

ASX and Media Release

2 April 2012

PREFEASIBILITY STUDY UNDERWAY ON ENEABBA HMS PROJECT

KEY POINTS

- **Sheffield launches pre-feasibility study on the Eneabba HMS Project**
 - **Appointment of Project Development Manager**
 - **Commencement of 4 month exploration drilling campaign to unlock further upside**
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Mineral sands explorer, Sheffield Resources ("Sheffield", "the Company") (ASX:SFX) today announced the launch of pre-feasibility studies at its Eneabba Project in the Mid-West region of Western Australia and the appointment of a project development manager.

The announcement follows the successful completion of Sheffield's \$10 million capital raising and the release on 30 March 2012 of positive results from scoping studies on the Eneabba project.

Sheffield's Board is pleased to advise that it has appointed Mark Teakle as Project Development Manager with immediate effect.

Mr Teakle is a geologist with extensive experience in the mineral sands sector. During his 30 year career, he has held senior management positions with Aberfoyle Resources Ltd and Australian Zircon NL and was Executive Director at Mineral Sands Ltd (now Corvette Resources Ltd/Tianshan Goldfields). Mr Teakle has been involved in the discovery and economic evaluation of mineral sands deposits in the Murray and Eucla Basins and has consulted to Sheffield on mineral sands since the Company's ASX listing.

Mr Teakle will assume management of the Eneabba Project pre-feasibility study initially, with the role extending to other projects, such as the world-scale Dampier zircon project, as they advance.

Sheffield's Eneabba Project contains six advanced exploration prospects: Yandanooka, West Mine North, Ellengail, Durack, Drummond Crossing and Irwin (Figure 1). Sheffield's strategy is to develop multiple HMS deposits capable of supporting a flexible mobile mining operation.

The pre-feasibility work will commence immediately and is scheduled for completion by Q4 2012.

Exploration drilling campaign

The Company has commenced a four month drilling campaign on its HMS projects and has recruited additional personnel to manage the programme.

The Eneabba project will be the initial focus, where Sheffield will drill three dunal style prospects: Durack, Drummond Crossing and Irwin; with the aim of delineating mineral resources to further improve the Project's robust economics outlined in the scoping study. In addition, Sheffield will undertake further drilling at Yandanooka aimed at increasing the amount of the resource in the Indicated classification.

A short focused drill programme is then scheduled for McCalls, before the rig mobilises to the Dampier zircon project.

Assay results from the Eneabba project drilling are expected progressively from May 2012 and will be followed by resource estimation work during Q3 2012, subject to exploration success.

Exploration Update – Dampier zircon project

Aboriginal Heritage surveys for the Dampier project have been scheduled for late April. Drilling is expected to commence in June and consist of approximately 12,500m of aircore drilling. The Dampier project, located near Derby in WA's Kimberley region has the potential to become Sheffield's flagship HMS project. It contains a world-scale zircon-rich HMS deposit formerly explored by Rio Tinto.

Exploration Update – Talc projects

Drilling has also commenced on the Company's Moora Talc Belt project. A focused programme of 20 RC drill holes and 3 diamond drill holes will follow up encouraging intercepts of high grade talc obtained in last year's drill programme and will include an initial test of the highly promising Azharuddin prospect. Results are expected from late May 2012.

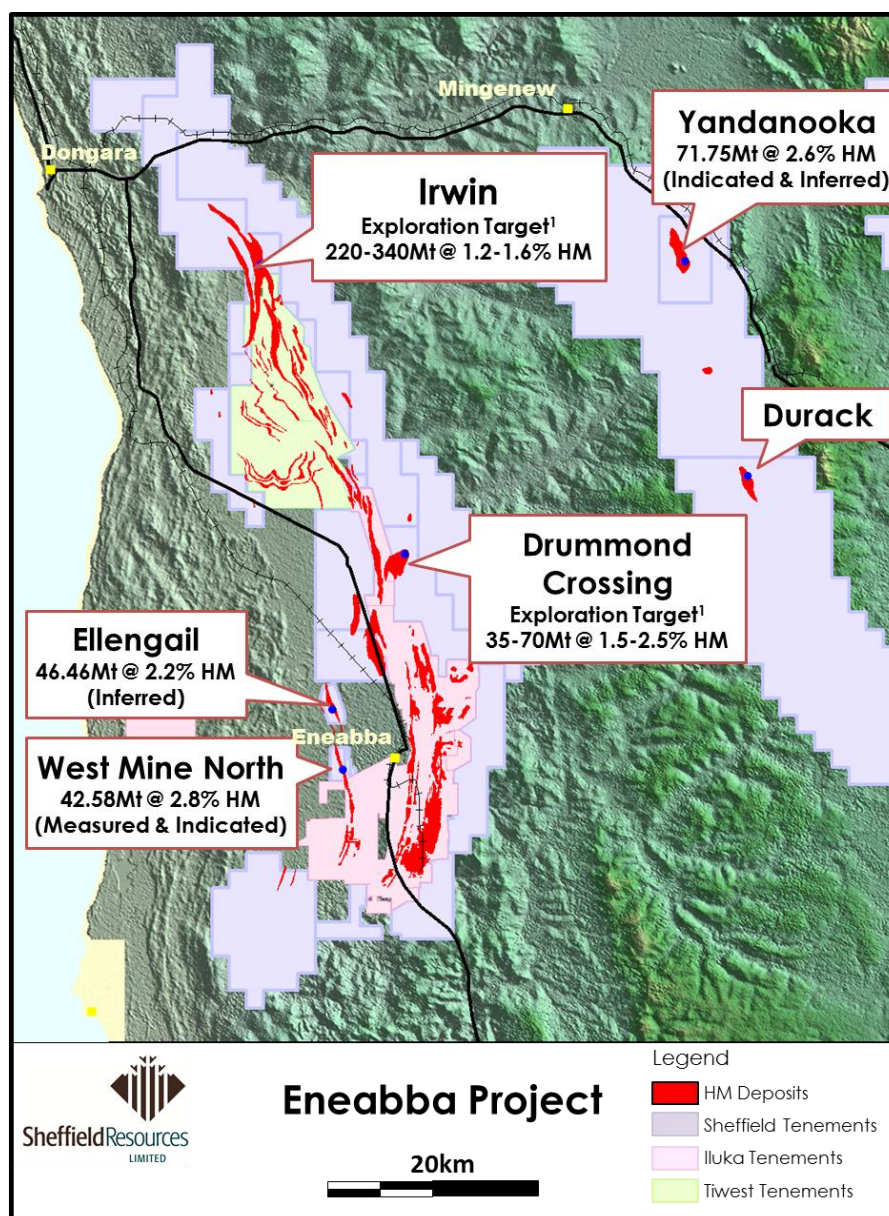


Figure 1: Sheffield's HMS prospects within the Eneabba project

¹Sheffield Resources has not yet reported Mineral Resources for Drummond Crossing and Irwin 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.

ENDS

For further information please contact:

Bruce McQuitty
Managing Director
Tel: 0409 929 121
bmcquitty@sheffieldresources.com.au

Media: Annette Ellis
Purple Communications
Tel: 08 6314 6300
AEllis@purplecom.com.au

Website: www.sheffieldresources.com.au

FORWARD LOOKING 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", "intends", "potential", "prospective" and similar expressions.

ABOUT SHEFFIELD RESOURCES

Sheffield Resources Limited (**Sheffield**) is a rapidly emerging heavy mineral sands (HMS) company with significant additional iron and talc assets.

ASX Code – SFX

MarketCap @ 47.5cps - \$44.7m

Issued shares* – 94m

Cash - \$11.2m

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 plant.

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.