R&D grant a winner for SA's resources industries

South Australia's mining and resources industries, including copper, are poised to gain significant benefits following the announcement by the SA Department of State Development of a research and development grant to two aligned engineering firms involved in improving the minerals exploration drilling sector.

The Government's Mining and Petroleum Services Centre of Excellence innovation fund has announced support via The University of South Australia (UniSA)'s Future Industries Institute (FII) for an R&D grant to multinational drilling rigs and equipment manufacturer, Boart Longyear, and Australian engineering company, LaserBond Limited, to extend analysis of wear life extension technology to percussive drilling engineering and equipment.

The grant supports a test drilling program that utilizes local and highly instrumented drilling test facilities to destructively test a number of drilling components in a highly characterised, geological environment.

Such tests cannot take place in working mines.

The group believes that success in understanding failure mechanics is the precursor for extending the technology through the drilling system.

Boart Longyear, the leading provider of mineral exploration drilling services and drilling products in the world today, has a collaboration agreement with LaserBond which is directed mainly towards improving LaserBond's DTH hammer and which could result in LaserBond manufacturing the product as an OEM supplier to the global drilling giant. BLY's Asia pacific operations are headquartered in Adelaide.

LaserBond's R&D and advanced manufacturing facilities centre is located just a few minutes away from UniSA's Mawson Lakes Campus in Cavan SA, where it is developing and manufacturing a range of products and services with embedded IP for direct or indirect export markets. This North Adelaide location is ideal for supporting innovation in several key growth centres, particularly in resources, agriculture and defence.

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Laserbond chairman Allan Morton said the grant effectively tripled the pace at which the company could develop solutions for the market: "With the relationships we're building from our collaborations we expect to see an acceleration of products commercialised – and more successfully commercialised," he told Australasian Drilling.

UniSA is part of a national collaborative group of five major Australian universities that form the Australian Technology Network of Universities (ATN), a new generation of universities focused on industry collaboration and real-world research with accelerated commercial impact. UniSA has a strong foundation in Materials and Mineral Sciences and advanced laser manufacturing technologies.

Its new multi-million dollar FII focuses on building knowledge and capacity in core future industries with an objective developing informed, industry-connected research and innovation in engineering and the physical sciences.

Prof Bill Skinner, research leader in Minerals and Resource Engineering in the Future Industries Institute (FII), believes a major impact can be made in reducing the costs of exploration drilling, along with increased safety, if significant improvements in wear life of drilling components can be made.

"Exploration drilling is an expensive exercise," Prof Skinner said.

"More so as shallow deposit discoveries are decreasing rapidly. Extending drill component life saves time, money and reduces the frequency of component replacement – an inherently hazardous activity", says Prof Skinner. "This project builds on SA's resources strength, and contributes to METS sector innovation and initiatives such as the SA Government's Copper Strategy."

"We see this as a meeting of minds", says Greg Hooper, LaserBond's executive director R&D. "This is a collaboration that brings our surface engineering DNA together with UniSA's extensive R&D capabilities, to create next generation solutions for drilling performance and industry economics. And we can manufacture them in SA."

This project will run into 2017, at which time the group expects to have identified a range of application opportunities.

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