Tuesday, 19 November 2013

The business of mining is business, not mining

Tuesday, 29 October 2013

Justin Niessner

YOU know those gimmicky illusions where the image doesn't come into focus until you stand way back? Apparently, mine planning is like that.

However, there's nothing gimmicky about clarifying company vision and synergising the complex interconnectedness of a mine operation's various constituent programs.

This is the idea behind Melbourne-based Whittle Consultancy's plan for "enterprise optimisation", a holistic approach to strategic planning that defies almost all conventional wisdom about how a mine should be run.

The method may look like madness within individual aspects of the mine on the ground level but, upon stepping back to look at the big picture, Whittle insists that operations will benefit from the scheme.

In fact, Whittle managing director Gerald Whittle guarantees use of the system will result in a 5-35% improvement in a mining project's net present value – even without ever looking at the project in question.

Speaking at a special event hosted by Xstract Mining Consultants at its Perth office, Whittle said studies using his company's optimisation plan consistently increased NPV of mining projects by 15-100%.

These simulations were run using only existing equipment and no extra capital.

In about half the cases, Whittle said cash flow was doubled in the first three to five years.

"There's a fundamental philosophical confusion in this industry and if you can sort that out, the rest is just plain logic," he said.

"Our philosophy is quite simple: it's not a gold mine or a coal mine – it's a money mine.

"If you're not sure about that being the appropriate objective, have a word to your shareholders.

"It's not about the metal. That's just a means to an end."

Whittle says improving the value of an operation is all about cash flow. This means increasing cash generation through occasionally counterintuitive processes and re-timing earnings for as soon as possible.

"We've all done 'Finance 101' but that philosophy doesn't usually translate into the operational and design decisions that are made by engineers on the ground because they don't have the context when they're designing a stope in an underground mine, laying out a pushback in a pit or determining the grind size in the plant," he said.

"You don't usually have the context from the whole business point of view and therefore you end up doing

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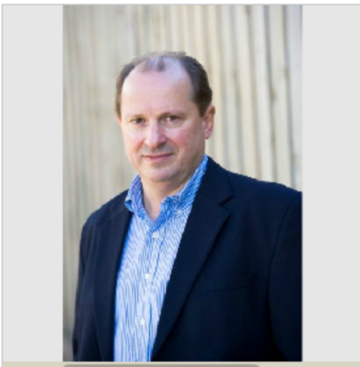

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something like maximising metal recovery, which will send you broke very quickly, or maximising cash.

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"But maximising cash per tonne is not the same as maximising NPV of the business."

For Whittle, the mining industry seems to have a moral obligation to get all the metal out of an orebody even if it is not in the best interest of the operation.

Likewise, there seems to be a knee-jerk reaction within the industry to cut costs as a means of improving economics.

"There's a lot of stress in the mining industry and a lot of discussion of cutting costs but you have to be very careful making statements like that," he said.

"Cutting costs in mining can be dangerous.

"If you want to cut your mining costs, just stop pre-stripping next year's pushback. Cash flow will be fantastic today and you'll be out of business next year.

"Any decision on costs has to be on what's the long-term implication. Using a discount rate balancing off consequences on cash flows now versus in the future is the right way to go."

Whittle continued by illustrating a number of models whereby the overall robustness and business options of mining operations were improved through reducing reserves, increasing costs, discarding some economic ore and idling fleets.

"We've broken every rule in the book and achieved the one thing I thought we were all trying to do in the first place, which is increase the value of the business as defined by cash flow – which is how more investors and bankers are going to be defining it."

The Whittle method aims to allow projects to attract debt finance by offering what is essentially an in-depth optimisation model that accelerates bottlenecks and tracks them down as they reappear elsewhere in the integrated chain.

It's expensive, highly specialised work and can represent a huge cultural challenge in an industry often burdened by poor internal communication and a tendency to cling to tradition.

The technical constraints of ball mills, ports and shaft declines – or even the obstacle of establishing a more flexible workforce for an optimised plan – are secondary concerns compared to the barrier of changing mining mindsets.

"There are some very headstrong people in this industry, which is great, otherwise we wouldn't have this industry," Whittle said.

"You're asking someone who for 25 years has been doing it this way and saying, 'that's not the right way. We should be increasing costs, reducing recovery and doing some things that on the face of it and in isolation look like madness Â¬– but in totality make absolute sense.'

"Not everyone welcomes that observation. It's a human thing, not a technical thing.

"With technical people, the biggest reaction is, 'I get it but my boss isn't going to like it'. We get the bosses in the room and they say, 'I get it but what's the market going to think?'

"It's always the other guy who doesn't get it, so a bit of community discussion and opening up is going to help."

In the end, the question companies must ask themselves is unambiguous.

Do they want their operations to produce tonnes or cash?

Whittle goes for the latter – and by most accounts, so do investors.

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