advisor for KoBold Metals.



**Kurt House** is the cofounder and CEO of KoBold Metals, an AI-driven mineral exploration company that integrates the expertise of top-tier mineral explorers with a world-class team of data scientists and software engineers from Silicon Valley giants such as Apple and Google. KoBold's mission is to accelerate the discovery of essential materials for the energy transition, and over the last six years, KoBold has established a diverse portfolio of over 60 projects across four continents, some of which are in partnership with industry leaders like BHP and Rio Tinto.



**Judith Kinnaird**, a former president of SEG, is internationally known for her work on ore deposits in Africa. She and a team of researchers have worked on copper mineralization in the Central African Copperbelt of Zambia and the DRC; pegmatite-hosted tin, lithium, and uranium deposits in the Damara belt of Namibia; tin, niobium, and tantalum in the Younger granites of Nigeria; lithium and gem-bearing pegmatites in Zimbabwe and Somaliland; chromitite and platinum group metals in the Bushveld Complex of South Africa and Malopo Farms Complex in Botswana; lead-zinc deposits in Ireland; and Archaean gold mineralization in South Africa and Mozambique. Currently, she is focusing on vanadium, platinum group elements, uranium, lithium, and rare earth elements needed for the green economy. Judith is codirector of a National Centre of Excellence (CIMERA) for Minerals and Energy Research Analysis, cohosted at the University of the Witwatersrand, Johannesburg, and funded by the NRF/DST of the South African government.



**Mfikeyi Makayi** is an engineer and seasoned mining professional with over 15 years' experience in industry. She worked on one of Zambia and Africa's largest copper mines, First Quantum's Kansanshi copper-gold mine, in mining operations and in the global internal audit division covering Australia, Finland, Mauritania, and Panama's operations. She was also the country manager and director of one of Zambia's largest mining and construction equipment supply and services companies, Barloworld Equipment, supplying Caterpillar products to various industries. Her portfolio covered First Quantum's Kansanshi and Sentinel mines, Barrick's Lumwana mine, Mopani copper mines, and Gemfield's Kagem mine, the world's largest emerald mine.



**Musa Manzi** completed his Ph.D. degree in geophysics in 2013 at the University of the Witwatersrand. He is an associate professor, founding director of the Wits Seismic Research Centre, and a scientific coordinator of the Eramin FuTuRe Project, an international consortium project funded through a pan-European network of research funding organizations. Manzi's innovative and outstanding contributions to geosciences are concerned with the development of novel seismic exploration methods to gain a deeper understanding of Earth processes, particularly in exploring for mineral, oil, and gas reservoirs in African basins and beyond.



**Benjamin Mapani** has made significant contributions to academia, including helping to build an international master's program in exploration geology at the University of Zimbabwe and building a geology program at the University of Namibia. In 2020, he was offered a professorial position in mining and sustainable development at the Namibia University of Science and Technology. Benjamin's research has focused on geodynamics, economic geology, groundwater, climate change, and environmental management of producing and abandoned mines. He has a combined experience of 35 years in geology—from mapping to structural geology, geochemistry, and applied geostatistics—and believes field work is the anchor for improving emerging AI technologies. He has consulted for a number of mines and organizations and has published extensively in the field.



**Kombada Mhopjeni** is the national program officer for natural sciences at the UNESCO Windhoek office. She leads the delivery of UNESCO's science programs in Namibia and coordination of the geoscience program in Southern Africa, drawing on over 18 years of scientific experience in the government, including various roles in geosciences and management. She served as the national representative for the International Union of Geological Sciences and the cosecretary general of the IUGS Commission for the Management and Application of Geoscience Information. Kombada is an executive member of the Geological Society of Namibia and founding national representative of the Young Earth Scientists Network Namibia chapter. She holds an M.Sc. in geology from the University of Western Australia.



**Thabisile Phumo** is an accredited public relations and communication specialist and Public Relations Institute of Southern Africa (PRISA) fellow with 28 years' experience in the public and corporate sector. She is a past president of PRISA and executive committee member of the World Communication Forum Association. She is currently the executive vice president and head of stakeholder relations at Sibanye-Stillwater and has worked in various capacities in the corporate affairs environment at the University of South Africa, the United Nations High Commissioner for Refugees, the Commission for Gender Equality, and Anglo American Platinum Ltd. She is co-editor of Strategic Communication: South African Perspectives, a member of the Academic Advisory Board for Strategic Communication at the University of Johannesburg, and chair of Group Technical Security Management (Pty) Ltd. Thabisile was recognized in Mining Elites in Africa 2022 and received the Alumni Dignitas Award 2023 from the University of Johannesburg.

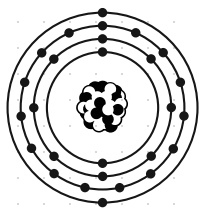


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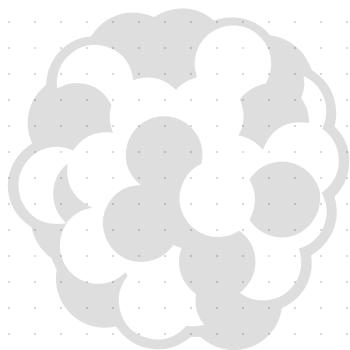
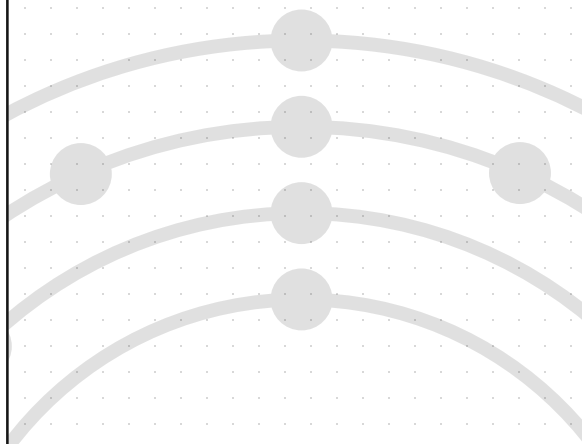
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**Mike Robertson** is a principal consultant with The MSA Group based in Johannesburg, South Africa. With an M.Sc. in the structural controls of gold mineralisation at the Sheba mine, Barberton greenstone belt, he has a particular interest in the application of applied structural geology to understanding controls on ore genesis and exploration targeting. This has led to work on orogenic gold deposits through southern, east, west, and northeast Africa, Saudi Arabia, Yemen, Western Australia, Russia, and Kazakhstan. He has been involved in mineral exploration, both in industry and in a consulting role, for 34 years.



**John Roos** is the country manager and director of B2Gold Namibia, the nation's largest gold mining company, which is 90% owned by B2Gold Corporation and 10% by EVI Mining Namibia. In his role, John oversees the company's long-term strategy and corporate development.



Before his appointment as country manager in November 2022, John led the corporate finance function and managed various green energy projects within the company. John is also actively involved in the company's corporate social investment (CSI) initiatives, spearheading various projects. He is a registered chartered accountant (SA) and a member of the executive committee of the Chamber of Mines of Namibia. Additionally, John serves on the boards of the Save The Rhino Trust and Nakayale Private Academy.

**David Selley** is an explorer and researcher with expertise in structural geology and basin analysis. His first visit to Africa was in 1999—a regional targeting of the Birimian in Côte d'Ivoire and Mali as a very green exploration geologist for North Ltd. The continent is now his second home, having worked throughout most of Africa's countries and geologic provinces. The highlight has been a near 25-year involvement with the Central African Copperbelt, where he has had the privilege to study and explore for the most wonderful ores, all the time working with and being mentored by stellar research, exploration, and production geologists. The province boasts superb data sets, generated over 100 years of systematic exploration and mining—these underpin the concepts that will be presented. The scale and complexity of the mineralizing system means that each new discovery generates new challenges and a need to continually develop and refine our deposit models.



**Adam C. Simon** is the Arthur F. Thurnau Professor of Earth and Environmental Sciences at the University of Michigan, USA. He earned degrees in geology and geochemistry from the University of Maryland and Stony Brook University and was a postdoctoral fellow at Johns Hopkins University. His scholarly work focuses on the global flow of energy and mineral resources with an emphasis on the geologic availability of energy critical metals. Adam has coauthored two textbooks and published 100 papers in the field of energy and mineral resources. Adam has done research and given invited lectures on all seven continents, including a TEDX talk in 2022, and was awarded the University of Michigan Provost's Teaching Innovation Prize for his transdisciplinary pedagogy.



**Richard Stewart** has 25 years' experience in South Africa's geologic and mining industries, is a fellow of the Geological Society of South Africa and a Registered Natural Scientist. Richard joined the Sibanye Group in 2014 and has held the position of chief regional officer: southern Africa since 2022, subsequent to being the group chief operating officer (COO) from 2020. Prior to being COO, Richard was the executive vice president: business development at Sibanye-Stillwater, where he contributed significantly to the group's growth and acquisition strategy.



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**Elizabeth Turner** has published extensively on sedimentary rock-hosted ore systems in northern Canada and the Central African Copperbelt. Her expertise in ore-hosting sedimentary systems, ore-forming fluids and events, carbonate and siliciclastic lithofacies and diagenesis, stratigraphy, basin analysis, paleobiology, early Earth-surface environments, fossil reefs, early animal and eukaryote evolution, and hydrothermal systems is founded in >30 years of remote field research in Proterozoic and Paleozoic sedimentary basins in northern Canada and central Africa, together with extensive microanalytical studies on the nature and evolution of ore-forming fluids and ore-hosting rocks.



**Franck Twite** was born in Lubumbashi, DRC Copperbelt, where he developed an interest in geology and mining. He pursued a Bachelor of Science in geology at the University of Lubumbashi, DRC, and a master's degree at the University of the Witwatersrand, South Africa. Franck has been a key member of the Kamoia copper project geology team since 2011. The work of this geology team led, among other things, to the discovery of the Kakula deposit (625 Mt at 2.73% Cu). Franck is currently accountable for the on-site geology functions including exploration, resource definition, and grade control. Franck was the leading author in two papers published in the *Journal of African Earth Sciences* and *Ore Geology Reviews*. In pursuit of further economic geology education, Franck recently enrolled as a Ph.D. student at the KU Leuven University in Belgium.



**Kirsten Youlton** is currently a senior mineralogist at SGS South Africa, where she specializes in automated scanning electron microscopy (autoSEM) of a range of commodities across various stages in the resource pipeline from exploration to optimization and even remediation. She routinely conducts mineralogical investigations into Bushveld ores in collaboration with the metallurgical team in order to understand, optimize, and improve processes. Prior to this, she was a senior scientist in the mineralogy division at Mintek.



**Marina A. Yudovskaya** is a graduate of the Lomonosov Moscow State University, where she completed her Ph.D. research on volcanogenic massive sulfide deposits of her native Rudny Altai. Upon completion of the Ph.D. degree, she went to work at IGEM in Moscow, with research focused on orogenic gold deposits in black shales, metal transport in fluids of active volcanoes, and unconventional platinum group element (PGE) mineralization. Since 2007, Marina has been involved in various projects on the Bushveld Layered Complex with affiliation at the University of the Witwatersrand (Johannesburg, South Africa). Her current projects also include studies on the intrusions and associated Cu-Ni-PGE deposits of the Norilsk region in the Russian Arctic.



**Ingenesia "Inge" Zaamwani** is an accomplished legal expert and executive with an extensive professional history in the mining and energy industries. She has held several government advisory positions, and she was CEO of NamDeb Diamond Corporation from 1999 to 2015, during which time she helped elevate the company to national significance and played an instrumental role in navigating the global financial crisis of 2008. Currently, Inge holds the position of senior presidential advisor, constitutional affairs and private sector interface, as well as five directorships and an honorary membership on the board of directors for the Namibia Chamber of Commerce and Industry.



**Munshya Zimba** is a principal geologist at First Quantum Minerals (FQM) in Zambia. His role focuses on regional generative exploration and support to the global exploration group. He has been working for over 16 years in the mining and mineral exploration industry with a focus on the Zambian Copperbelt. During this period, he has been involved in various phases of mining and exploration from generative to resource definition to production. He holds an M.S. in geochemistry from the University of Leeds, United Kingdom, and a B.S. in geology from the University of Zambia. He has a passion for the acquisition, integration, and interpretation of relevant regional geochemical, geophysical, and geologic data sets to improve understanding of the Katanga basin and subsequent mineral exploration targeting.



## Copper is critical to the energy transition.

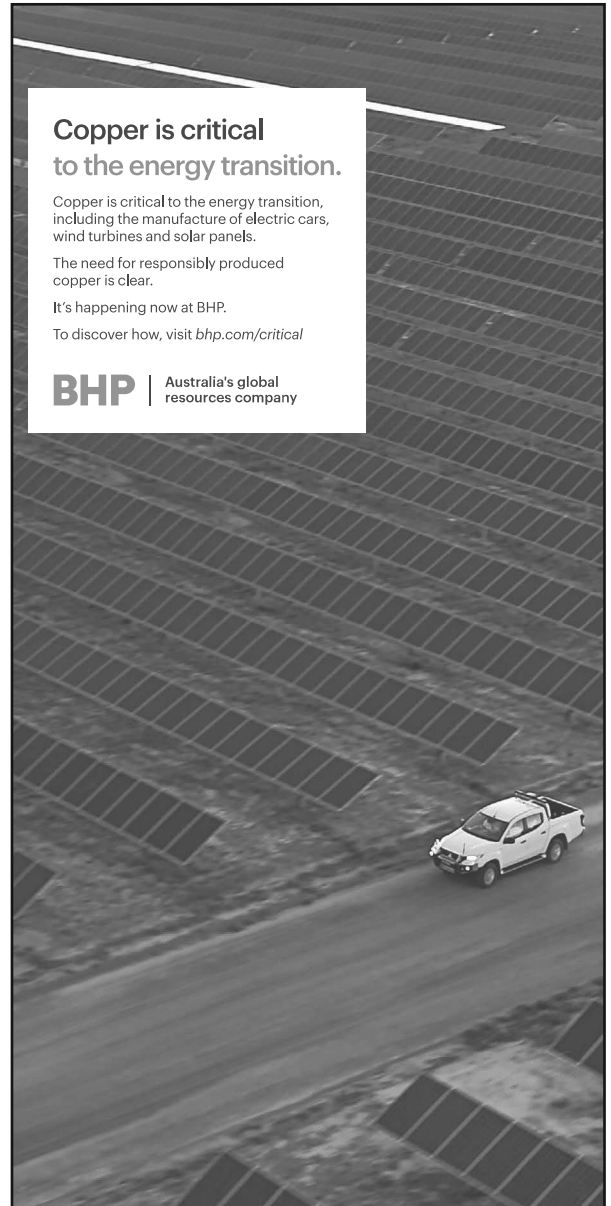
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Posters will be on display during regular conference hours in the Poster and Speed Talk Tent. Titles and authors of posters are listed below; the presenter's name is underlined. For schedule updates, please go to [www.seg2024.org](http://www.seg2024.org).

### Africa's Iconic Ore Deposits

- P1.001 Investigating the Role of Country-Rock Assimilation on the Mineralisation of the Platreef, Turfspruit Farm, Northern Bushveld Complex, South Africa  
Alessia Barbieri (Student), Katie McFall, Richard Herrington, Iain McDonald, Bothepeha Phetlhu, Tim Dunnett
- P1.002 Geology, Geochemistry and Zonation of the Tsumeb Polymetallic Deposit  
Rob J. Howell, Ester Shalimba, Abner Ngoongoloka, Matthew Leybourne, Daniel Layton-Matthews, Stephanie G. Lohmeier, Hartwig E. Frimmel, Helke Mocke
- P1.003 Application of Conventional and Unconventional Exploration Methods for Sapphire Discovery in Southeastern Madagascar: From Regional to Project Scale  
Evelyn Caiza (Student), Dibya J. Baral
- P1.004 The Mineralogy of PGE in the Deep Critical Zone at Sandsloot, Northern Bushveld Complex, South Africa: PPGE Reef Underlain by an IPGE + Rh-Rich Base Metal Zone  
Kate Canham (Student), David Holwell, Iain McDonald, Hannah Hughes, Katie McFall, Andy Lloyd, Erin Thompson, Kofi Acheampong, Lara Du Preez, Matthew Loader
- P1.005 Lithostratigraphic Distribution and Geochemistry of Carrollite in the World-Class Tenke-Fungurume Cu-Co Mining District, Democratic Republic of the Congo  
Malena Cazorla Martínez, Lingli Zhou, Murray Hitzman
- P1.006 Mapping Under Cover: The Kalahari Copperbelt in Eastern Namibia  
Branko Corner, P.R. Hildebrand, M. Kumar
- P1.007 Geochemical and REE Data for Sheeted Leucogranites at the Primary Uranium Deposits of the Damara Orogen, Namibia  
Guy G. Freemantle
- P1.008 The Antelope Deposit, Otjikoto, Namibia: An Integrated Geochemical and Mineralogical Study  
Charlie B. Hamblet (Student)

- P1.009 Nickel Potential of the Historical Okiep Copper District: An Overlooked Target in a Convergent Margin Setting  
John Paul Hunt, Louw van Schalkwyk, Errol Smart, Clive Benhura
- P1.010 The Role of Exploration on an Active Mine: Case of Kamao Copper Mine  
Richard Ilunga, Franck Twite
- P1.011 Geochronology and Assessment of the Age(s) of Khoemacau Cu-Ag Mineralization Event(s) in the Ghanzi-Chobe Belt Portion of the Kalahari Copper Belt  
Tebogo Kelepile (Student), Thierry Bineli Betsi, Elisha Shemang
- P1.012 The Growth and Expansion of Kansanshi, an Iconic Ore Deposit in the New Copper-Belt, NW Zambia  
Nommia Kolala (Student)
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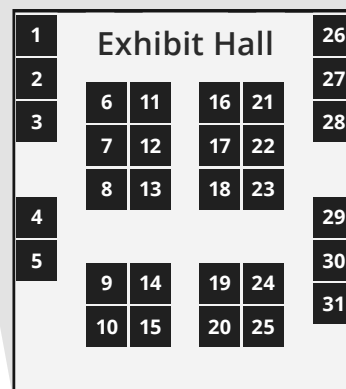
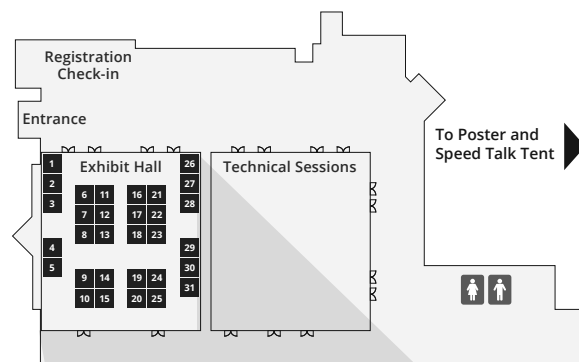
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