

## CSIRO collaboration to launch drilling analysis technology to slash exploration costs

[ABC Rural](#)

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Posted 30 Sep 2015, 7:44am

Technology spearheaded by the CSIRO that will slash the costs of exploration for new mines will soon hit the market.

Called 'Lab-At-Rig' technology, it's literally that: a mini laboratory that analyses the mineral composition of drilling core-samples as soon as soon as they are collected at the drilling rig.

The existing process for analysing core samples involves collecting them at the rig, usually in a remote location, transporting to an urban laboratory, conducting metallurgical analysis and compiling data on the assays.

It is a time consuming and expensive process that can take anywhere from a couple of a weeks to a couple of months to complete.

The 'Lab-At-Rig' system will operate on a one-hour cycle for that whole process, not only saving on costs but also enabling geologists and others to make in-the-field decisions on whether to continue drilling.

Dr Rob Hough, Program Director with the CSIRO Australia's Mineral Resources Flagship, said the various parts of the technology already existed and were used in drilling in their individual sense.

"The innovation really is putting all that together," Dr Hough said.

"And then the real smarts, I suppose, is once you get that analysis, is integrating that data and interpreting that data."



**Photo:** Lab-at-Rig technology, developed by CSIRO and the Deep Exploration Technologies CRC, cuts the time of analysis minerals in drill cores from weeks and months to one hour. (Supplied: CSIRO)

The system collects solids from drill cuttings which are passed by X-ray diffraction sensors and X-ray fluorescence sensors, developed by Olympus.

That provides the chemistry and mineralogy of the sample data which is uploaded into a cloud-based platform owned by partner REFLEX where it is analysed and sent back to the explorer in real-time.

The 'Lab-At-Rig' technology took two years to develop and is a collaboration between the CSIRO, the Deep Exploration Technologies CRC, Olympus and Imdex - a subsidiary of REFLEX.