

*The University of the Witwatersrand
in association with
The University of Johannesburg present*

SHORT COURSES FOR INDUSTRY

***COAL SCHOOL 2
ECONOMIC GEOLOGY OF SOUTHERN
AFRICA COAL:
COAL AND CBM GEOLOGY, EXPLORATION
AND CARBON SEQUESTRATION AND UCG***

– 15 to 19 March 2010 -s

Five-day course or daily attendance

**

Module in the Postgraduate Programme
LEADERSHIP IN FUEL & ENERGY TECHNOLOGY

**

VENUE:

Sturrock Park Sports Administration Campus
University of Witwatersrand
Braamfontein, Johannesburg

**

PRINCIPLE COURSE LECTURERS:

Prof Rosemary Falcon, Univ Wits (Convenor)
Prof Bruce Cairncross, Univ of Jhb
Mr Gerhard Esterhuizen, Coalserve/SAQA
Mr Xavier Prevost, AfriCoal Energy
Mr Claris Dreyer, Exxaro
Mr Oliver Barker, Banzi Mining

COURSE OBJECTIVES

The course seeks to provide introductory and up-dated information on the following issues:

- Origin, formation, constitution of coal,
- Coal geology, basin analysis and factors influencing quality distribution
- Techniques in coal exploration and mine planning
- DME legislations, JSE regulations and bankable documentation
- Geological factors on mining, beneficiation, marketing, and optimum utilisation
- Global and Regional oil and gas resources and reserves
- Coalbed methane
- Global and South / Southern African coal resources / reserves

MOTIVATION

With the increasing demand for high quality coal products for export purposes and the ever-increasing requirements for a variety of grades of coal for local power generation, petrochemical, metallurgical and industrial use, it is now of vital importance to gain knowledge concerning the coal resources and reserves of South and Southern Africa and the nature of the products being produced.

In addition, the availability and potential use of alternative fossil fuel sources is of significant interest and in this regard an overview of the region's oil, gas and coalbed methane resources is becoming of equal relevance.

In parallel, an overview of current legislation and modern methodologies used to assess the distributions, qualities and reserves of coal, oil and gas more accurately than has been the case in the past has now become necessary, including the need to understand the methods by which geological models are developed and from which significantly improved coal mine planning, extraction, beneficiation, marketing and utilisation can be assured.

WHO SHOULD ATTEND THIS COURSE

- Geologists
- Mining engineers
- Mine planners
- Mineral (coal) resource managers
- Coal processing engineers
- Marketing and trading personnel
- Industrial users of coal
- Engineering manufacturers
- Fuel technologists
- Financial funding agencies
- Government and company policy planners
- Researchers and lecturers in academia.

PROGRAMME TOPICS

DAY 1 – 15 March 2010

COAL GEOLOGY, BASIN ANALYSIS AND SEDIMENTARY ENVIRONMENTS

- Origin and formation of coal – *Prof B Cairncross, Univ of Jhb*
- Sedimentary environments for coal formation and their effects on coal quality and Basin analysis and ore body modelling. *Prof B Cairncross, Univ of Jhb*
- Regional settings of Southern African coal deposits; *Prof B Cairncross, Univ of Jhb*
- Factors affecting coal seam quality distribution - structural and geological settings; *Prof B Cairncross, Univ of Jhb*

DAY 2 –16 March 2010

COAL EXPLORATION

- Management principles during coal exploration programmes; *Mr Gerhard Esterhuizen, Coalserve*
- Mining geology principles with application to coal mining; mining methods; mine design, layout, planning and exploitation. *Mr Gerhard Esterhuizen, Coalserve*
- Sampling methodology to apply during coal exploration programmes including the sampling and taking of sample increments in respect of bulk sample boreholes and the introduction of bias – with specific case histories in difficult geological areas. *Mr Gerhard Esterhuizen, Coalserve*
- Assessment of coal deposits and investment decision processes; current legislation and licensing. *Mr Gerhard Esterhuizen, Coalserve*
- Contamination and dilution, and the effect on coal qualities, costs and the environment. *Mr Gerhard Esterhuizen, Coalserve*
- Public reporting of coal resources and coal reserves, the competent persons report, SAMREC and Jorc requirements; compliance; estimation and valuation of coal deposits. *Mr Gerhard Esterhuizen, Coalserve*
- Summary - risk management including geology, mining marketing and utilisation potential of reserves and their products. *Mr Gerhard Esterhuizen, Coalserve*

DAY 3 – 17 March 2010

ADVANCED ASSESSMENTS OF COAL DEPOSITS; REGIONAL AND GLOBAL PERSPECTIVES OF COAL

- Application of advanced coal analyses for quality assessments, washability with beneficiation potential and marketability. *Mr Lionel Falcon/Prof Rosemary Falcon, Wits University*
- Geology of the Waterberg Coalfield and Northern Basins. *Mr Claris Dreyer or substitute, Exxaro*
- Coal and Coalfields in Botswana. *Mr Alan Golding, Consultant t.b.a.*
- Review of world coal resources and reserves and in South Africa. *Mr Xavier Prevost, AfriCoal Energy Review*

DAY 4 – 18 March 2010

COALBED METHANE (CBM), CARBON CAPTURE/STORAGE AND UNDERGROUND GASIFICATION

- Applied use of coal seams and related strata: Coal bed methane (CBM); enhanced CBM (ECBM). *Mr Oliver Barker, Banzi Mining*
- Carbon capture and storage (CCS) - current developments in Southern Africa. *Prof T Surridge, SANERI*
- Underground gasification – current and future developments. *Prof Mark van der Riet, Eskom*

DAY 5 – 19 March 2010

COURSE ON GEOPHYSICAL LOGGING

- Geophysical core logging - Advanced borehole core assessments with practical applications - *Mr John Jeffrey, Weatherford*

CONTACT DETAILS

TECHNICAL ENQUIRIES:

Prof Falcon / Mrs Maggie Blair - 011 717-7387/8 or 082 451 4753
rosemary.falcon@wits.ac.za or margaret.blair@wits.ac.za

WEEK-LONG AND DAILY INDUSTRIAL ATTENDANCE:

Mrs Lesley Stephenson 0836790697 (lstephenson@mweb.co.za)

FORMAL ACADEMIC REQUIREMENTS

School of Mining Engineering: Mrs Mona Shah – 011 717 7403
 School Chemical and Metallurgical Engineering: Mrs Vanessa Moodley – 011 717 7525

FORTHCOMING COURSES FOR 2010

- **Coal Preparation and Beneficiation - April 12 – 16 2010**
- **Coal Exploitation and Mining - May 17 – 21 2010**
- **Coal Combustion and Power Generation - July 26 - 30 2010**
- **Coal and the Environment - October 4 – 8 2010**
- **Coal Management and Marketing - November 8 – 12 2010**

ECONOMIC GEOLOGY OF SOUTHERN AFRICA COAL

REGISTRATION - FIVE-DAY ATTENDANCE:

R7 500-00 + VAT 1050.00 = R8550-00

Email registration to: MRS L STEPHENSON. VAT No: **4270185251**
Tel/Fax: 011 447 1490 Cell: 083 679 0697 Email: lstephenson@mweb.co.za

NAME:..... TITLE:.....

AFFILIATION

COMPANY.....

ADDRESS.....

TEL:..... FAX:.....

MOBILE..... EMAIL:.....

ACCOUNTS CONTACT PERSON.....

ACCOUNTS TEL NUMBER.....

ACCOUNTS EMAIL ADDRESS.....

COMPANY VAT NO..... **VENDOR NO**..... **PURCHASE ORDER NO**:.....

NB: ATTENDANCE IS STRICTLY SUBJECT TO PAYMENT PRIOR TO THE COURSE

BANKING DETAILS: *Please fax a copy of the deposit slip or EFT to (011) 447 6148 or email projects@fossilfuel.co.za.*

Fossil Fuel Foundation of Africa (Educational Course)

Bank: ABSA

Branch Code: 632 005

Account No: 919 978 4837

Ref: **PLEASE USE THE FFF INVOICE NUMBER ON YOUR DEPOSIT SLIP OR EFT.**

CANCELLATION OF THIS REGISTRATION

Cancellation may be made in writing 7 days prior to this course, whereon a 25% cancellation fee will be charged. No refund or credit will be issued within the 7 days of the course. Registrations are transferable. Invoices will be sent once registration forms have been submitted. **KINDLY NOTE: ATTENDANCE IS STRICTLY SUBJECT TO PRIOR PAYMENT**

ECONOMIC GEOLOGY OF SOUTHERN AFRICA COAL

REGISTRATION - DAILY ATTENDANCE:

R1650-00 + VAT R231.00 = R1881 per day

DAY 1..... DAY 2..... DAY 3..... DAY 4..... DAY 5.....

Email registration to: MRS L STEPHENSON.

Tel/Fax: 011 447 1490 Cell: 083 679 0697 Email: lstephenson@mweb.co.za

NAME:..... TITLE:.....

AFFILIATION

COMPANY.....

ADDRESS.....

TEL:.....FAX:.....EMAIL:.....

ACCOUNTS CONTACT PERSON.....

ACCOUNTS TEL NUMBER.....

ACCOUNTS EMAIL ADDRESS.....

FFF MEMBERSHIPYes/No..... No.....

COMPANY VAT NO..... VENDOR NO..... PURCHASE ORDER NO:.....

NB: ATTENDANCE IS STRICTLY SUBJECT TO PAYMENT PRIOR TO THE COURSE

BANKING DETAILS: Please fax a copy of the deposit or EFT to (011) 447 6148 or email to projects@fossilfuel.co.za.

Fossil Fuel Foundation of Africa (Educational Courses)

Bank: ABSA

Branch Code: 632 005

Account No: 919 978 4837

Ref: PLEASE USE THE FFF INVOICE NUMBER ON YOUR DEPOSIT SLIP OR EFT.

CANCELLATION OF THIS REGISTRATION

Cancellation may be made in writing 7 days prior to this course, whereon a 25% cancellation fee will be charged. No refund or credit will be issued within the 7 days of the course. Registrations are transferable. Invoices will be sent once registration forms have been submitted. KINDLY NOTE: ATTENDANCE IS STRICTLY SUBJECT TO PRIOR PAYMENT