MINERAL ECONOMICS FOR GEOLOGISTS
One-day course
December 3rd 2013

Are you a geoscientist in the mining sector?

Do you know how mineral economics drives decision making and success in your industry?

Prove it. Take our test right now!

1. Mineral Economics Theory

How many of these concepts can you explain in one line?

Value-based costing  Substitution  Barriers to entry
Economic rent  Factors of production  Dutch disease
Swing producer  Game theory  Exchange traded fund
Put option  Price elasticity  Oligopsony
Expected value  Sustainability  Conflict minerals

Still going strong?! How about these?

Preferred value  Producer pricing  Contango
1. Mineral Economics Theory: Answers

If you got…

Less than 12:
Your lack of mineral economics theory is affecting your decision making! Your attendance is vital at Mineral Economics for Geologists on December 3rd at the Centre for Exploration Targeting.

Between 12 and 15:
A mineral economics amateur, you’re on your way up, but if you really want to reach those senior posts you should attend Mineral Economics for Geologists and perhaps do a Graduate Diploma or Masters in Mineral & Energy Economics at Curtin University.

More than 15:
Send us your CV!

2. Commodity Markets

For which of the following can you identify the largest national supplier and the biggest end use sector?

Iron Ore  Gold  Copper
Diamonds  Coking coal  Uranium
Oil  Tin  Tungsten
Vanadium  Graphite  Barite
Mercury  Vermiculite  Unconventional gas

Easy enough?! What about these case-study classics?

Niobium  Rare Earths  Tantalum
2. Commodity Markets: Answers

If you got…

Less than 12:
You don’t know enough about commodity markets, how are you going to spot the next big opportunity? Your attendance is vital at Mineral Economics for Geologists on December 3rd at Centre for Exploration Targeting.

Between 12 and 15:
A commodity markets amateur, you know your way around different industries, but can you back it up with the statistics for decision making? You should attend Mineral Economics for Geologists and perhaps do a Graduate Diploma or Masters in Mineral & Energy Economics at Curtin University.

More than 15:
Send us your CV!

3. Project Evaluation

Can you combine theory and commodity market knowledge to spot a world class asset from a marginal one? Outline the main risk, uncertainty, value driver and opportunity for each of the assets below:

| Open pit gold mine, WA | Uranium mine, NT | Thermal Coal mine, QLD |
| Aluminum smelter, NSW | Nickel concentrator, WA | Onshore LNG plant, WA |
| Rare earths deposit, WA | Tantalum mine, WA | Magnetite deposit, WA |
| Offshore oil/gas, Norway | Platinum mine, Zimbabwe | Nickel laterite deposit, Cuba |
| Talc mine, Norway | Gold mine, Fiji | Niobium mine, Brazil |

Easy enough?! What about these new opportunities?

Coal-seam gas deposit, QLD, Offshore stranded gas field, WA
Seabed sulphide deposit, Pacific Ocean
3. Project Evaluation: Answers

If you got...

10 or less:
You're in danger of getting involved with a marginal project. To avoid this, your attendance is vital at Mineral Economics for Geologists on December 3rd at CET.

Between 10 and 12:
You can probably spot what is marginal, but can you separate very good from World Class? If you really want to reach those senior posts you should attend Mineral Economics for Geologists and perhaps do a Graduate Diploma or Masters in Mineral & Energy Economics at Curtin University.

More than 12:
Send us your CV!

4. Mineral Project Financing

You have big plans, but how are you going to finance them? Summarise in one line your strategy if you had each of the following levels of finance available to invest in the assets on the previous slide?

- $5 million equity or similar
- $5 million debt facility or similar
- $20 million equity or similar
- $20 million debt facility or similar
- $500 million equity or similar
- $500 million debt facility or similar
- $2 billion equity or similar
- $2 billion debt facility or similar

Straight forward?! How would your strategy change if:

- The amount doubled!
- The amount halved!
- The mix changed to 50% debt and 50% equity

If you got…

8 or less:

You have big ideas but no chance of ever funding them. Learn how to manage money better at Mineral Economics for Geologists on December 3rd at the Centre for Exploration Targeting.

Between 8 and 10:

You have some idea of the financial sector, but in today’s tough capital markets you need more than this to survive. If you want to stay afloat you should attend Mineral Economics for Geologists and perhaps do a Graduate Diploma or Masters in Mineral & Energy Economics at Curtin University.

More than 10:

Expect phone calls from mining moguls imminently!

Mineral Economics for Geologists: Take the CET test!

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Mineral Economics for Geologists

3rd December 2013
Centre for Exploration and Targeting, UWA, Crawley Campus

This one-day course appeals to the professionals in technical roles in the mining and exploration sector in strengthening their economic and strategic knowledge of the drivers of industry advantage that accrue from market-related factors.

This intensive course focuses on the principles and fundamentals of mineral markets, covering both the major exchange-traded metal markets (gold, silver, PGM's base metals), bulk commodities (iron ore & coal seaborne trade), intermediate markets (metal concentrates) and other markets (alloying metals, uranium, rare earth elements).

Providing an understanding of the fundamental principles of mineral markets, adopting both micro-economic and macro-economic lenses to both explore and explain market dynamics.

For more information please click here to view the brochure.

Mineral Economics for Geologists: Take the CET test!

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Your Hosts...

**Prof. Allan Trench**

Allan Trench is Professor (Risk & Value) at the Centre for Exploration Targeting (CET), University of Western Australia and Curtin University Graduate School of Business, a Non-Executive Director of several resources sector companies - and the Perth representative for CRU Strategies, a division of independent metals & mining advisory CRU group.

**Mr John Sykes**

John Sykes is a PhD Candidate in Risk & Value at the Centre for Exploration Targeting, focusing on the long term economics of the supply-side of the copper industry and aiming to define the “Copper Mine of Tomorrow”. He lectures on the Master of Science in Mineral & Energy Economics at Curtin University and is the author of a number of industry economic reports, and technical and media articles on mining and mineral economics.

Extra Information

**Costing:**

- Non-corporate members: $720*
- Corporate members: $504*
- CET Staff and Students: $404*

*all prices inclusive of GST.

**Website:**


**Contact:**

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