

MINING ECONOMICS

MINING ECONOMICS AND STRATEGY - Based on Dr I.C. Runge's Book

19-20 January, 2012 Brisbane | 22-23 February, 2012 Brisbane | 08-09 March, 2012 Sydney | 27-28 March, 2012 Brisbane | 02-03 April, 2012 Perth | 09-10 May, 2012 Brisbane | 14-15 June, 2012 Brisbane

INTRODUCTION

The mining industry is currently subject to unprecedented demand for its products. Worldwide, the economics of mining is in a state of great change. Both operational and economic efficiency are needed to make the most out of the opportunities in these changing times. In order to ensure appropriate capital and production decisions, accurate understanding and forecasting of the cost and revenue structures of your operation are crucial. This course addresses these issues straight on. It will keep your whole team thinking costs, economics and profitability. It will give you the tools for robust decision-making. It will focus your planning engineers and senior production staff on cost efficiency in every step of their work - from mine design and layout to day-to-day equipment deployment. The aim of this course is to provide a solid foundation in the fundamental and principles of mining economics. It focuses on cost efficiencies that can be made in each step of the mining process. It also provides an introduction to systematic mine planning and reinforces the importance of engineering decision-making based on costs. At the completion of this course participants will take away a set of templates and solutions that can be utilised back in the workplace.

WHO SHOULD ATTEND?

The course is recommended for personnel who play pivotal roles in collecting, analysing, and presenting information for economic evaluations. Anyone who has an interest in understanding how to improve the economics of your mine should also attend. Participants typically include:

- Operational and Planning Engineers
- Business and Strategic Analysts
- Financial and Management Accountants
- Mine Managers and Superintendents

COURSE CONTENT

Integrating Economics into Mining

- The mine planning process, application of economic evaluation procedures

Time Value of Money

- Value at a constant point in time, discounted cash flow analysis, risk, uncertainty, inflation & constant money calculations

Break even Analysis

- Discounted cash flow ranking criteria, Discounted Average Cost

Capital and Operating Costs

- Machine life and capital cost, operating costs, Xeras economic modelling

Cost Effective Mining Schemes

- Key elements, systematic planning process, economic data at each phase of the planning cycle, incremental costing for mining alternatives

Development Strategies for Maximum Value

- Undeveloped deposits, initial assessments, capital values and development strategies.

Investment Decisions involving Uncertainty, Risk and Return

- Discounted cash flow - comparison of two alternatives, payback and sensitivity analysis

Operating mine case study

"This course will keep your whole team thinking costs, economics, and profitability. It will give you the tools for robust decision-making"



DELIVERY METHOD

Interactive classroom-style delivery with a heavy emphasis on workshops, participant involvement and case studies. The course involves a detailed manual, workshops, lectures, the use of mining equipment product literature, and the use of computers and relevant software for economic calculations. In particular:

- You will be actively involved in all workshops. By the end of the course you will understand the tools and actually have practical solutions to many real life mining problems.
- The whole theme involves engineering decision-making based on costs. The examples are real life mining cases, including open cut and underground equipment and the influences of the associated capital on the economics of mining.
- There is strong emphasis on computer applications, using the computer as a tool to undertake robust economic evaluation of mining alternatives. The techniques are simple to understand and apply, they work on PC's and you can readily put them to effective use.
- Participants are encouraged to interact and to bring forward for discussion any particular problems or important constraints at their mine site.
- Examples and case studies are drawn from Runge's direct experience and involvement in the mining industry worldwide.

We understand and teach what is happening in the world of mining and we highlight up-to-date important industry trends.

All course participants will receive a copy of Dr Ian Runge's book "Mining Economics and Strategy". The course will focus on the first 10 chapters of the book with the emphasis depending on the individual preferences of the majority of participants. When registering for the course, please indicate your particular areas of interest, as well as those components of the course content that you expect are less relevant to your field of interest

LEARNING OUTCOMES

The Mining Economics Course introduces participants to the fundamentals of mine costing and economics. It involves:

- Introduction to systematic mine planning and the importance of engineering decision-making based on costs
- Economic terminology
- Cash flow concepts using compounding and discounting formula
- Break even analysis using discounted average cost
- Costs from an economic perspective
- Incremental and Marginal Cost Analysis
- Everyday decisions using economic criteria



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ON-SITE / CUSTOMISED OPTIONS THE ADVANTAGES FOR YOUR ORGANISATION

- On-site training is more economical for a large group
- Training days can be at a convenient, unique time and location
- Content can be customised to suit a client's specific requirements to attendees needs
- Confidential information can flow freely giving maximum learning outcomes.

For over 20 years, Runge has been providing high quality training courses to the Mining Industry worldwide.

Our courses are recognised as unique in the Industry. The knowledge and challenges that Runge consultants deal with daily in project work and software implementations is captured and reflected in our high quality training courses.

Numbers are restricted to enhance learning, and participants can share experiences gained from their respective organisations. Runge's courses cover mine business planning and fall into the following major categories:

- Mining for Non Miners (Coal and/or Metals Focus)
- Mining Economics
- Integrated Open Pit Coal Mine Planning
- Truck and Shovel Mining Systems
- Coal Seam Gas Reservoir Assessment
- Dragline Mining Systems

Other mining related courses could be developed and delivered on request. Runge can work with you to meet your training requirements. Please contact our Training Department to discuss your specific needs in more detail.



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PROFESSIONAL DEVELOPMENT

DATE

- | | |
|--|--|
| <input type="checkbox"/> 19-20 January, 2012 Brisbane Australia | <input type="checkbox"/> 02-03 April, 2012 Perth Australia |
| <input type="checkbox"/> 22-23 February, 2012 Brisbane Australia | <input type="checkbox"/> 09-10 May, 2012 Brisbane Australia |
| <input type="checkbox"/> 08-09 March, 2012 Sydney Australia | <input type="checkbox"/> 14-15 June, 2012 Brisbane Australia |
| <input type="checkbox"/> 27-28 March, 2012 Brisbane Australia | |

VENUES

Runge Limited Level 12 333 Ann Street, Brisbane QLD 4000 Australia	Runge Limited Level 3 251 Adelaide Terrace, Perth WA, 6000 Australia	Minarco-MineConsult Level 16, Australia Square 264-278 George Street, Sydney NSW 2000 Australia
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TIME

8:30 AM - 5:00 PM

Would you please also take a minute to fill out the following questions - this will help us to ensure that your expectations can be taken into account when planning the course program.

What is your educational background? _____

What is your work background? _____

What is your current job role? _____

How many years have you worked in this role or similar roles? _____

Course attendance is limited to a maximum of 25 people. Please bring laptop for workshops.

YES! PLEASE REGISTER ME FOR MINING ECONOMICS

- Yes! Please send me more information on other courses.

Name :	
Position :	
Department :	
Company :	
Site :	
Billing Address :	
City :	
State :	Postcode :
Ph :	Fax :
Email :	
Purchase Order No. :	

CREDIT CARD DETAILS

<input type="checkbox"/> Bankcard	<input type="checkbox"/> Mastercard	<input type="checkbox"/> Visa	<input type="checkbox"/> American Express
Name on Card :		Expires on : /	
Card Number :			
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SIGNATURE : _____

CANCELLATION POLICY

Registration may be transferred or cancelled with minimum 14 days' notice without cost penalty. Should you be unable to attend with less than 14 days before the course, a substitute delegate may attend at no extra charge. Alternatively, you may transfer your registration to another course date with an added service charge of \$200 per day of course (excl of gst). Runge Limited reserves the right to cancel a course at any time, in which case registration fees are fully refundable.

REGISTRATION FEE

\$2,750 p.p. (ex GST)

Fee includes tuition, comprehensive course notes, copy of XERAS lite financial modelling software, workshop assignments and solutions, morning and afternoon coffee, lunch and certificate of completion. Once your booking is received your place is automatically reserved, and we will send you a confirmation of enrolment.

Contact: Linda Tat or Suzanne Hammelmann
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