



19th September 2012

Company Announcements Office
Australian Securities Exchange Limited
4th Floor
20 Bridge Street
SYDNEY NSW 2000

Dear Sir/Madam

CHARLEY CREEK RARE EARTH PROJECT

OUTSTANDING RESULTS AS CROSSLAND COMPLETES INITIAL HEAVY MINERAL CONCENTRATE PILOT TEST WORK

- **Conventional Heavy Mineral concentration processes deliver outstanding results**
- **Wet Plant test flowsheet upgrades Total Rare Earth Oxide (TREO) to grade of over 12%, with recovery of 68%.**
- **Dry Plant test flowsheet produced a final concentrate containing over 41% TREO, with recovery of 77%.**
- **Further process optimisation is expected to substantially lift mineral recoveries.**
- **These results confirm that the xenotime/monazite rare earth bearing minerals at Charley Creek can be successfully concentrated using low-cost technology used by the mineral sand industry, and significantly de-risks the proposed process flow-sheet for the project.**

Crossland's confidence that the Charley Creek Project can become an early, low cost, and long-term producer of valuable rare earth oxides is reinforced by these recent results.

A pilot plant program evaluating the complete Wet and Dry plants (gravity separation methods, followed by magnetic and electrostatic separation) has been completed. A metallurgical bulk composite sample of alluvium from 12 test pits across the Charley Creek project in the Northern Territory was tested. Results from this program now confirm that xenotime/monazite can be successfully concentrated into a high grade REO mineral concentrate using conventional low cost heavy mineral sand beneficiation techniques.

The pilot program was conducted at Allied Mineral Laboratories Pty Ltd (AML) in Perth WA under the supervision of Crossland's metallurgical consultant.

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Wet Plant testwork

Wet Gravity plant test work achieved a recovery of 68% TREO (Total Rare Earth Oxide) at a grade of 12.53% TREO contained within 0.81wt % of the initial feed. Achieving a grade of over 12% TREO from a simple spiral test circuit confirms that processing of sized feed material from Charley Creek is very amenable to beneficiation by gravity. A number of simple flowsheet improvements have been identified to further improve TREO recoveries during the next phase of test work.

Product	Percent Mass	Grade (wt. %)			
		LREO	MREO	HREO	TREO
Wet Plant Concentrate	0.81%	10.95	0.52	1.06	12.53
		Recovery (%)			
		69	66	55	68

Note: MREO consists of oxides of Sm, Eu and Gd, while HREO consists of oxides of Tb to Lu from the Lanthanide series, plus Y.

Dry Plant testwork

The Wet plant concentrate product was then processed via conventional electrostatic and magnetic separation (Dry Plant) techniques to produce a high grade heavy mineral concentrate product averaging 41.25% TREO at a recovery of 77.6% TREO. Again there are a number of opportunities identified during this phase to further improve recoveries, while maintaining TREO grade at 40%. Zircon and other valuable heavy mineral recoveries should also improve with these modifications.

Product	Percent Mass	Grade (wt. %)			
		LREO	MREO	HREO	TREO
Dry Plant Concentrate	0.18%	36.04	1.54	3.67	41.25
		Recovery (%)			
		78.1	75.7	73.2	77.6

These results confirm xenotime/monazite rare earth bearing minerals at Charley Creek can be successfully concentrated by conventional mineral sand flowsheet used for recovery of titanium minerals and zircon. Crossland retains on-site at Charley Creek substantial additional material from the same test pits used for this work to enable on-going optimisation work.

These new results have significantly de-risked the proposed process flowsheet as far as production of a heavy mineral concentrate composed dominantly of the valuable REE bearing minerals. Crossland has been encouraged by potential purchasers of Charley Creek output to explore rapid development of xenotime/monazite concentrate production as a first step in staged development of Charley Creek. These results will aid in the preparation of a scoping study to assess project economics. This study is due for completion before the end of 2012. The work now completed represents a major component of that study.

The market was advised on August 28 that a 400kg sample of tabled heavy mineral concentrate (HMC1) produced on site from 7 tonne of alluvial material in the Cattle Creek alluvial fan has been transported to AML in Perth. This material will be upgraded to produce a large quantity of >40% xenotime/ monazite dry plant concentrate for on-going test work to confirm that this concentrate is amenable to standard methods of REO extraction, as well as to provide samples for examination by potential off-take buyers.



Geoff Eupene

Exploration Director FAusIMM (CP)

*The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by **Geoffrey S Eupene CP**, a Fellow of the Australasian Institute of Mining and Metallurgy. He is a director of the Company and a full time employee of Eupene Exploration Enterprises Pty Ltd. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration, and to the activity which he is undertaking to qualify as a Competent Person as defined in the December 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Geoffrey S Eupene has consented to the inclusion in this report of the matters based on this information in the form and context in which it appears.*