

ASX and Media Release

11 February 2013

FIXED LOOP EM IDENTIFIES THREE STRONG CONDUCTORS AT RED BULL

KEY POINTS

- **Three strong bedrock conductors defined from initial Fixed Loop EM survey results at Sheffield's Red Bull Ni-Cu Project**
- **All three anomalies are consistent with massive to strongly developed sulphide and are of a similar tenor to Sirius Resources NL's main Nova conductor**
- **Coincident magnetic anomalies are a further indicator of potential mineralised systems**
- **Drilling to commence following regulatory approvals and clearances**

Sheffield Resources ("Sheffield", "the Company") (ASX:SFX) today announced the presence of three strong bedrock conductors at its Red Bull Nickel-Copper Project following processing and modelling of results from a Fixed Loop Transient Electromagnetic (FLTEM) survey.

The Red Bull Project is within 20km of Sirius Resources NL's (ASX:SIR) recent Nova Nickel-Copper discovery, in the newly identified Fraser Range Nickel Province in Western Australia (Figure 4).

The three highest priority targets (RB_VA1-3) identified from Sheffield's VTEM survey flown in November 2012, have been defined in the follow-up FLTEM as strong, localised bedrock conductors, consistent with the presence of massive to strongly developed sulphides (Figure 1).

Southern Geoscience Consultants (SGC), who are managing the FLTEM survey on Sheffield's behalf, have modelled all three anomalies with a conductance of 5,000S¹ or greater. By comparison, Sirius Resources NL's (ASX:SIR) Nova main conductor was modelled with a conductance of 5,144S (SIR ASX release 18 April 2012).

RB_VA1-3 also have coincident magnetic anomalies (Figures 2 & 3). The combination of EM conductors and magnetic anomalies is considered a strong indicator of mineralised systems.

Managing Director, Bruce McQuitty said that the results were a terrific start to Sheffield's exploration campaign at Red Bull.

"We are delighted to have already generated three high priority drill targets in this exciting new nickel province."

"Our success in identifying these targets has resulted in the FLTEM survey being expanded to test an additional five lower priority VTEM targets."

"We are looking to commence drilling of these three identified targets, plus any further targets generated from our ongoing exploration programme, as soon as is practically possible."

Further details of the modelled targets, as described by SGC, are provided below.

¹Conductance is measured in Siemens (S)

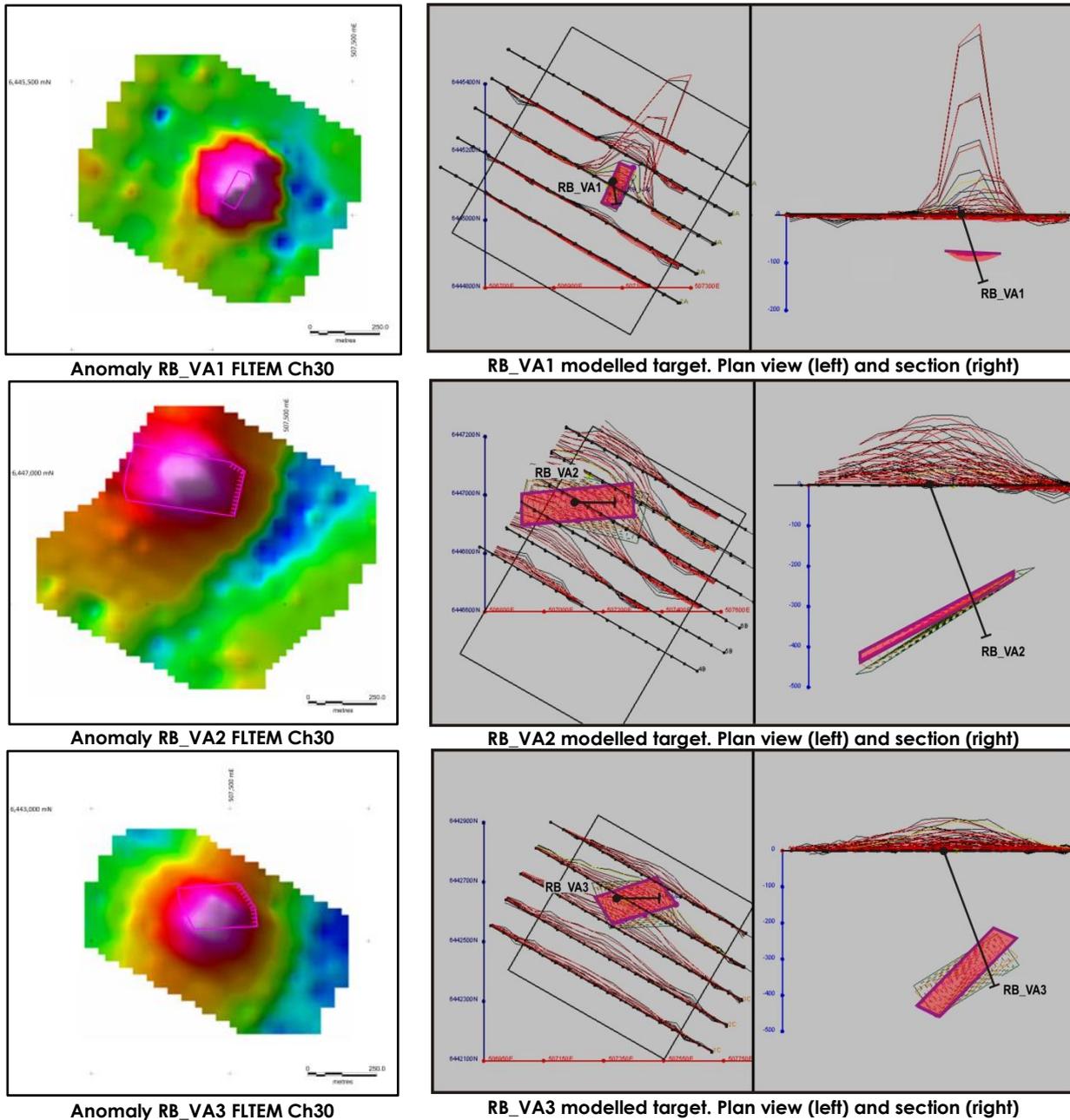


Figure 1: Anomalies RB_VA1-3 showing modelled conductors and proposed drill holes to test each target

Target details

RB_VA1

The core of conductive source is approximately 50x150m in size at ~75m vertical depth. It is near flat lying in orientation and highly conductive at ~7,500-10,000S+. An additional western bedrock conductor is present, but is of limited size and strength compared to the main target.

RB_VA2

The core of conductive source is approximately 100x400m in size, at ~150-200m vertical depth and has a shallow-moderate westerly dip. It is highly conductive at ~6,000S+.

RB_VA3

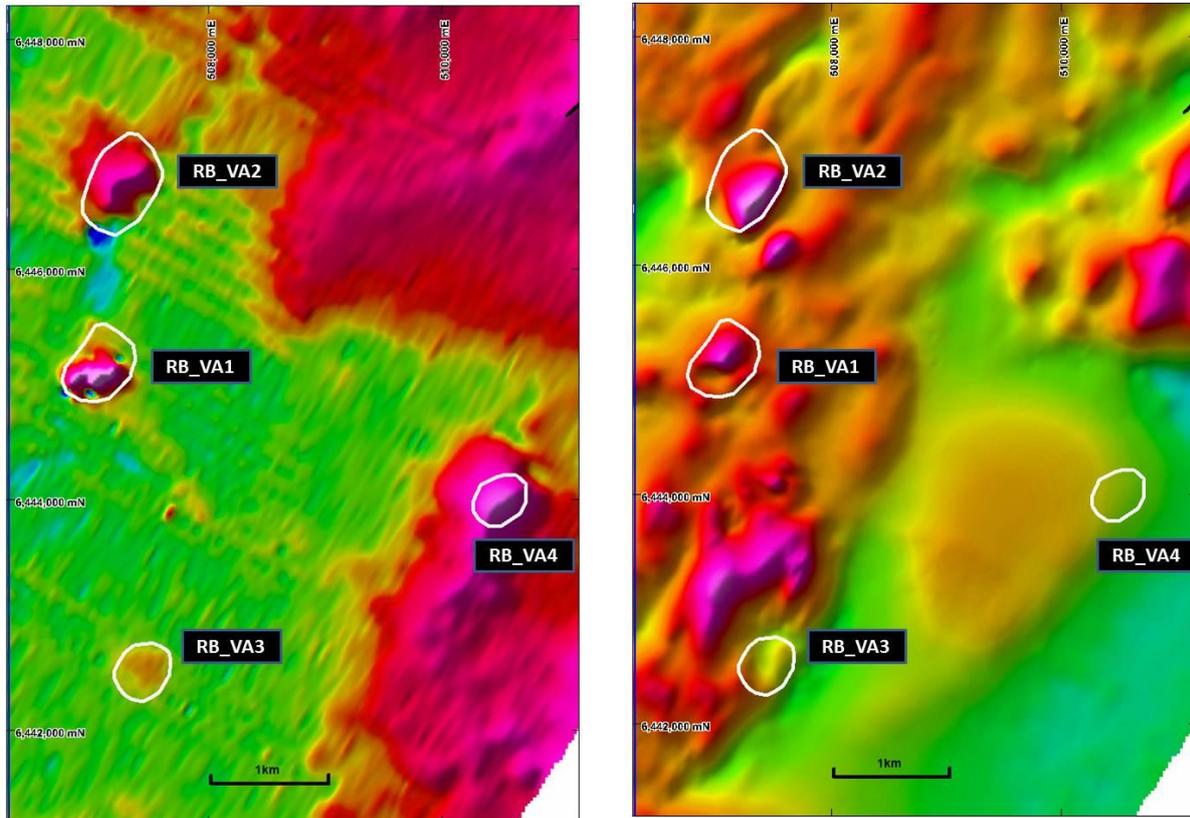
The core of conductive source is approximately 100x300m in size at ~250m vertical depth. It is moderate west to southwest dipping and highly conductive at ~5,000S+.

Conductance signatures of >5,000S are considered consistent with the presence of massive/strongly developed sulphides.

FLTEM Survey

The initial focus of the FLTEM survey was three high order VTEM anomalies (RB_VA1-3, Figure 2), identified from the recently completed VTEM airborne electromagnetic survey (see ASX releases dated 28 November 2012 & 13 December 2012).

The FLTEM survey has been expanded to test an additional 5 lower priority VTEM targets with results expected later in the current quarter.



Figures 2 & 3: Late Channel B-field VTEM (left) and TMI magnetics (right) showing high-order priority targets RB_VA1 to RB_VA4. Note the correlating magnetic anomalies for targets RB_VA1 to 3.

Future Work

Soil sampling programmes have already commenced over the higher priority EM anomalies. In addition, an aircore drilling programme has been designed to provide an initial test of the bedrock geochemistry over anomalies RB_VA1-3.

This is scheduled for completion prior to direct drill targeting of the modelled conductors.

About the Red Bull Ni-Cu Project

The Red Bull project comprises two recently granted tenements with a total area of 525km². The northern tenement E69/3052 covers prospective mafic and ultramafic rocks of the Fraser Complex.

Sheffield is targeting nickel-copper mineralisation of the Nova-style. In addition to the targets generated from the VTEM and Fixed Loop EM surveys, Sheffield will also focus its exploration on an 8km long Ni-Cu-Co-(Pt-Pd) anomalous trend in a layered mafic-ultramafic sequence, identified from aircore drilling by previous explorers (refer ASX announcement dated 24 September, 2012).

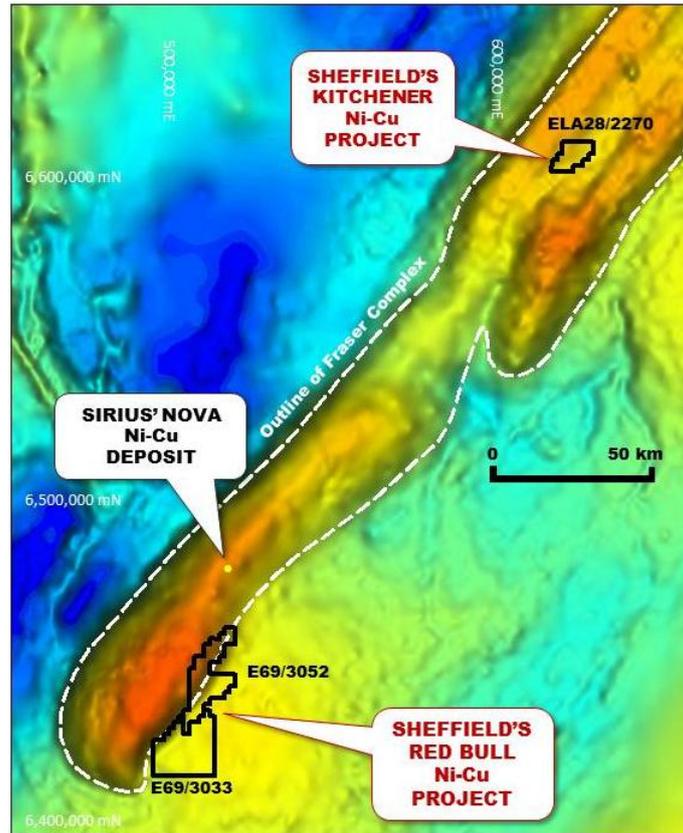


Figure 4: Location of Red Bull Project on a gravity image outlining the Fraser Complex

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 Archer. Mr Archer is a full time employee of the Company. Mr Archer 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 Archer 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 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", "strategy" and similar expressions.

ABOUT SHEFFIELD RESOURCES

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

ASX Code – SFX

Market Cap @ 51.5cps - \$51.0m

Issued shares – 99.0m

Cash - \$6.0m

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, contains the large, high grade zircon-rich Thunderbird HMS deposit.

The Eneabba project comprises multiple HMS deposits and is located near Eneabba approximately 140km south of the port of Geraldton in WA's Mid-West region.

Sheffield is also evaluating the large McCalls chloride ilmenite project, located 110km to the north of Perth.

NICKEL-COPPER

Sheffield's 525km² Red Bull project is located in the highly prospective Fraser Complex within 20km of Sirius Resources NL's (ASX:SIR) Nova Ni-Cu discovery.

IRON

Sheffield has identified iron mineralisation on four of its tenements in the Pilbara iron ore province. Thick hematite mineralisation was intersected in first pass RC drilling at the Three Pools project, 20km north of Newman.