



The Directorate of Professional Programmes of the Geological Society of South Africa

PRESENTS:

DRILLING METHODS & TECHNIQUES IN EXPLORATION AND MINING

A PRACTICAL OVERVIEW OF ALL METHODS OF DRILLING FOR  
PRACTICING GEOLOGISTS AND RELATED PROFESSIONALS

A TWO-DAY COURSE

15 & 16 July 2010

Glen Hove Conferencing, 52 Glenhove Road,

Melrose, Johannesburg

COURSE LEADER

Mr Colin Rice

After leaving university, Colin taught high school mathematics in Zimbabwe for 7 years before moving to South Africa in 1984. He has been actively involved in many aspects of the Southern African drilling industry since 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 11 years when the company was acquired by Atlas Copco (Pty) Ltd. 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 Southern African countries other for the past 19 years.

### WHO SHOULD ATTEND

This course is aimed at new geologists who require an insight into the many different methods of drilling that are used in exploration projects as well as at experienced geologists who need a refresher on latest trends in the industry. Other professionals involved in the varied aspects of exploration drilling from a technical, geological and managerial point of view will also find the course enlightening and interesting.

All common drilling methods will be reviewed and special emphasis will be placed on the capabilities and limitations of each method. Problem solving and practical case histories in mining, exploration and geo-technical programmes will be covered.

The fundamentals of borehole survey methods and directional drilling techniques will be covered as will the use of drilling fluid additives, future trends in drilling and the economic aspects of drilling.

Questions and discussions will be actively encouraged. Each delegate will receive a CD with a comprehensive set of course notes, a printed version of the many presentations as well as a copy of The Diamond Drilling Handbook by Dr Wolf Heinz.

### ABOUT THE COURSE

The need for a course on drilling methods and techniques for geologists and related professionals was recognised by the Geological Society of South Africa several years ago. Since then a number of very successful courses under the expert guidance of Colin Rice have been organised as a service to our members and other technical professionals.

Drilling techniques and methodology are continually evolving to the extent that drilling is now becoming more of an exact science of fundamental importance in all geological evaluation programmes. The courses are continually being updated to reflect these changes as well as the changing needs of geologists, to this end a second course, Advanced Diamond Drilling, was added to the program in 2005.

Day 1 – 15 July 2010

DRILLING METHODS & TECHNIQUES

|               |   |
|---------------|---|
| 08:00 - 08:30 | Registration, tea & coffee, Welcome                                     |
| 08:30 – 09:30 | Introduction to drilling methods  |
| 09:30 – 10:30 | Introduction to drilling methods continued, Percussion Drilling Methods |
| 10:30 – 11:00 | Tea & Coffee Break  |
| 11:00 – 12:15 | Rotary Drilling Methods   |
| 12:15 – 13:00 | Lunch Break   |
| 13:00 – 14:00 | Rotary Percussion Methods, Dual Tube Reverse Circulation Drilling       |
| 14:00 – 15:00 | Sonic drilling.   |
| 15:00 – 15:15 | Tea & coffee break  |
| 15:15 – 16:30 | Diamond Core Drilling   |

Day 2 – 16 July 2010

|               |  |
|---------------|--|
| 08:00 - 09:30 | Diamond Core Drilling Cont   |
| 09:30 – 10:30 | Diamond Core Drilling cont.  |
| 10:30 – 11:00 | Tea & Coffee Break   |
| 11:00 – 12:15 | Air Flush Coring, Common Drilling Calculations                     |
| 12:15 – 13:00 | Lunch Break  |
| 13:00 – 14:00 | Fundamentals of borehole surveying - Directional drilling concepts |
| 14:00 – 15:00 | Economic aspects of drilling and Drilling Problems                 |
| 15:00 – 15:15 | Tea & coffee break   |

Please reply to [events@rca.co.za](mailto:events@rca.co.za)

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