

RED BULL NICKEL PROJECT UPDATE, FRASER RANGE

KEY POINTS

- Diamond and RC drilling program completed at the Stud Prospect at Red Bull
- Diamond drill hole intersected:
 - 12m of graphitic metasediment from 348m – likely source of target conductor
 - 13m of brecciated ultramafic with trace disseminated sulphides from 436m
- 2m interval of disseminated sulphide intersected from 107m, near contact between mafic granulite and metasediment in RC drill hole RERC003
- Thick intersection of ultramafic rock in southernmost RC drill hole RERC004 presents as a potential host unit for magmatic nickel deposits
- Assay results and down-hole EM scheduled for Q1 2016

Sheffield Resources Limited (“Sheffield” “the Company”) (ASX:SFX) today announced the completion of a short RC and diamond drilling program at the Stud nickel-copper prospect at its 100% owned Red Bull Project, located in the Fraser Range region of Western Australia (Figure 2). Stud is located just 21km to the south of the Nova nickel-copper deposit.

One diamond drill hole with RC precollar (total 453m) targeted a large bedrock conductor, whilst 4 RC holes (total 642m) targeted zones of IP anomalism coincident with nickel-copper geochemical anomalism in aircore drill holes (see ASX release dated 11 December 2015).

The diamond drill hole (REDD005) intersected a 12m zone of graphitic metasediment from 348m to 360m down hole which is the most likely source of the bedrock conductor.

RC drill hole RERC003 intersected a 2m zone of disseminated sulphide mineralisation (predominantly pyrite, up to 10%) from 107-109m, near the contact between mafic granulite and metasedimentary units.

The southernmost RC drill hole, RERC004, intersected a substantial down-hole thickness of metamorphosed ultramafic rocks from 48m to 160m (eoh) - a potential host unit for magmatic nickel sulphide deposits.

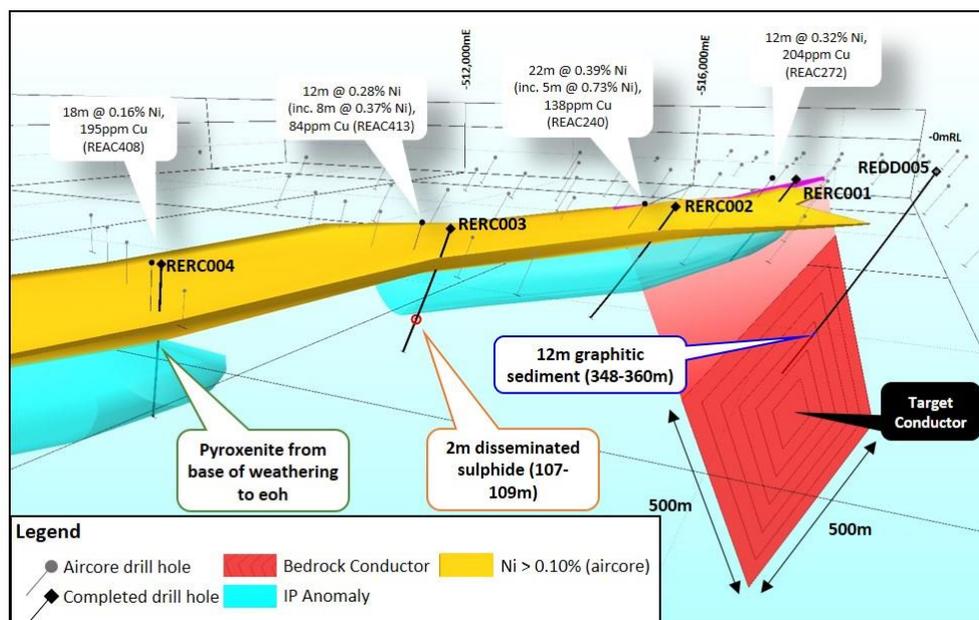


Figure 1: Stud prospect showing completed drill holes

RC drill holes RERC001 & RERC002 did not intersect any alteration or mineralisation of note. Summary geological logs and drill hole information are presented in Table 1 (below), and in Appendix 1.

It is important to note that these results are only estimates from visual examination of the drill core and chips; assay results are pending and are expected to be received in Q1 2016.

Downhole EM surveys are planned in Q1 2016 to confirm the conductor source in REDD005 and search for any off-hole conductors from RERC003.

Further work is dependent on the assay and geophysical results from this program.

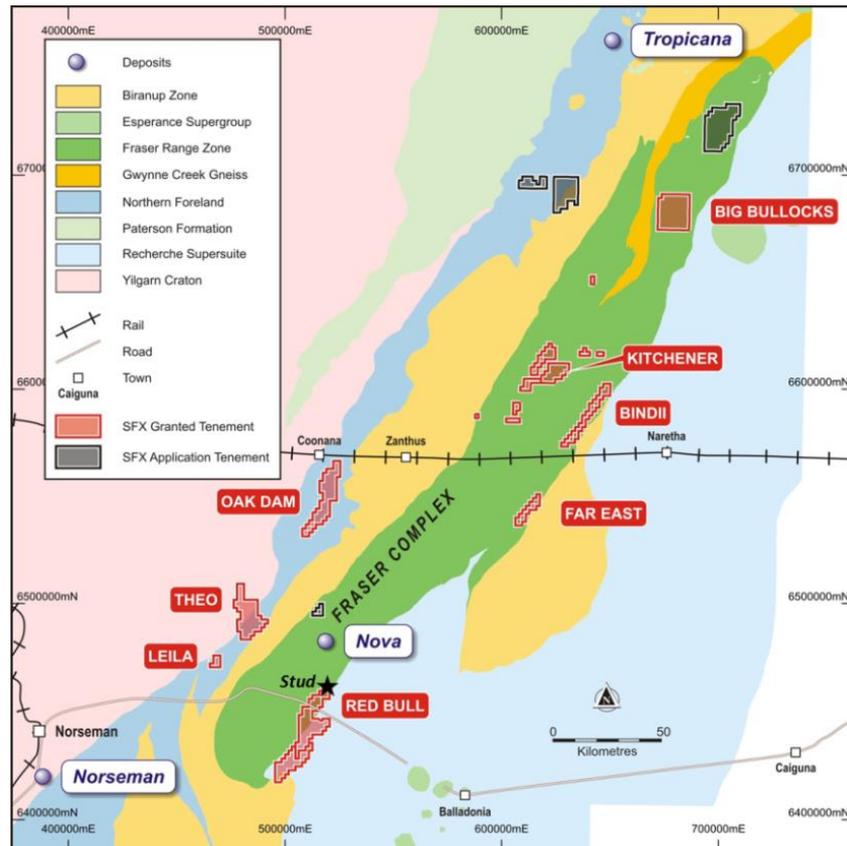


Figure 2: Location of Sheffield's Red Bull project & Stud prospect in relation to Nova Ni-Cu deposit

ENDS

For further information please contact:

Bruce McFadzean
Managing Director

Tel: 08 6424 8440

info@sheffieldresources.com.au

Media: Luke Forrestal

Cannings Purple

Tel: 08 6314 6300

lforrestal@canningspurple.com.au

Website: www.sheffieldresources.com.au

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:

- "DRILLING COMMENCES AT RED BULL NICKEL PROJECT, FRASER RANGE" 11 December, 2015
- "SHEFFIELD TO DRILL COMPELLING NICKEL TARGET AT RED BULL Ni-Cu PROJECT, FRASER RANGE" 28 October, 2015
- "COMPELLING NEW DRILL TARGET IDENTIFIED FROM GROUND EM SURVEY AT RED BULL NICKEL PROJECT" 23 June, 2015
- "LARGE BEDROCK CONDUCTOR IDENTIFIED AT RED BULL Ni-Cu PROJECT, FRASER RANGE", 7 July, 2014
- "LARGE Ni-Cu-Co ANOMALIES IDENTIFIED IN THE FRASER RANGE", 11 February, 2014

This report also includes information that relates to Exploration Results which were prepared and first disclosed under the JORC Code 2004. The information has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported. The information was extracted from the Company's previous ASX announcements as follows:

- "THREE NEW NICKEL TARGETS FROM AIRCORE DRILLING AT RED BULL", 12 September, 2013
- "AIRCORE DRILLING UNDERWAY AT RED BULL NICKEL PROJECT", 27 November, 2013

These announcements are available 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 announcement and, in the case of reporting of Exploration Results that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which any Competent Person's findings are presented have not been materially modified from the original market announcement.

FORWARD LOOKING AND CAUTIONARY 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", "targeting", "likely", "scheduled", "intends", "potential", "prospective" and similar expressions.

Table 1. Preliminary drill hole information and summary geological logs.

Collar Information

Hole ID	Type	Easting	Northing	RL	Dip	Azimuth	Hole Depth	Comment
REDD005	DDH	518440	6459162	261	-64	271	453.2	120m RC pre-collar
RERC001	RC	518235	6458920	254	-58	270	162	
RERC002	RC	518153	6458440	258	-57	270	160	
RERC003	RC	518020	6458185	257	-57	300	160	
RERC004	RC	517941	6457952	259	-57	300	160	

Hole locations surveyed by handheld GPS system with expected accuracy of +/- 15m horizontal, RL determined by projection to a SRTM DEM model. Easting and Northing coordinate system is MGA Zone 51 (GDA94), RL is AHD.

Summary Geology

Hole ID	From (m)	To (m)	Geology
REDD005	0	6	Colluvium, laterite
	6	17	Saprolite clays
	17	36	Saprock, meta-gabbro
	36	76	Magnetite rich meta-gabbro
	76	116	Meta-gabbro, pyroxene phyric gabbro
	116	339.5	Gneissic sediments
	339.5	348.2	Gneissic sediments, quartz veining, pyrite 1-2%
	348.2	360	Gneissic sediments, with several, narrow graphite bands
	360	436	Gneissic sediments
	436	449.1	Brecciated ultramafic with trace disseminated sulphides
RERC001	449.1	453.2	Gneissic sediments
	0	4	Colluvium, laterite
	4	48	Saprolite clays
	48	71	Meta-gabbro, pyroxene phyric gabbro
	71	95	Pyroxene phyric gabbro
	95	117	Gneissic sediments
	117	121	Ultramafic
RERC002	121	162	Gneissic sediments
	0	4	Colluvium, laterite
	4	29	Saprolite clays
	29	62	Pyroxenite
	62	87	Meta-gabbro
	87	140	Gneissic sediments
	140	152	Meta-gabbro
	152	156	Gneissic sediments
RERC003	156	160	Meta-gabbro
	0	2	Colluvium
	2	7	Laterite
	7	38	Saprolite clays
	38	53	Saprock/saprolite, after meta-gabbro
	53	74	Meta-gabbro, fresh
	74	77	Meta-sediment
	77	104	Meta-gabbro
	104	107	Meta-sediment
	107	109	Meta-sediment, sulphidic (<10%, pyrite dominant)
RERC004	107	160	Gneissic sediment
	0	7	Laterite
	2	48	Saprolite clays, (after mafic)
	48	160	Pyroxenite

Appendix 1: JORC (2012) Table 1 Report

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 (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> No sampling conducted to date
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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"> RC holes: 5.5 inch Reverse Circulation hammer drilling. REDD005: 5.5 inch RC pre-collar 0-120m, diamond drill core NQ diameter from 120m to eoh. Core is orientated using downhole orientation tool and referenced to downhole gyroscopic survey (pending).
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"> Sample quality (including wet vs. dry and qualitative recovery) is logged at the drill site. RC holes have been sampled as 2m composites, assay results are pending. REDD005 will be sampled pending further examination of drill core.
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"> RC chips have been geologically logged. Drill core has been geologically logged to a summary/preliminary level to date, more detailed logging will follow.
Sub-sampling techniques and sample preparation	<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, rotary split, etc and whether sampled wet or dry. 	<ul style="list-style-type: none"> RC holes have been sampled as speared 2m composites and submitted for assay, results are pending. REDD005 will be sampled pending further examination of drill core.

Criteria	JORC Code explanation	Commentary
	<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"> RC holes have been sampled as speared 2m composites and submitted for assay, results are pending. REDD005 will be sampled pending further examination of drill core.
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"> No assays completed to date.
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"> Hole locations were surveyed by handheld GPS system with expected accuracy of +/- 15m horizontal. RL determined by projection to a SRTM DEM model. Easting and Northing coordinate system is MGA Zone 51 (GDA94), RL is AHD. Dip and azimuth for REDD005 by downhole multi-shot tool providing dip and azimuth information. Dip for RC holes by downhole multi-shot tool. Azimuth for RC holes is planned azimuth.
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"> See body of announcement for drill hole details. This is a first-pass exploration drill program.
Orientation of data in relation to geological structure	<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. If the relationship between the drilling orientation and the orientation of key 	<ul style="list-style-type: none"> Mineralisation and stratigraphy is assumed to be sub-vertical, and in drill core the rock fabric is generally at a high angle to the core axis, however insufficient work has been completed to date to confirm these relationships. Downhole widths are quoted only.

Criteria	JORC Code explanation	Commentary
	<i>mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Sample security is not considered a significant risk given the location of the Project. Nevertheless, the use of recognised transport providers, and sample dispatch procedures directly from the field to the laboratory are considered sufficient to ensure appropriate sample security.
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"> No formal external audits or review have been conducted. Audits are not considered necessary at this stage of the Project's development. Industry-standard methods are being employed.

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 E69/3052 which was granted on 27/07/2012 and is due to expire on 26/07/2017. 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 region for more than 3 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 Red Bull Project area was explored by Gold Partners between 1995 and 1999. An aeromagnetic interpretation was completed showing the extent of magnetic units followed up by 3,943m of air core drilling exploring for base metal mineralisation potential.
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. Details are included in the body of this, and previously released announcements.
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 down hole length and interception depth hole length. 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. 	<ul style="list-style-type: none"> See body of announcement.
Data aggregation methods	<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 	<ul style="list-style-type: none"> None applied.

Criteria	Statement	Commentary
	<p><i>Material and should be stated.</i></p> <ul style="list-style-type: none"> 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. 	
Relationship between mineralisation widths and intercept lengths	<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"> Only visual results have been presented here, no assays have been completed to date. Mineralisation and stratigraphy is assumed to be sub-vertical, and in drill core the rock fabric is generally at a high angle to the core axis, however insufficient work has been completed to date to confirm these relationships. Downhole widths are quoted only.
Diagrams	<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"> See body of announcement, no assays completed to date.
Balanced reporting	<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"> This announcement is an update for an exploration program which is still underway, and has been made to fulfil the Company's continuous disclosure obligations. Visual observations only are reported here, no assay or other analytical information is available to date and it is possible that the interpretation may change based upon further information which will be reported at the appropriate time. In the case of previously-announced results, the initial announcement is referenced. Terms like "best", "strongest" or "significant" are used to highlight those results considered most important in the context of the announcement.
Other substantive exploration data	<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"> Where relevant this information has been included in the body of this announcement.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg 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.

ABOUT SHEFFIELD RESOURCES

Sheffield Resources Limited (Sheffield) is focused on developing its 100% owned, world class Thunderbird Mineral Sands Project, located near Derby in Western Australia.

ASX Code:	SFX	Market Cap @ 40.5cps:	\$59.5m
Issued shares:	147.0m	Cash:	\$8m (approx.)

THUNDERBIRD MINERAL SANDS

Thunderbird is one of the largest and highest grade mineral sands discoveries in the last 30 years.

The deposit is rich in zircon, which sets it apart from many of the world's operating and undeveloped mineral sands projects which are dominated by lower value ilmenite.

Sheffield's Pre-feasibility study shows Thunderbird is a modest capex project that generates strong cash margins from globally significant levels of production over a 40 year mine life.

The Company is targeting project construction commencing 2017 and initial production in 2019. The initial planned production profile is aligned with expected emerging supply gaps in global mineral sands markets.

NICKEL-COPPER

Sheffield has over 1,900km² of 100% owned tenure in the Fraser Range region of Western Australia, including the Red Bull project which is within 20km of the Nova Ni-Cu deposit. The Company is exploring the region for magmatic nickel deposits similar to Nova.