



SheffieldResources
LIMITED

ASX and Media Release

12 July 2012

DRILLING COMMENCED AT DAMPIER HMS PROJECT

KEY POINTS

- Drilling programme will test large Exploration Target at potentially world class Thunderbird zircon prospect
- Drilling campaign finalised on Eneabba & McCalls HMS projects
- Assay results and resource estimation work for Dampier and Eneabba will be reported progressively from August

Mineral Sands explorer Sheffield Resources ("Sheffield") (ASX:SFX) is pleased to announce that it has commenced drilling at its Dampier heavy mineral sand (HMS) project near Derby in Western Australia's Kimberley region.

The drilling programme will target the large Thunderbird prospect where the Company has previously announced an Exploration Target¹ of **450-850Mt** at **5-10% HM** based on past drilling by Rio Tinto (ASX: RIO) (see ASX release dated 8 November 2011).

Rio Tinto's prior exploration indicates an average grade of 7.9% HM, with an average of 8% zircon in the heavy mineral assemblage. This equates to an in situ zircon grade of 0.63% which places Dampier amongst the top tier of zircon exploration projects.



Sheffield's drilling programme, which is expected to take 6 weeks to complete, has been designed with the objective of allowing estimation of a Mineral Resource and will also provide material for metallurgical testwork.

Managing Director, Bruce McQuitty said the Company is very excited to now be in a position to test the potential at Thunderbird.

"Zircon projects of this scale are very scarce globally."

"There have been no new world class zircon-dominated mineral sands deposits discovered since Jacinth-Ambrosia in 2004. We believe that Thunderbird has the hallmarks of a world class zircon deposit."

Figure 1: Sheffield's first drill hole at Thunderbird

¹ Sheffield Resources has not yet reported Mineral Resources for Thunderbird and any discussion in relation to targets and Mineral Resources is conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

Thunderbird Prospect

The Dampier project area was explored by Rio Tinto ("Rio") between 2004 and 2009. Rio completed four broadly spaced aircore drill traverses, identifying two zones of significant heavy mineral concentration: a large, shallow "eastern zone", named Thunderbird, and a smaller, deeper "western zone", named Argo.

Selected intersections from the Thunderbird prospect include:

- 45m @ 9.85% HM from 3m (JD073),
- 27m @ 7.00% HM from 1.5m (JD023), and
- 27m @ 7.92% HM from 9m (JD003).

On 8 November, 2011 Sheffield announced an Exploration Target¹ of **450-850Mt at 5-10% HM** for the Thunderbird Prospect. The Exploration Target (the area shown in red in Figure 2) is based on 8 Rio Tinto drill intersections on two near-perpendicular sections across the deposit. These drill intersections outline a mineralised area of 13-18km² and a mineralised thickness of between 20m and 25m. Within the Thunderbird Exploration Target area the mineral assemblage averages 8.0% zircon, 2.3% rutile, 6.0% leucoxene, 16.9% altered ilmenite, and 16.6% ilmenite.

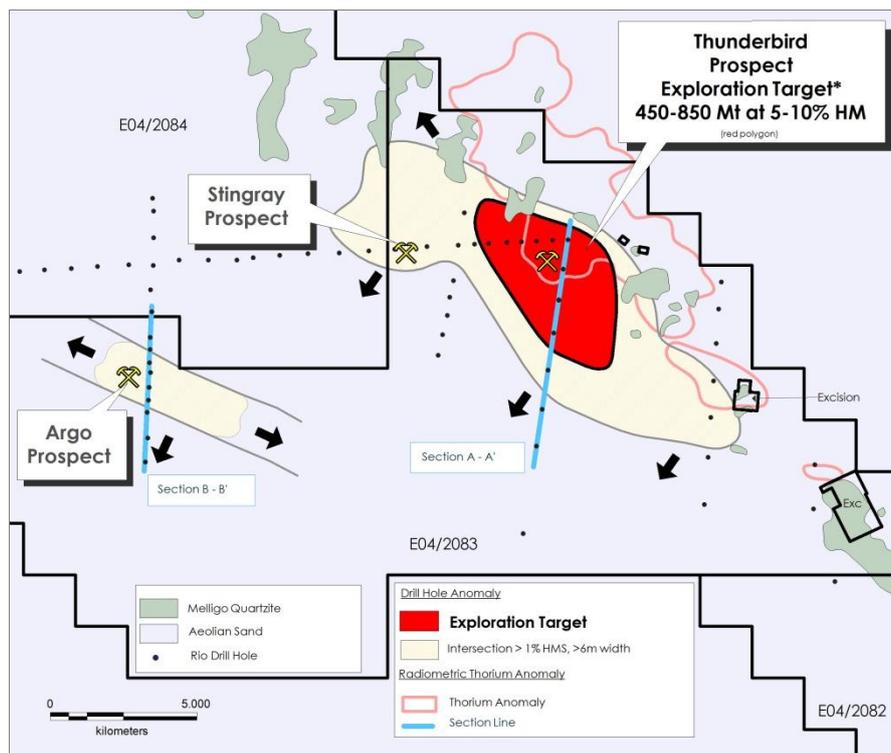


Figure 2: Plan of Dampier project showing location of Thunderbird prospect and Rio Tinto drill holes

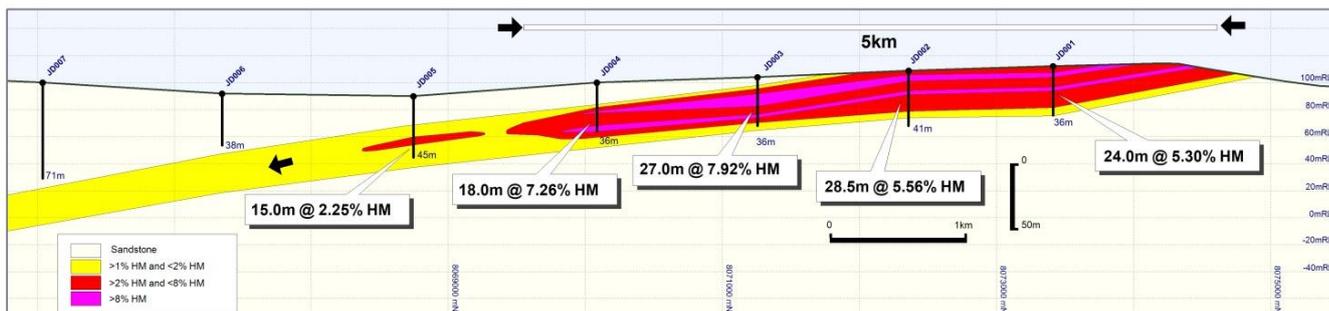


Figure 3: Thunderbird Prospect – Cross Section A-A'

Eneabba Project Update

The Company recently completed a major drilling campaign at its Eneabba project, including the Durack, Yandanooka, Drummond Crossing and Irwin prospects. Assay results from the Durack prospect were reported on 22 May 2012 and further assay results from the drill programme will be reported progressively from the end of July. Resource estimation work is underway on Durack, with the results due in early August.

Metallurgical testwork is in progress on a bulk sample from the Yandanooka prospect and preliminary results will be reported in the near future.

ENDS

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COMPETENT PERSONS' STATEMENT

The information in this announcement that relates to exploration results is based on information compiled by David Boyd. Mr Boyd is a full time employee of the Company. Mr Boyd is a Member of the Australasian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity to which they are undertaking to qualify as Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code")'. Mr Boyd consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

FORWARD LOOKING AND EXPLORATION TARGET STATEMENTS

Some statements in this announcement regarding estimates or future events are forward-looking statements. They involve risk and uncertainties that could cause actual results to differ from estimated results. Forward-looking statements include, but are not limited to, statements concerning the Company's exploration programme, outlook, target sizes and mineralised material estimates. They include statements preceded by words such as "expected", "planned", "target", "scheduled", "prospective", and similar expressions.

ABOUT SHEFFIELD RESOURCES

Sheffield Resources Limited (**Sheffield**) is a rapidly emerging heavy mineral sands (HMS) company.

ASX Code – SFX

Market Cap @ 27cps - \$25.6m

Issued shares – 94.8m

Cash - \$9.3m (approx.)

The Company has over 6,000km² of highly prospective tenure, all situated within the state of Western Australia.

HEAVY MINERAL SANDS

The Dampier project, located near Derby in WA's Kimberley region has the potential to become Sheffield's flagship HMS project. It contains a large zircon-rich HMS deposit formerly explored by Rio Tinto.

Sheffield's Eneabba Project contains six advanced exploration prospects: West Mine North, Ellengail, Yandanooka, Durack, Drummond Crossing and Irwin which are located near Eneabba. The Project is close to existing mineral sands operations and to a network of highways and railway lines connecting to the Geraldton and Fremantle/Kwinana ports. Sheffield's strategy is, subject to exploration success, to develop multiple HMS deposits capable of supporting a flexible mobile mining operation.

Sheffield is also evaluating the large McCalls chloride ilmenite project, located near Gingin.

IRON

Sheffield's iron strategy is to target hematite mineralisation adjacent to infrastructure in the world class Pilbara iron province and build up consolidated tenement holdings over time. To date, high grade iron mineralisation has been identified on three of the Company's tenements.

TALC

Sheffield has 1,152km² of tenure over the 175km-long Moora Talc Belt which represents a dominant ground position over a region that has, for the last 50 years, been exclusively controlled by major mining companies.

The Moora Talc Belt includes the large Three Springs mine which is owned by Imerys subsidiary Luzenac Australia Pty Ltd. Three Springs is renowned for producing high purity talc and is a relatively simple "dig-and-deliver" operation.

Sheffield's large tenement holding contains numerous talc occurrences and has the potential to become a strategic talc asset. Sheffield therefore represents a unique opportunity for investors to gain exposure to one of the few high-grade talc explorers in the world.