



DRILLING UNDERWAY IN NORTHERN FRASER RANGE

KEY POINTS

- Aircore drilling commenced at Big Bullocks nickel project in northern Fraser Range
- Drilling will target several magnetic lows interpreted as discrete mafic/ultramafic intrusives
- First ever drilling program for nickel on this large, highly prospective tenement
- Moving loop EM survey continues at Red Bull nickel project in southern Fraser Range

Sheffield Resources Limited ("Sheffield" "the Company") (ASX:SFX) today announced it has commenced aircore drilling on its Big Bullocks tenement E39/1733, located 85km south of the Tropicana gold mine in the northern Fraser Range (Figure 3).

The 5,000m drilling program will provide an initial test of several magnetic lows, interpreted as discrete mafic/ultramafic intrusive bodies (Figures 1 & 2). The drilling will also establish the depth of transported and weathered cover, enabling effective design of potential follow up work such as ground-based geophysical surveys. The program is expected to be completed in April, with results due later in Q2, 2015.

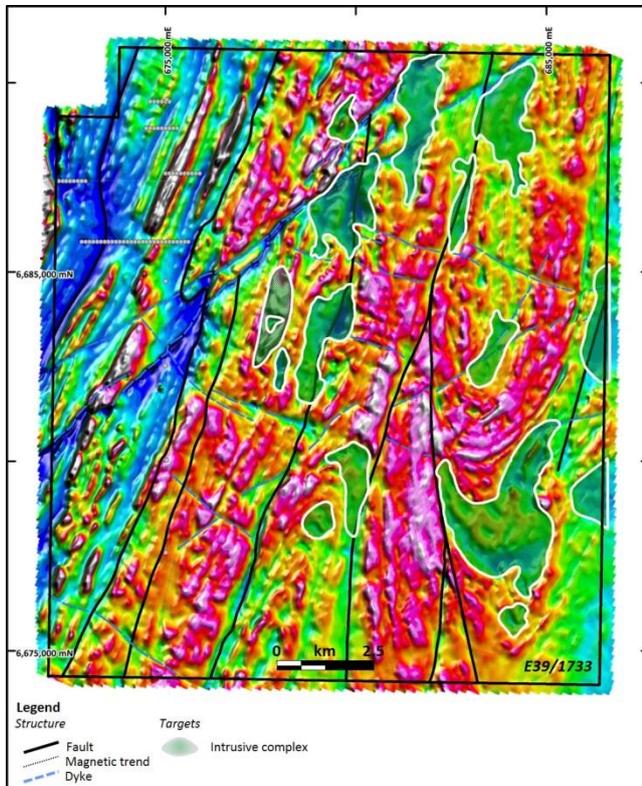


Figure 1: Big Bullocks project detailed aeromagnetic image with structural interpretation and target intrusive complexes

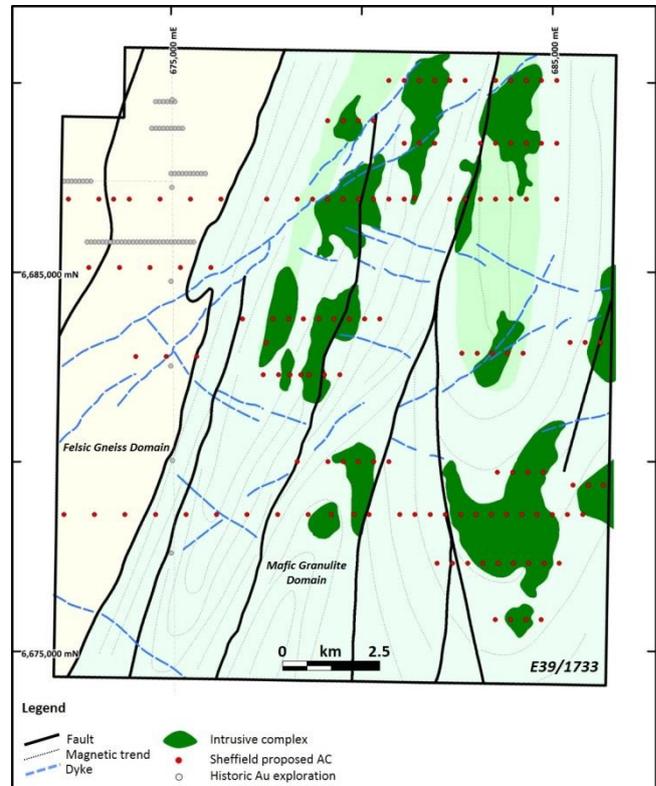


Figure 2: Big Bullocks project bedrock geological interpretation and proposed drilling targeting intrusive complexes

Sheffield's Managing Director Bruce McQuitty said it was pleasing to launch the maiden drilling program at Big Bullocks.

"Big Bullocks is a large 238km² tenement that straddles the main gravity high associated with the Fraser Complex. It is a highly prospective regional setting for magmatic nickel sulphide deposits and has never before been drilled for nickel.

"Our Fraser Range nickel exploration program is now in full swing, with ground EM surveys continuing at Red Bull, 20km south of Nova. We aim to generate multiple targets for follow-up drilling."

Sheffield's consultants recently completed a bedrock geological interpretation and prospectivity analysis of Big Bullocks using detailed aeromagnetic survey data and other datasets (Figures 1 & 2). Several factors were identified which contribute to the project's nickel exploration potential:

- Located centrally over the gravity high defining the Fraser Complex;
- Structurally complex area with tight fold domains separated by major linear shear zones;
- Coincident magnetic lows, gravity highs and disrupted fold patterns suggest multiple mafic / ultramafic intrusive centres;
- Increased prospectivity at the mineral camp scale with thick crust and deep-seated structural complexity evident.

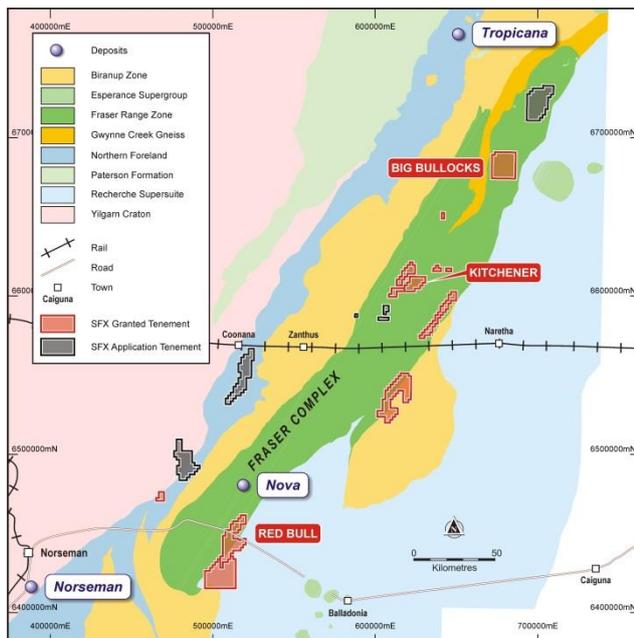


Figure 3: Sheffield's tenement holding in Fraser Range

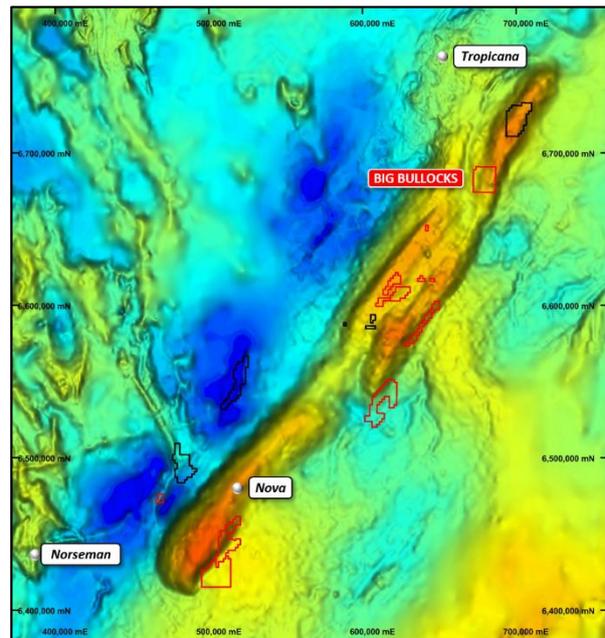


Figure 4: Regional gravity image with Sheffield's tenement holding.

ENDS

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COMPLIANCE STATEMENTS

EXPLORATION RESULTS

The information in this report that relates to Exploration Results is based on information compiled by Mr David Boyd, a Competent Person who is a Member of Australian Institute of Geoscientists (AIG). Mr Boyd is a full-time employee of Sheffield Resources Ltd and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Boyd consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

PREVIOUSLY REPORTED INFORMATION

This report includes information that relates to Exploration Results which were prepared and first disclosed under the JORC Code 2012. The information was extracted from the Company's previous ASX announcements as follows:

- "GROUND EM SURVEYS COMMENCE AT RED BULL NICKEL PROJECT", 18 February, 2015

These announcements are available to view on Sheffield Resources Ltd's web site: www.sheffieldresources.com.au.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

FORWARD LOOKING STATEMENTS

Some statements in this report 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 "anticipated", "expected", "target", "scheduled", "intends", "potential", "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 @ 73cps	\$98.1m
Issued shares:	134.4m	Cash: \$7.7m*	

*includes \$2.5 million proceeds from sale of Oxley Potash tenements (see ASX announcement dated 9 March 2015)

Sheffield's projects are all situated within the state of Western Australia and are 100% owned by the Company.

HEAVY MINERAL SANDS

The Dampier project, located near Derby in WA's northwest, contains the large, high grade zircon-rich Thunderbird HMS deposit. Sheffield is currently undertaking a pre-feasibility study on Thunderbird.

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 has over 2,000km² of tenure in the Fraser Range region, including the Red Bull project which is within 20km of Sirius Resources NL's (ASX:SIR) Nova Ni-Cu deposit.

Appendix 1: JORC (2012) Table 1 Report, Fraser Range, 16 March 2015.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Not applicable
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> Not applicable.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> Not applicable.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> Not applicable.
Sub-sampling techniques and sample	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, 	<ul style="list-style-type: none"> Not applicable.

Criteria	JORC Code explanation	Commentary
preparation	<p>rotary split, etc and whether sampled wet or dry.</p> <ul style="list-style-type: none"> For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	<ul style="list-style-type: none"> Not applicable.
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> Not applicable.
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> Not applicable.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> Not applicable.
Orientation of data in relation to geological	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 	<ul style="list-style-type: none"> Not applicable.

Criteria	JORC Code explanation	Commentary
structure	<ul style="list-style-type: none"> If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Not applicable y.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Processing and interpretation of geophysical and geological data was completed by external consultants and reviewed by senior Sheffield personnel prior to reporting.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	Statement	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> Data reported is from Exploration Licence E39/1733 which was granted on 19/11/2013 and is due to expire on 18/11/2018. The tenement is held 100% by Sheffield Resources Ltd. There are no known or experienced impediments to obtaining a licence to operate in the area. Sheffield has been operating successfully in the Fraser Range region for more than 2 years.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The tenement has been explored by other parties, with the bulk of modern work by Ponton Minerals from 2007 to 2012. Most of this work targeted gold discovery, with surface geochemical sampling of magnetic lag, calcrete and soil fractions followed by a limited aircore drilling program in the NW corner of the tenement (see Figure 2 in body of announcement). No significant discoveries were made from this work. The nature and thickness of transported cover across the tenement reduces the effectiveness of the surface sampling.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> Sheffield is exploring primarily for magmatic-hosted Ni-Cu sulphide, however the potential for Au, and ultramafic-hosted PGE will also be assessed. Other details are included in the body of the announcement.
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole 	<ul style="list-style-type: none"> Not applicable.

Criteria	Statement	Commentary
	<ul style="list-style-type: none"> ○ down hole length and interception depth ○ hole length. <ul style="list-style-type: none"> • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> • In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> • Not applicable.
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> • These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> • Not applicable
<i>Diagrams</i>	<ul style="list-style-type: none"> • Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> • Included in the body of announcement.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> • Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> • All new exploration results relating to the announcement are reported. • Refer to the statements in the body of the announcement under the headings "Previously Reported Information" and "Forward Looking Statements".
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> • Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> • The announcement contains results of an airborne geophysical survey acquired by Thomson Aviation and managed by Southern Geoscience Consultants as follows: <u>Survey Specifications</u> Traverse line direction: 112.5deg. Traverse line spacing: 100m Tie line direction: 202.5deg. Tie line spacing: 1000m Block traverse km: 2501 Block tie km: 311 Block total km: 2812 <u>Magnetics</u> Geometrics G822A magnetometer

Criteria	Statement	Commentary
		<p>Nominal accuracy 0.01nT Data rate 20Hz Diurnal monitoring by dual base station magnetometers recording data to a sensitivity of 0.1nT every 6 seconds.</p> <p><u>Radiometrics</u> Radiation Solutions Inc. RS400 Gamma Ray Spectrometer 0.33 MeV to 3.0 MeV resolution NaI (TI) crystal detector pack 33l volume Total Count, Potassium, Uranium, Thorium and Cosmic data collected.</p> <p><u>Location</u> King KR 495B Radar Altimeter Setra 276 Pressure Transducer barometric altimeter Novatel OEMV-1VBS GPS Receiver, Omnistar differential GPS data, accuracy 5m RMS Traverse line spacing: 100m Tie line direction: 202.5deg. Tie line spacing: 1000m Block traverse km: 2501 Block tie km: 311 Block total km: 2812</p> <ul style="list-style-type: none"> • Geophysical data was processed and interpreted by external consultants. • Regional geological information was used in conjunction with the geophysical interpretation to complete a bedrock geological interpretation by an external consultant, and reviewed by Sheffield personnel, the results of which are presented in the report.
<i>Further work</i>	<ul style="list-style-type: none"> • The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> • Included in the body of announcement.