



# DIAMONDS FROM EXPLORATION TO MANUFACTURING

20 - 30 JUNE 2022

## MINE & FIELD VISITS

JULY 2022



SOUTH AFRICAN DIAMOND PRODUCERS ORGANISATION  
SUID-AFRIKAANSE DIAMANTPRODUSENTEORGANISASIE

REGISTER NOW



### CPD POINTS

**GSSA = 32**

16 Part A or B

**SACNASP - 4**

2 Part A or B

## SECOND CIRCULAR ONLINE PRESENTATION SERIES

The last half century has seen a massive shift in geological thinking and technological development across all facets of the diamond exploration, mining, recovery, manufacturing, and marketing spectrum. Recently synthetic gemstone diamonds have taken an important place alongside natural gemstone-diamonds and jewellery. Blockchain technology is coming to the fore to ensure 'source to sale-point' tracing and integrity.

However, in spite of the very significant advances in all forms of technology applied to the diamond 'pipeline', the diamond sector has not seen a new world-class (Tier-1) diamond mine since 1991. Most existing mines have progressed, or are progressing, to underground operations with concomitant reduction of rough diamond production. The Argyle diamond mine, famous for producing rare pink-diamonds, closed in November 2020, and several other small operations and projects have also closed. Interestingly, in late-2021 both De Beers and Rio Tinto announced they would pursue new exploration ventures in Angola, and in January 2022 De Beers advertised for an Exploration Programme Manager in Botswana.

Recently announced embargoes against the sale of diamonds by Russian company ALROSA, the world's largest rough producer (~30%), which is marginally ahead of Botswana, are adding uncertainty to the rough diamond market and manufactured output.

## MORE INFORMATION

In this context, the OGG in conjunction with a team of prominent local and international experts, SADPO (which represents the South African Small and Junior alluvial and kimberlite producers), and the GSSA, is offering an eleven-part series covering the complete range of diamond exploration, evaluation, mining, processing, recovery, manufacturing, and marketing.

This course provides participants with exposure to the latest developments in diamond exploration, geophysics, craton and structural studies, kimberlite petrology and mineralogy, diamond formation, mantle indicator and fine diamond applications. It further covers the full ambit of primary (kimberlites and lamproites) and secondary (land and marine based alluvial) diamond deposits, including the evaluation, mining and exploitation, processing and diamond recovery from these deposits, as well as marketing and sales.

It is pitched at fourth-year university students, researchers, and industry professionals looking to update their knowledge of this fascinating and important 2000 year old industry.

## VIRTUAL SHORT COURSE PROGRAM



### PART A : 20 - 24 JUNE

- Introduction to the diamond industry
- Diamonds and their origin
- Diamond exploration
- Kimberlites and lamproites
- Mantle Indicators as applied to diamond exploration
- Micro/macro diamond relationships

### PART B : 27 - 30 JUNE

- Alluvial diamond deposits
- Mining, processing and recovery methods
- Diamond valuation and project evaluation
- Current and future trends
- Discussion and Concluding Remarks

## STUDENT SUPPORT AND PARTICIPATION

The organisers of the June 2022 Short Course have received generous support from sponsors, and will allocate financial support to fourth year and post-graduate Students with an interest in diamond geology, exploration, and mining, primarily but not exclusively, for the online course and to attend the mine/fieldtrips. Support will be provided on a first come first serve basis, and Students seeking financial assistance must please register by the middle of May 2022 to attend the full Online course or Sections A or B, and mine and fieldtrips. They should also kindly provide a short letter or email of support from their HOD or supervisor. All students must attend a minimum of 80% of the online presentations to receive a certificate of attendance and appropriate CPD points.

**All applications for support must be emailed to [info@gssa.org.za](mailto:info@gssa.org.za) by 15 May 2022. All emails must carry the subject line "Diamond Short Course".**

### MINE AND FIELD TRIPS - JULY 2022

**1a: Cullinan U/G Mine Visit – Wednesday 20 July** – (20 participants). Arrive at designated mine venue at 8.00am north-east of off Pretoria via the N4, passing through Rayton en-route to Cullinan. An early start and strict deadline are important to ensure that participants complete mine H+S formalities and meet the early morning shaft hoisting schedule to take visitors underground at this active mining operation. The underground visit will be followed by a surface trip to see the 'Big Hole' and processing plant. Courtesy of Petra Diamonds; Anton Wolmarans, Andrew Rogers

**1b: Helam (Swartuggens) Fissure Mine U/G visit – Thursday 21 July** (10 participants). Arrive at mine north of Swartruggens at 9.30am about 200 kms from Johannesburg. Complete mine H+S formalities, proceed on underground tour, followed by surface, plant, and laboratory visits for microscope viewing of Main, Changehouse and Muil kimberlite fissure specimens, compared to hand-specimens. Participants should please provide their own overalls, and steel-capped boots. Courtesy of Jim Davidson + Team (Helam Mining)

**2. Northern Cape – Kimberley Mine Museum, Nodule-dumps, Kimberlite + Alluvial deposits Excursion** (20 persons):

**Thursday 14 July** – arrive at own accommodation by 12.00, and meet at the famous Big Hole Museum by 13.00 for guided tour by Dr Jock Robey (Overnight Kimberley)

**Friday 15 July** – 8.00am – Depart from Cecil John Rhodes Guest House for the Middle Orange River (MOR) fieldtrip between Douglas and Prieska, to visit the Wouterspan alluvial mining operation. Transport to the MOR and Ghaap Plateau mine sites will be provided by SADPO. Please wear decent safety shoes or boots, preferably steel capped, and bring hard hats. Courtesy of Lyndon De Meillion and SADPO (O/N Kimberley)

**Saturday 16 July** – 8.00am – Visit the unique Kimberley Mantle Nodule dumps, followed by a visit the Blue Rock diamond mine on the Ghaap Escarpment north of Ulco. Courtesy of Blue Rock and Jock Robey.

**Saturday Evening** – SADPO and Blue Rock sponsored braai and drinks. (O/N Kimberley)

**Sunday 17 July** – depart Kimberley for home.

Please note that Mine and Field trip dates could change in the event that Covid challenges and lockdowns necessitate, participant numbers are limited, and a first-come first serve situation will apply.

Trips 1a, b will be run over two consecutive days out of Johannesburg/Pretoria, and Trips 2a, b, c over consecutive days out of Kimberley. Participants will be required to make their own travel and accommodation arrangements to Cullinan and Helam, likewise Kimberley, and to the Johannesburg Tender House. The organisers will assist with overall arrangements, recommend suitable cost-effective accommodation in Kimberley, advise on meeting points, and provide documentation for Field and Mine trips. Delegates for the Northern Cape and Helam mine visits must please provide their own PPE equipment (safety boots, hard hats, overalls, and long pants)

## DIAMOND TENDER (AUCTION) HOUSE VISITS

These will be undertaken in July or August in a modern Tender facility in Killarney Johannesburg. Interested parties should register accordingly, and dates and details will follow for two (2) visits of 10 people each, where rough diamond production from alluvial and kimberlite sources will be viewed. Please bring your ID document (or passport) to gain entry through the Tender security system.

## COSTS

### Online Short Course

- **GSSA, SADPO, & OGG members** - R7000 | (US \$470) for the full online Course, or R3500 (US \$235) per Part A or Part B
- **Non Members** - R 7500 | (US\$500) for the full online Course, or R3800 | (US \$250) per Part A or B
- **Registered University Students** - R2000 | (US \$135) for the full online Course; R1000 | (US \$70) per Part A or Part B
- **Pensioners** - R2000 | (US \$135) per person; R1000 | (US \$70) per Part A or Part B

### Field and Tender House Trips

- **Cullinan and Helam** - R500 | (US \$35) per person; no-cost for online course participants
- **Kimberley Diamond Museum & Dumps, Blue Rock, and MOR** - R500 (US \$35) per person; no-cost for online course participants
- **Johannesburg Tender House Visit** - R500 | (US \$35) per person; no-cost for online course participants

**For further information, background, and sponsorship offers please contact one of the following:**

Tania Marshall (GSSA) (marshall.tania@gmail.com; +27 82 611 3388)  
John Bristow (OGG) (jwbdia@gmail.com; +27 82 571 3004)  
Hennie Greeff (OGG) (hennie.greeff@gmail.com; +27 82 569 5314)  
Herman Grutter (SRK) (herman.grutter@outlook.com; +1 778 883 7422)

## Sponsors

### Annual Sponsors

**acquire**

**DMT**  
DMT Kai Batla (Pty) Ltd

**GEO-EXPLORE STORE**  
GEO-EXPLORE STORE (PTY) LTD

**UCP AFRICA**  
Unique Core Products Africa (PTY) LTD.

**SACNASP**  
South African Council for Natural Scientific Professions

### Event Sponsors

**CONSULMET®**

DE BEERS GROUP

**MINROM**  
managing mineral resource risk

### Student Sponsors

**srk consulting** **srk exploration**

**MSA**  
THE MSA GROUP

**BOTSWANA**  
DIAMONDS PLC

**MINERALS COUNCIL**  
SOUTH AFRICA

### Field Trip Sponsors



**HELAM MINING**

**BLUEROCK**  
DIAMONDS

**PetraDiamonds**