

23 February 2022

ASX Announcement ASX Codes: SRN and SRNOC

## **KADJI PROJECT (100%)**

#### **PERENJORI**

#### NICKELIFEROUS ULTRAMAFICS IDENTIFIED

- Located in the West Yilgarn Ni-Cu-PGE Province, host to the recently discovered Julimar
   PGE deposit
- Highly anomalous ultramafic hosted nickel samples recorded in pXRF readings
- Previously unknown pegmatites discovered
- Kadji Project greenstones have been overlooked by previous explorers
- First pass interpretation of the data shows mafic and ultramafic rocks are more common than shown on published geology maps
- Field follow-up confirms prospective greenstone lithologies

Surefire Resources NL (**ASX: SRN**, "**the Company**" or "**SRN**") wishes to announce the completion of a high-resolution aeromagnetic survey and initial geological reconnaissance of the Kadji Project area (E70/5575 and E59/2446) in the Koolanooka Greenstone Belt of Western Australia (Figure 1).

#### The Kadji setting

These tenements are located within the West Yilgarn Ni-Cu-PGE Province (Figure 2). This province is host to the recently discovered Julimar Ni-Cu-PGE mineralisation, recognising this area as a major new Ni-Cu-PGE province. The Province covers the western margin of the Archaean Yilgarn Craton and has analogues in many Archaean areas of the world where small mafic intrusives along cratonic margin faults give rise to world-class magmatic sulphide deposits.

Kadji is along trend of the Julimar discovery and covers an area previously mapped as a block faulted gneiss surrounded by Yilgarn Craton granites. It has previously been overlooked by past explorers even though regional aeromagnetic data implied the presence of greenstones. The new high resolution aeromagnetic data resolves the previously ambiguous magnetic signatures into areas of interpreted layered ultramafic and smaller plutonic intrusives. Both

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these settings are considered highly prospective for Ni-Cu-PGE mineralisation. Additionally, major north-west trending structures host historic gold workings, also a commodity not previously explored for in the past.

In excess of 25 strike kilometres are held by Surefire in this exciting new Ni-Cu-PGE setting.

#### Aeromagnetic survey maps targets

A high resolution, low level aeromagnetic survey has been completed on the Kadji tenements (Figure 3). Details of the survey are included in the attached JORC Table 1. Interpretation of the survey has identified numerous areas that are the focus of first pass geological reconnaissance.

#### Targets identified for exploration

The initial assessment of the aeromagnetic data has identified four styles of mineralisation:

- 1. Mafic-ultramafic layered intrusive complex giving rise to Ni-Cu-PGE mineralisation similar to that seen at Julimar;
- 2. Porphyry-related gold;
- 3. Structure-related orogenic gold; and
- 4. Pegmatite hosted lithium mineralisation.

#### **Geological Field Reconnaissance**

Geological field reconnaissance has been undertaken to assist in the interpretation of the aeromagnetic data. While regional granite and granitic-gneiss outcrop most, due their resistive nature, considerable evidence of mafics and ultramafic lithologies was found. Notably, the extensive presence of these lithologies has confirmed the Company's view that Kadji is highly prospective for Julimar-style Ni-Cu-PGE sulphide mineralisation.

Confirmation of this interpretation has been provided by spot rock chip and soil sampling. A field portable pXRF was used to assess metal content in outcropping lithologies and overburden. The assaying procedure is outlined in the attached JPRC Table 1. Results for nickel are shown in Table 1 and displayed in Figure 4. Anomalous nickel values up to **618ppm** were obtained<sup>1</sup>. Anomalous nickel values are noted in outcropping mafic and ultramafic lithologies. While these often have a high nickel background, elevated nickel above approximately 300ppm is considered anomalous. Of particular interest are komatilites noted by the GSWA as occurring in the area (Figure 4) and confirmed by this reconnaissance work. Komatilites are a classic nickel host (e.g., Kambalda). Selected samples will be assayed by an independent laboratory to confirm the pXRF assays.

Significantly, previously unmapped pegmatites have been identified in the northwest of the project area. These will be further assessed for possible lithium mineralisation.

<sup>&</sup>lt;sup>1</sup> Care should be taken with pXRF assays due to calibration, mineral interference, inconsistent geometry, sample and inhomogeneity.

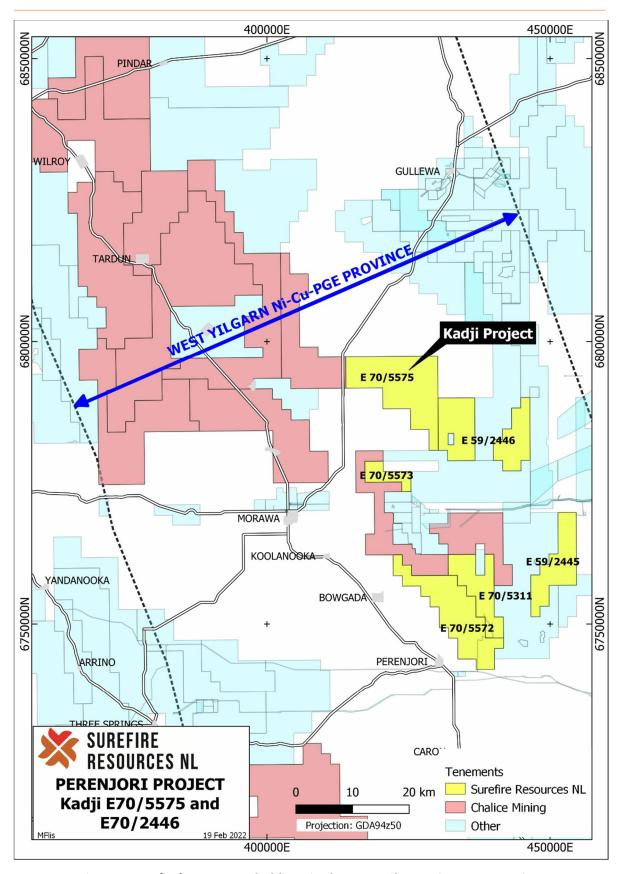


Figure 1 Surefire's tenement holdings in the West Yilgarn Ni-Cu-PGE Province.

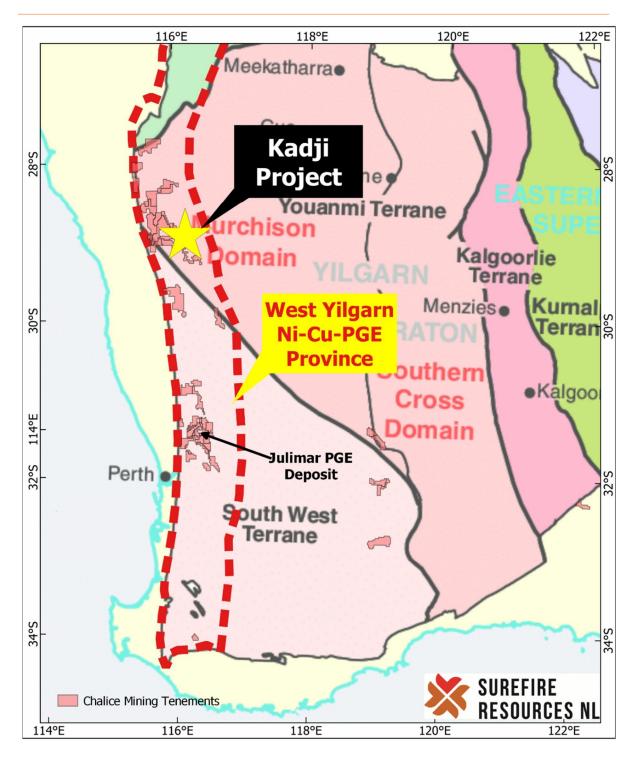


Figure 2 The Kadji Project is located in the emerging Ni-Cu-PGE West Yilgarn Province, host to the newly discovered Julimar Deposit.

Table 1 pXRF nickel assay results for samples collected during geological reconnaissance. These samples are plotted in Figure 4. bdl = below detection limit.

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Sample	Type	East	North	RL	Rock	Ni ppm
KDR0001	rock	418538	6793005	339	Granite	96.2
KDR0002	rock	418479	6793100	339	Ultramafic	bdl
KDR0003	rock	418737	6792955	332	Ultramafic	124.6
KDR0004	rock	421192	6795690	331	Granodiorite	146.7
KDR0005	rock	421202	6795692	331	Mafic	344.8
KDR0006	rock	421193	6796033	340	Granite	168.8
KDR0007	rock	421552	6795873	337	Pegmatite	107.8
KDR0008	rock	421894	6795681	334	Mafic/bif	bdl
KDR0008	rock	421894	6795681	334	Mafic/bif	bdl
KDR0008	rock	421894	6795681	334	Mafic/bif	bdl
KDR0008	rock	421894	6795681	334	Mafic/bif	bdl
KDR0009	rock	421952	6795605	332	Ultramafic	bdl
KDR0009	rock	421952	6795605	332	Ultramafic	bdl
KDR0009	rock	421952	6795605	332	Ultramafic	bdl
KDR0010	rock	432805	6782122	284	Ultramafic/bif	617.8
KDR0011	rock	433347	6781805	275	Mafic	366.1
KDR0012	rock	432379	6783226	281	Amphibolite/bif	468
KDR0013	rock	431339	6790184	279	Felds Porphyry	bdl
KDR0014	rock	428335	6790292	311	Mafic	bdl
KDS0001	soil	418549	6792992	339	Granite	bdl
KDS0002	soil	418478	6793098	340	Ultramafic	113.1
KDS0003	soil	421200	6794120	314	Clay	151.3
KDS0004	soil	421191	6795691	332	Granite sand	211
KDS0005	soil	421178	6796051	340	Granite sand	97.6
KDS0006	soil	421169	6796394	352	Granite sand	110.4
KDS0007	soil	421864	6795703	333	Lag	137.5
KDS0008	soil	421948	6795605	332	Ultramafic	173.9
KDS0009	soil	431077	6782219	274	Sheetwash	168
KDS0010	soil	432810	6782132	286	Mafic/bif	bdl
KDS0011	soil	433360	6781869	278	Granite sand	bdl
KDS0012	soil	433334	6781815	278	Mafic	233.1
KDS0013	soil	432381	6783231	281	Mafic	214.4
KDS0014	soil	428331	6790289	311	Mafic	bdl

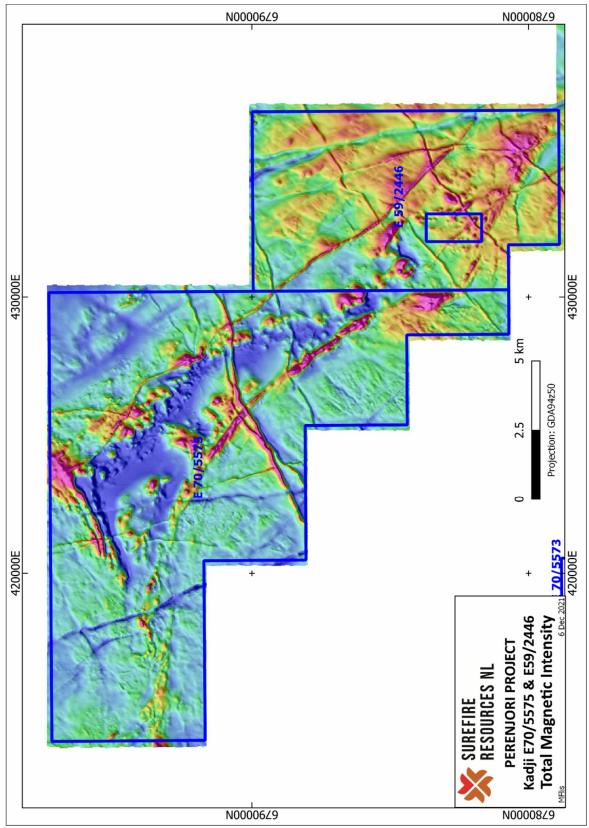


Figure 3 Image of the Total Magnetic Intensity form the aeromagnetic survey completed over the Kadji Project.

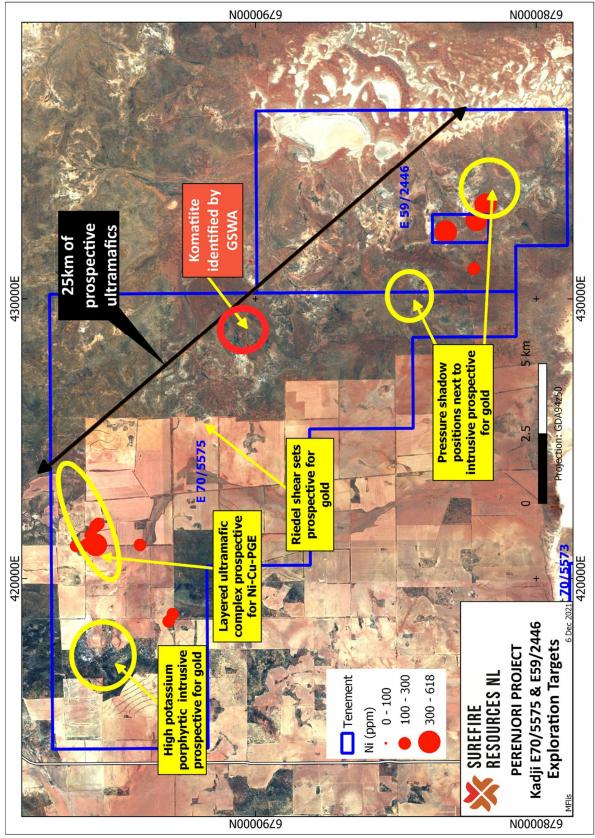


Figure 4 Exploration target areas identified from interpretation of the aeromagnetic data with rock chip nickel values. These assays were derived from pXRF equipment and need to be verified by standard laboratory assaying.

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#### Surefire Managing Director Vladimir Nikolaenko commented:

"Verification of mafic and ultramafic lithologies in the Kadji area is very exciting as Kadji lies in the West Yilgarn Ni-Cu-PGE Province, host to the newly discovered Julimar Ni-Cu-PGE deposit. Surefire controls over 25km strike length of this under-explored area. Together with the gold and lithium potential of the lease, Kadji is shaping up to be a promising prospect for the Company.

## Authorised for ASX release by:

Vladimir Nikolaenko Managing Director

#### **Competent Person Statement:**

The information in this report that relates to exploration results has been reviewed, compiled and fairly represented by Mr Marcus Flis, a Fellow of the Australian Institute of Mining and Metallurgy ('FAusIMM'), a Principal of Rountree Pty Ltd and a consultant to Surefire Resources NL. Marcus has sufficient experience, including over 40 years' experience in exploration, resource evaluation, mine geology and finance, relevant to the style of mineralisation and type of deposits under consideration to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee ('JORC') Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Marcus consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

#### Forward Looking Statements:

This announcement contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.

# JORC Code, 2012 Edition: Section 1: Sampling Techniques and Data

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

Criteria	Commentary
Sampling techniques	An airborne magnetic survey was conducted over the areas as shown in Figures 1, 2 and 3.  The survey was commissioned by Surefire Resources NL Resources
	MagSpec Airborne Surveys Pty Ltd flew the survey.
	Survey size is 5,480-line km collected with the specifications summarised below.
	<ul> <li>Survey Specifications         Line Spacing: 50m         Line Direction: 090-270         Tie Line Spacing: 500m         Tie Line Direction: 000-180         Survey Height: 30m agl</li> </ul>
	Survey Equipment
	Aircraft Type: Cessna 210 Data Acquisition System: Integrated Novatel OEM GPS receiver providing positional information Sample rate: up to 20 Hz Base Station Magnetometer: Scintrex ENVIMAG Stinger mounted magnetometer: Geometrics GR823A Caesium vapour Sample Rate: 20 Hz Resolution 0.001 nT Sensitivity 0.01 nT Compensation 3-axis fluxgate magnetometer Gamma-Ray Spectrometer: RSI RS- 500 gamma-ray spectrometer incorporating 2x RSX-4 detector packs Crystal Volume: 32 L Sample Rate 2Hz
	<ul> <li>Rock chip and soil samples were done on an ad hoc basis in areas of geological interest.</li> </ul>
	Geological samples may not be representative of the entire area.
	Geologic samples were test with a handheld Niton XLT792YW pXRF instrument.
Drill sample recovery	• n/a
Logging	• n/a
Sub-sampling techniques and sample preparation	• n/a

Criteria	Commentary	
Quality of assay data and laboratory tests	<ul> <li>Standard operating procedures for aeromagnetic surveys were followed, including:         <ul> <li>Daily spectrometer background checks and calibration</li> <li>Aircraft manoeuvre tests to calibrate the compensation magnetometers and set their compensation factors</li> </ul> </li> <li>See "Sampling technique" for airborne survey details</li> <li>Niton XLT792YW instrument was used for pXRF tests:         <ul> <li>Calibration is by an internal test and a standard sample test.</li> <li>A 30 sec scan was used for each reading.</li> </ul> </li> </ul>	
Verification of sampling and assaying	• n/a	
Location of data points	<ul> <li>Grid system GDA 1994, MGA Zone 50.</li> <li>Airborne Global Positioning System: Novatel OEM719 DGPS with real time differential correction         555- channel         L1/L2 + GLONASS Multi Frequency         GPS data recorded at a sample         2 Hz reading rate     </li> </ul>	
Data spacing and distribution	<ul> <li>Aeromagnetic survey: "Sampling technique".</li> <li>Geological samples: random with no aim to establish continuity.</li> </ul>	
Orientation of data in relation to geological structure	<ul> <li>Aeromagnetic survey: The line path is approximately perpendicular to the regional strike direction of geological formations and is sufficient to locate discrete anomalies.</li> <li>Geological sampling: random but biased to geological observations and features of interest.</li> </ul>	
Sample security	• n/a	
Audits or reviews	Airborne Magnetic and Radiometric data was subjected to rigorous auditing and vetting by the independent geophysical contractor/service provider and data manager by MAGSPEC Airborne Surveys Pty Ltd. Geological samples: samples will be submitted to an independent laboratory of standard geochemical assaying, to be reported at a later date.	

# Section 2: Reporting of Exploration Results (Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
Mineral tenement and land tenure status	<ul> <li>Located 320km northeast of Perth in the mid-west region of Western Australia.</li> <li>E 70/5575 and E59/2446 are granted tenements.</li> <li>Surefire Resources NL has 100% interest</li> <li>There are no currently recognised impediments to the tenements.</li> </ul>
Exploration done by other parties	Previous exploration work in the area includes:  1980-1981 Esso Minerals  A 23-hole RAB drilling programme returned ultrabasic rocks assaying up to 600ppm Ni.
	1988-1989 Gwalia Group Gwalia undertook mapping, soil geochemistry surveys, ground EM surveys, and ground magnetometry on greenstones to the NW of Kadji with no encouragement to continue.
	1996-1998 Stockdale Prospecting Ltd Stockdale searched for diamonds in the area with an aeromagnetic survey, Nine magnetic features were followed up with high resolution helimag surveys, heavy mineral sampling, and the drilling of one air core hole that intersected basalt and dolerite. No diamond bearing rocks were identified and the licences were relinquished.
Geology	Kadji is located over a poorly explored greenstone belt in the West Yilgarn Province.
	Mafics, ultramafic, banded iron formation, and felsic volcanics make up a NW trending belt that is heavily dissected by NW and NE trending regional structures.
	The belt is bracketed by Yilgarn Craton granites.
	Ni-Cu-PGE sulphide mineralisation associated with ultramafic complexes
	Orogenic gold mineralisation associated with regional structures and possible felsic porphyry intrusives.
Drill hole Information	No drilling has yet been undertaken by the Company.
Data aggregation methods	• n/a
Relationship between mineralisation widths and intercept lengths	• n/a
Diagrams	Appropriate maps are included in the body of the announcement.

Criteria	Commentary
Balanced reporting	• n/a
Other substantive exploration data	• n/a
Further work	Follow up drilling will be planned once all results are received.