



Tapping our hidden resources

The Centre for Exploration Targeting (CET) based at The University of Western Australia is assembling four dimensional models that will change the way exploration companies operate in the future.

Building on the back of UWA's world recognised economic geology research centre, CET operates at the cutting edge of fundamental scientific research while providing practical solutions to exploration challenges for the exploration industry. CET is a joint venture between UWA, Curtin University of Technology, and the mineral industry, with more than 50 industry partners as corporate members.

Director of CET, Professor Campbell McCuaig, said the idea was to set up a centre that was focused on research to improve exploration.

"If you look back over the last couple of decades data clearly shows that the rate at which we find minerals and metals is declining as a ratio of the rate at which we mine them," he said.

"These metals are vital building blocks of the global economy, so longer term we're facing a wall that we're going to hit if we don't get better at finding them.

This challenge is similar to the concept of 'peak oil' now widely understood in the petroleum industry. We have to innovate to be able to get past this hurdle. Not every company realises this yet but there are enough of them that see the vision and are jumping on board.

"New ore bodies are likely to be found deeper under cover," said Professor McCuaig. "As a result it is getting more expensive to try to explore. One of the major issues is selecting the best ground to start exploring in the first place. If you look at greenfields exploration generally the success rate is much less than one percent. That's less than one economic discovery out of 100 targets – an expensive exercise. If we can make a change to even two percent, that's a big saving and will provide a big productivity boost to the exploration industry."

The State Government's \$80 million Exploration Incentive Scheme to boost mineral and petroleum exploration throughout the State's greenfield and frontier areas during the next five years is providing money to collect data that will attract increased exploration in Western Australia. The CET and Geological Survey of Western Australia (GSWA) are partnering under this funding umbrella to help stimulate more

productive exploration and improve the pool of knowledge available to explorers.

"GSWA is working with CET and contracting the Centre over the next four years to jointly deliver targeting products to enhance and make more accessible the raw data releases generated through regional surveys.

Norilsk Nickel Australia is among the companies getting behind the CET's research.

According to Ian Gregory, Norilsk Nickel Australia's Exploration Manager, it has given them the opportunity to access higher level research science.

"It provides us with predictive four dimensional geological models which allow us to understand our mineralisation system, and in turn generate new targets. There are also obvious commercial benefits, by reducing the risk of exploration and hopefully resulting in the discovery of new ore bodies," he said.

The first of CET-GSWA's integrated Geographic Information System targeting packages is expected to be delivered in 2010.

Contact: Heath Nelson,
(08) 6488 2636
heath.nelson@uwa.edu.au



CET researchers on a field trip in the Goldfields