### **DRILLING METHODS & TECHNIQUES IN RESOURCE EXPLORATION**

presented by Colin Rice, for the Geological Society of South Africa

# 23<sup>rd</sup> January – 13<sup>th</sup> February 2024

8am (SA Time)

23<sup>rd</sup> January (1/2 Day)

30<sup>th</sup> January (1/2 Day)

6<sup>th</sup> February (1/2 Day)

13<sup>th</sup> February (1/2 Day)

## **About the Course:**

Frequently, geologists are placed on drilling projects with very little understanding of the drilling operation. In order to effectively contribute to managing the project, geologists require at least a basic level of understanding of drilling principles and the drilling operation as a whole. This course will provide newly qualified geologists, that have had little or no exposure to drilling operations with a fundamental understanding of selected aspects of a drilling operation. It also serves as a valuable refresher for seasoned geologists.

Delegates can expect learning to take place through a combination of online, self-directed learning and virtual contact sessions where concepts can be discussed and clarified, questions can be answered, and practical applications of the concepts can be discussed. Delegates will have access to a discussion forum, printable notes in pdf format and support sessions throughout the course.

#### The course is presented in three modules:

Module 1: The principles of a rock drilling operation - The features common to all drilling operations.

Module 2: Common drilling methods and techniques - Capabilities and applications of different methods of drilling boreholes into the earth.

Module 3: Drilling fluid circulation systems - Flushing and circulation systems and some fundamental calculations that every geologist must be able to do.

Module 4: Costs aspect and borehole surveying in exploration drilling - Directional survey concepts and some economic aspects of a drilling operation

Delegates will be required to do a fair amount of online, self-directed learning in their own time that will be supported by four virtual contact sessions over the course of four weeks. These virtual sessions play a crucial role in the learning process, and we encourage participants to actively participate by bringing any questions or concerns they may have.

CPD Points - GSSA 16 | SACNASP 2

Registration Fees – Member - R3000 | Non Member - R3500 | Student / Retired - R2000

### Biography:



Colin Rice established Colin Rice Exploration and Training in September 2009 with the purpose of offering consulting and training services to the exploration drilling industry.

Colin has been actively involved in many aspects of the Southern African drilling industry since moving to South Africa in 1984. He was a founder partner in SA Mud Services (Pty) Ltd, later SAMCHEM (Pty) Ltd and he was Managing Director of Professional Diamond Drilling Equipment (Pty)

Ltd for eleven years when the company was acquired by Atlas Copco AB. In 1995, Colin and his business partner launched Borehole Survey (Pty) Ltd and imported the very first electronic borehole survey tools into the country. Borehole Survey (Pty) Ltd was a first service company in sub-Saharan Africa to utilize state of the art electronic survey tools and the successful application of electronic survey technology acted a springboard for the systems in other African countries.

Colin has always had a keen interest in improving the level of understanding of drilling principles through training and was responsible for setting up the National Diploma, Drilling Practice Course at Technikon SA. He has been delivering drilling and exploration related courses at a number of institutions and in a number of other Southern African countries for the past twenty years.

Colin is the Chairman of the newly launched Drilling Industry Certification Authority of South Africa (DICASA) and President of the Borehole Water Association of Southern Africa.

Colin is a member of the steering committee of the Pilot Carbon Storage Project, part of a joint World Bank and SANEDI project and is an Honorary Fellow of the Geological Society of South Africa. More recently, Colin was a member of the working group that designed the newly registered QCTO Driller qualifications.

In 2017, Colin Rice Exploration and Training (Pty) Ltd. proudly re-launched "DrillSafe, The Southern African Drilling Industry Safety Forum". Colin is the driving force behind DrillSafe which aims to improve the ability of people involved in the drilling industry to effectively identify hazards on drill sites and manage the associated risks.