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24 GSSA CPD Points

3 SACNASP CPD Points

DRILLING METHODS AND TECHNIQUES IN RESOURCE EXPLORATION

19 - 21 February 2020

MANDELA MINING PRECINCT

About the Course

This three-day course provides a practical overview of all aspects of exploration drilling for practicing geologists and related professionals. The course is interactive and questions and discussions of on-site problems are encouraged. Participants will receive a set of printed course notes and a copy of "The Diamond Drilling Handbook" by Dr W.F. Heinz.



Course Outline

- Drilling Fundamentals
- Essential elements of a drilling operation
- The mechanics of rock breaking
- Drill rig fundamentals
- Percussion drilling methods
- Rotary drilling methods - mud rotary, air flush rotary
- Rotary percussion methods - DTH drilling, Dual-tube reverse circulation drilling
- Sonic drilling
- Diamond core drilling
- Simultaneous casing systems
- Common drilling calculations
- The use of drilling fluids
- Fundamentals of borehole surveying and directional drilling, core orientation methods
- Economic aspects of drilling

Common Drilling Problems

- Shale stabilisation
- Lost circulation
- Solids control

About the Speaker - Colin Rice



After leaving university, Colin taught high school mathematics in Zimbabwe for 8 years before moving to South Africa in 1984. He has been actively involved in many aspects of the Southern African drilling industry since 1984, 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 11 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 20 years.

Registration Fee for 3 days

- **Member - R10,000**
- **Non Member - R12,700**
- **Academic - R6700,00**
- **Student - R5300,00**