

21<sup>st</sup> July 2021

ASX RELEASE

## **SOFALA PROJECT GEOPHYSICS UPDATE**

Significant new targets identified on the Sofala Project and reconnaissance exploration to commence during the 4<sup>th</sup> Quarter

- The Sofala project area has undergone significant historical mining and exploration activities however only limited geophysical surveys have been conducted.
- Interpretation of the high-resolution magnetics by Core Geophysics has defined trends and structures which appear to control the gold mineralisation within the Sofala Project.
- High resolution magnetics has defined trends and structures which appear to control the gold mineralisation within the project, showing close correlation to historical workings and deposits such as Queenslander, Big Oakey and Whalans Hill mines.
- The area has a long history of exploration and mining the area is relatively underexplored at depth. For small-scale gold workings and occurrences within the project show good potential for further deposits to be found.
- Nine (9) target areas have been selected within the Sofala Project based on the magnetic and radiometric responses. These have specifically targeted over areas along mineralised structures with an elevated potassium response which have considerable strike extent.
- There is close correlation between some of the workings and potassium responses evident in the radiometric data. This is interpreted to reflect sericite and kaolinite alteration which is known to be associated with gold mineralisation within the project or possible potassic alteration halos from porphyry development.
- The large magnetic response at Wattle Flat is considered to represent a deep intrusive underlying the Sofala Volcanics and may have provided a heat source for fluid migration.

MinRex Resources Limited (ASX: MRR) ("**MinRex**" or "**the Company**") is pleased to announce the first detailed high-resolution magnetic/radiometric interpretation over the Company's flagship Sofala Project located within the eastern Lachlan Fold Belt, NSW.

The Sofala Project is hosted within the world class gold-copper mining province of the Lachlan Fold Belt which comprises projects such as Cadia (Newcrest Mining), Cowal (Evolution Mining) and North Parkes (CMOC).

**MinRex Resources Limited Chief Executive Officer Mr Kastellorizos commented:**

*"We are extremely pleased to have received an incredibly positive high level data review report from Core Geophysics as this represents a major leap forward in the companies systematic targeting process in defining new discoveries over the Sofala Project. The locations of surface and hard rock mines now allow*

*us to understand the regional geophysical signatures associated with the gold mineralisation which were previously unknown.*

*The high-resolution magnetics clearly correlates defined trends and structures which appear to control the gold mineralisation. In addition, the historic working is closely correlating with potassium responses which reflect sericite and kaolinite alteration which is also known to be associated with gold mineralisation.*

*We have now based the company in a good position to actively commence ground exploration over multiple geophysical, lithological, mineralised and structural targets and trends previously unknown to many explorers”.*

*By completing this process, we have significantly advanced the company’s exploration strategy by direct targeting priority exploration areas which have the potential for delineating undiscovered gold mineralisation.”*

### **Sofala Project**

The Sofala Gold Project is located 250 km north-west of Sydney near the town of Sofala in the central western region of New South Wales. The project is considered prospective for gold mineralisation and contains considerable historical surface and hard rock gold workings. Historic hard rock mining activities has been reported to be over 24,383 oz Au extracted (Lennox, 2001). Recently, the **Spring Gully JORC Resource of 9.48Mt at 1.06g/t Au containing 323,913 oz Au** was reported by MinRex (refer to MinRex’s announcement of 12 July 2021).

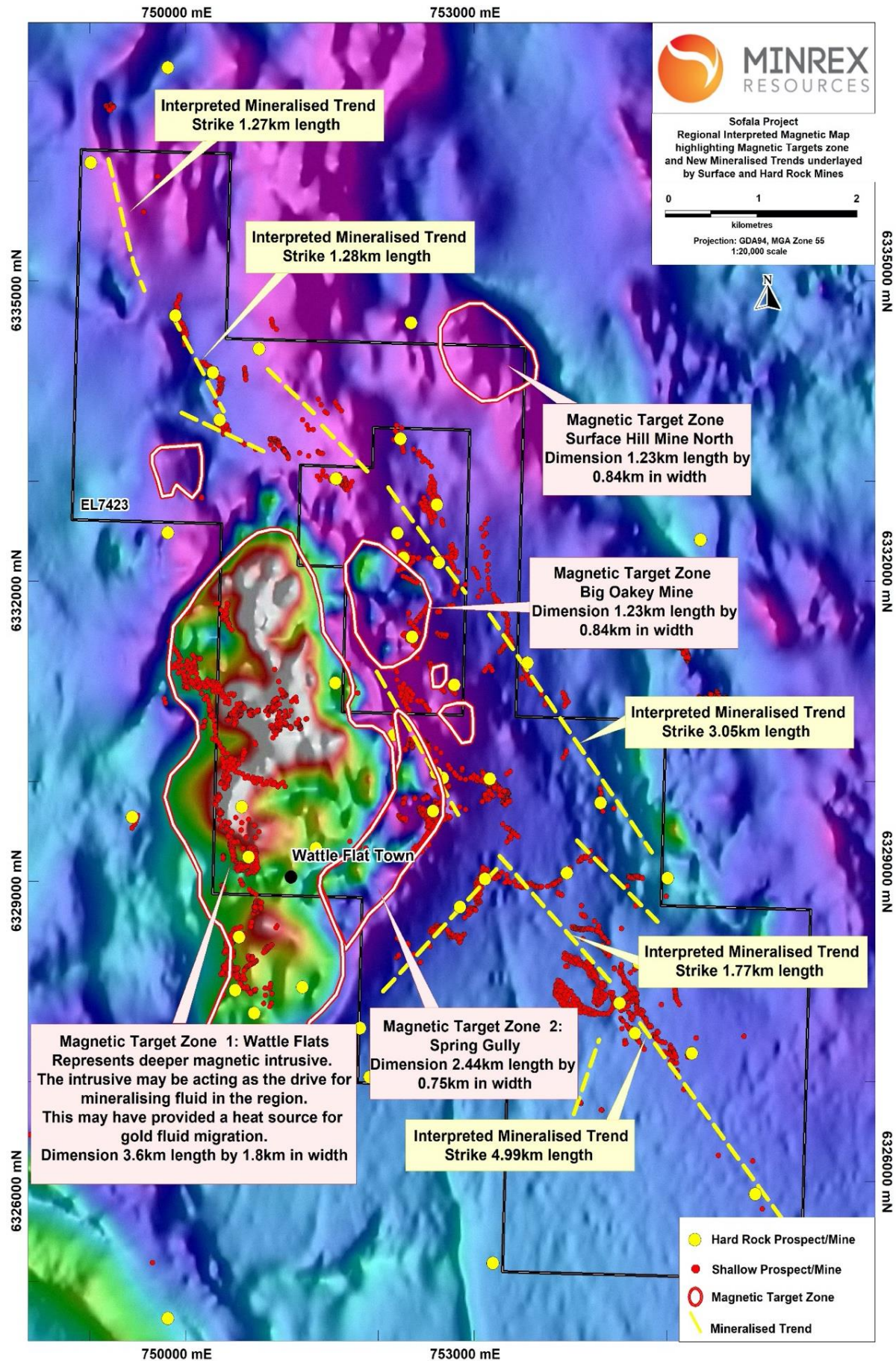
The current exploration licence area covers over 40 km<sup>2</sup> with the mineralisation commonly located along major structures (Big Oakey Fault) and thrust contacts (Wiagdon Thrust) in quartz veins and diorites. Mineralisation is generally hosted in quartz veins associated with carbonate, sericite, kaolinite alteration and commonly with arsenopyrite, pyrite and chalcopyrite. Numerous occurrences exist, primarily to the south of Sofala and around Wattle Gully townships. These occurrences are mainly restricted to the Sofala Volcanics and the Chesleigh Formation lithologies. The mineralisation is believed to be orogenic gold from hydrothermal veining and stockwork.

### **Open File Geophysics**

Available open file company airborne geophysical surveys were conducted using the Geological Survey of NSW DIGS and MinView online systems which provides records of previous geophysical surveys and exploration activities. The search revealed that the project area has been covered by medium resolution (200m spaced) and high resolution (50-100m) aeromagnetic (AMAG) surveys.

### **Aeromagnetic Data Reprocessing**

The aeromagnetic data has been compiled, subset and merged. The raw data was then processed to generate a suite of imagery to highlight and better define controlling structures including shears, faults, and lithological variations. Data processing of the data included calculation of the first and second vertical derivatives and tilt derivatives, all reduced to the pole. The high resolution of the 50-100m line spaced surveys clearly provides superior detail and fine scale geological information when compared to the older 200m flight line surveys.



**Figure 1: Regional AMAG Interpretation with New Exploration Targets and Mineralised Trends**

Conclusions based on the re-processing Aeromagnetic Data below:

1. Magnetics has indicated the number and extent of both major and minor faults appears to be significantly greater than indicated by Government published geological maps.
2. Within the Wattle Gully magnetic zone, a complex series of cross cutting faults terminate magnetic anomaly trends, predominantly along NW trending structures but also SW-NE and ENE-WSW lineations, Figure 1.
3. Mineralisation appears to be structurally controlled and preferentially oriented along or close to the major faults (e.g., Big Oakey Fault) or thrusting within the project (Wiagdon Thrust) which hosts most of the larger workings and mineral occurrences, Figure 1.
4. Magnetic responses over both the Sofala Volcanics north and NE of the Spring Creek and Big Oakey Faults as well as in the Wattle Gully area (SW of these faults), are active and have numerous isolated magnetic anomalies associated.
5. The Sofala Volcanics at Wattle Gully alone cannot account for the amplitude of the magnetic response and there is likely a deeper magnetic intrusive. This intrusive may be acting as the driver of mineralising fluid in the region.
6. The large magnetic response at Wattle Flat is considered to represent a deep intrusive underlying the Sofala Volcanics and may have provided a heat source for fluid migration, Figure 1.

### **Radiometric Data Reprocessing**

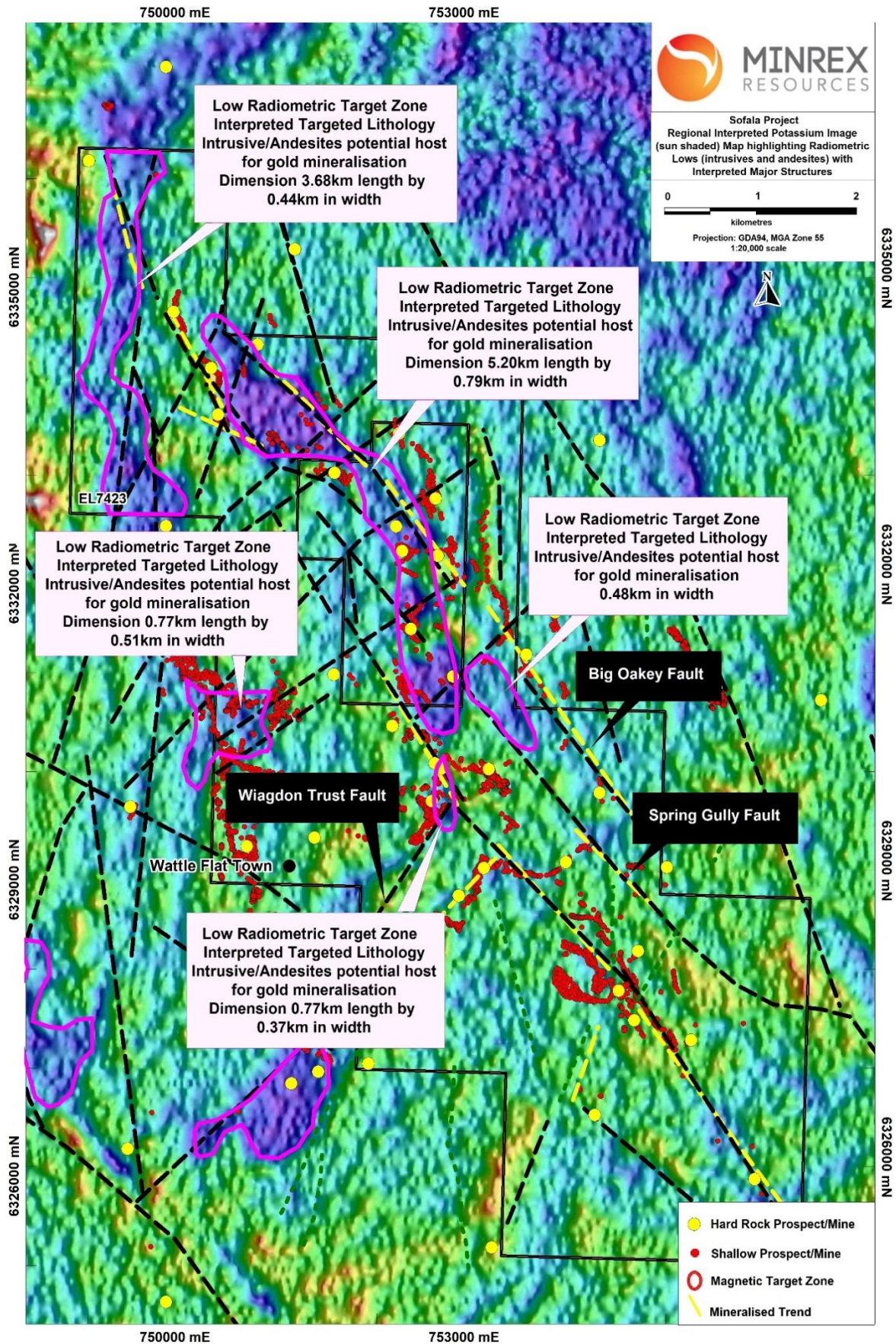
The radiometric response geologically mapped the Sofala Volcanic rocks to the north and the Chesleigh Formation to the south of the Project area (Figure 3). Conclusions based on the re-processing Radiometric Data below:

1. Gold occurrences within this domain appear to lie along contact between the Sofala Chesleigh Formation which is depicted by an elevated potassium response.
2. The elevated potassium is likely representing potassic alteration due to hydrothermal alteration and a good indicator of gold mineralisation. As such the combination of structure and the potassic radiometric response appears to provide an additional targeting tool.
3. Several zones of elevated potassium are evident in the SE of the project within the Chesleigh Formation, Figure 2. These zones are coincident with known historical gold workings and lie along interpreted NE trending structures.
4. Defined the andesitic member of the Sofala Volcanics and the majority of the major gold workings are shown along the margins of the potassium zones.

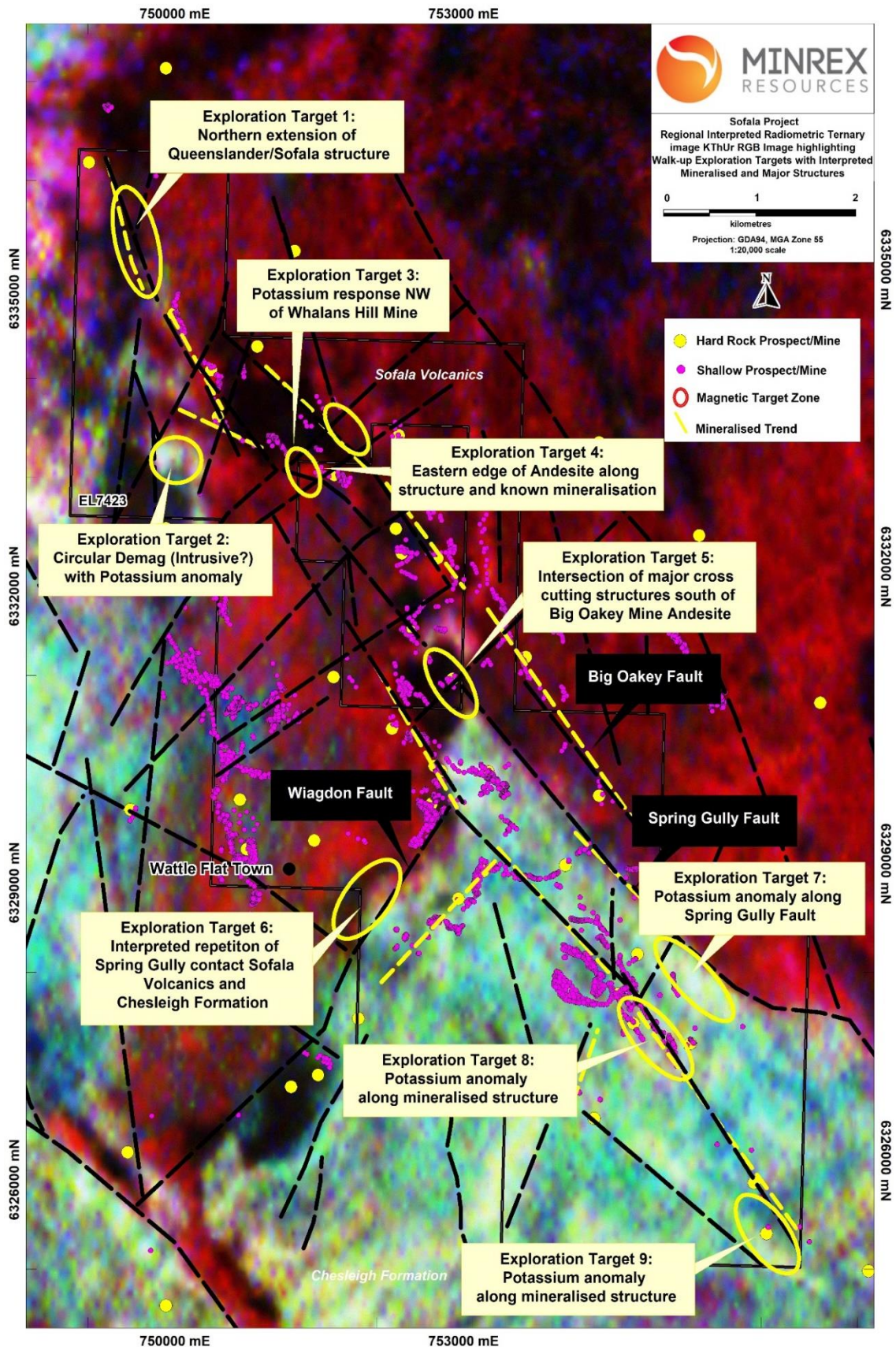
### **Targets Generated**

Although the area has a long history of exploration and mining the area is relatively underexplored at depth. A total of 9 target areas have been selected within the project tenements based on the combination of magnetic and radiometric responses. These have been preferentially selected over areas along mineralised structures with an elevated potassium response which have considerable strike extent. These are summarised in Table 1 and Figure 3 Target Map.

In addition, smaller potassic anomalies associated with known historical workings have not been selected in this review as they may have been previously drill tested or be a result of the mining activity itself.



**Figure 2: Regional Potassium Image highlighting Interpreted Targets Lithology which may host Gold Mineralisation**



**Figure 3: Regional Ternary image KThUr RGB Image highlighting walk-up targets based on magnetic, elevated potassium & radiometric responses over areas along mineralised structures**

**Table 1: Priority Targets Requiring Ground Reconnaissance**

Target Id	GDA94 East	GDA94 North	Comment
1	749509	6335377	Northern extension of Queenslander/Sofala structure
2	749922	6333172	Circular Demag with Potassium anomaly
3	751243	6333051	Potassium response NW of Whalans Hill Mine
4	751691	6333484	Eastern edge of Andesite along structure and known mineralisation
5	752774	6330920	Intersection of major cross cutting structures south of Big Oakey Mine Andesite
6	751901	6328738	Interpreted repetition of Spring Gully contact Sofala Volcanics and Chesleigh Formation
7	755303	6327926	Potassium anomaly along Spring Gully Fault
8	754902	6327330	Potassium anomaly along mineralised structure
9	756063	6325356	Potassium anomaly along mineralised structure

### Sofala Project Forward Strategy

Currently, we are working on the importation over 4,000 historic surface geochemical along with previous drilling over the interpreted geophysics. Based on the results we will be systematically targeting these areas on the ground.

The results of the re-interpretation will be announced to the market upon receiving the final report from Core Geophysics.

This ASX announcement has been authorised for release by the Board of MinRex Resources Limited.

**-ENDS-**

#### For further information, please contact:

Pedro Kastellorizos  
Chief Executive Officer  
MinRex Resources Limited  
T: +61 8 9481 0389  
M: 0427 482787  
[info@minrex.com.au](mailto:info@minrex.com.au)

### About MinRex Resources Ltd

MinRex Resources (ASX: MRR) is an Australian based ASX listed resources company with projects in the Lachlan Fold Belt (LFB) of NSW, a world-class gold-copper province and over the Marble Bar and Murchison Regions of WA. Currently the Company's tenements package cover 619km<sup>2</sup> of highly prospective ground targeting multi-commodities type deposits. Currently the company has JORC compliant resource totalling 323,913 oz gold.

The Directors believe that the Company is well positioned to grow its current resource and advance prospects base around systematic targeted regional exploration.

### Competent Persons Statement

*The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Pedro Kastellorizos. Mr. Kastellorizos is the Chief Executive Officer of MinRex Resources Limited and is a Member of the AusIMM of whom have sufficient experience relevant to the styles of mineralisation under consideration and to the activity being reported 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. Kastellorizos have verified the data disclosed in this release and consent to the inclusion in this release of the matters based on the information in the form and context in which it appears.*

## References

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## Forward Statement

*This news release contains “forward-looking information” within the meaning of applicable securities laws. Generally, any statements that are not historical facts may contain forward-looking information, and forward looking information can be identified by the use of forward-looking terminology such as “plans”, “expects” or “does not expect”, “is expected”, “budget” “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates” or “does not anticipate”, or “believes”, or variations of such words and phrases or indicates that certain actions, events or results “may”, “could”, “would”, “might” or “will be” taken, “occur” or “be achieved.” Forward-looking information is based on certain factors and assumptions management believes to be reasonable at the time such statements are made, including but not limited to, continued exploration activities, commodity prices, the estimation of initial and sustaining capital requirements, the estimation of labour costs, the estimation of mineral reserves and resources, assumptions with respect to currency fluctuations, the timing and amount of future exploration and development expenditures, receipt of required regulatory approvals, the availability of necessary financing for the project, permitting and such other assumptions and factors as set out herein.*

*Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to: risks related to changes in commodity prices; sources and cost of power and water for the Project; the estimation of initial capital requirements; the lack of historical operations; the estimation of labour costs; general global markets and economic conditions; risks associated with exploration of mineral deposits; the estimation of initial targeted mineral resource tonnage and grade for the project; risks associated with uninsurable risks arising during the course of exploration; risks associated with currency fluctuations; environmental risks; competition faced in securing experienced personnel; access to adequate infrastructure to support exploration activities; risks associated with changes in the mining regulatory regime governing the Company and the Project; completion of the environmental assessment process; risks related to regulatory and permitting delays; risks related to potential conflicts of interest; the reliance on key personnel; financing, capitalisation and liquidity risks including the risk that the financing necessary to fund continued exploration and development activities at the project may not be available on satisfactory terms, or at all; the risk of potential dilution through the issuance of additional common shares of the Company; the risk of litigation.*

*Although the Company has attempted to identify important factors that cause results not to be as anticipated, estimated or intended, there can be no assurance that such forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. Forward looking information is made as of the date of this announcement and the Company does not undertake to update or revise any forward-looking information this is included herein, except in accordance with applicable securities laws.*