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ASX Release

KEMPFIELD NEW MULTIPLE GEOPHYSICS TARGETS UPGRADES POLY-METALLIC PROJECT

Drilling Program is currently been designed to increase the current Kempfield Resource – Targeting Northern and Southern Zone from the Main Central Mineralised Zone

HIGHLIGHTS

- Interpretation of the high-resolution multiple geophysics datasets by Core Geophysics has defined new drill targets and potential extensions of the Kempfield VMS Deposit.
- Extensive multiple IP, VTEM, Gravity, Radiometric, Magnetic and SAM zones of interest have been identified – and may represent blind mineralised areas.
- The magnetic and radiometric data display significant anomalies associated with the known mineralised zones and provide untested targets for follow up investigation.
- The magnetic data also highlight major structures NNW of the Kempfield Deposit which appear to potentially control the mineralisation.
- Induce Polarisation (IP) has been reported to have been the most effective geophysical method for delineating ore lenses, the 2010 survey providing broad and deeper targets which are relatively untested.
- The flanks of the SAM highs are considered as target areas as these provide the best correlation to the known ore lenses.
- Over 1.3km remains untested by drilling NNE of the Quarry Mineralised Zone and there is 1.2km of untested ground around the Sugarloaf area. Ground truthing all target anomalies will commence as a pre-cursor to drill testing.

Argent Minerals Limited (ASX: ARD) (“**Argent**” or “the **Company**”) is pleased to announce the results from its high-level geophysics interpretation review over its 100% Kempfield Gold-Silver-Base Metal Project.

About the Kempfield Project Area

The Kempfield Ag-Pb-Zn-Au-Cu Deposit is located 45km SSW of Blayney and 8km west of Trunkey Creek in New South Wales. The Kempfield area first became known for barite mining which commenced in 1918 and continued periodically until the Geological Survey of NSW undertook mapping from 1971. Mineralisation is of Volcanogenic Massive Sulphide type comprising stratiform barite-rich horizons with silver, lead, zinc and +/- gold. The Exploration Licence 5645 is 100% owned and operated by Argent Pty Ltd a wholly owned subsidiary of Argent Minerals Limited.

The Kempfield Polymetallic Project has a substantial Mineral Resource of 21.8 million tonnes containing 52 million ounces of silver equivalent metal. The Mineral Resource was upgraded to JORC 2012 standard in May 2014 without any changes in the estimates for grade and tonnage, reflecting both the quality of the existing Mineral Resource itself and the high standard of the work

conducted at the project by Argent Minerals to date (refer to 6th May 2014 ASX Announcement “*Kempfield Resource Statement Upgraded to JORC 2012 Standard*”). Over 90% of the Kempfield Polymetallic Project’s identified mineral resource is located within freehold land that has been purchased by Argent Minerals Limited. The Coombing Formation (includes feldspathic siltstone, sandstone & chert rock types) hosts the majority of the Ag-Au-Cu-Pb-Zn mineralisation.

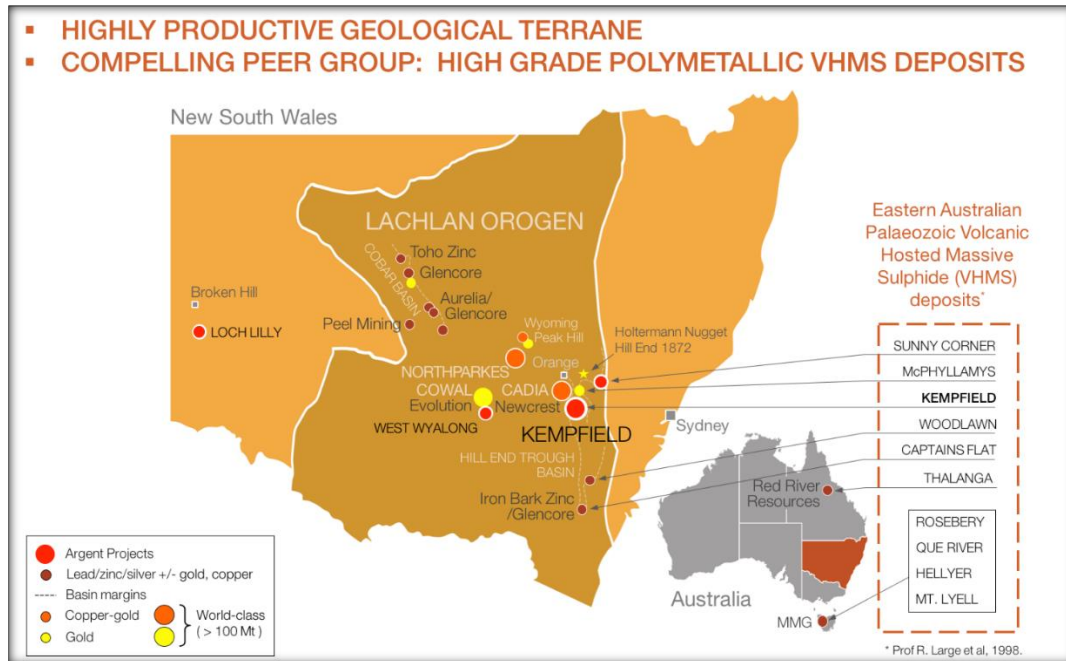


Figure 1 – Location of Argent’s Kempfield Project compared to other World Class Projects

Argent Minerals Limited Managing Director 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 as well as mineralised extensions over the known JORC Resource zones within the Kempfield Deposit. The high-resolution interpretation has delineated target areas that represent potentially large tonnage exploration targets”.

“By completing this process, we have significantly advanced the company’s exploration strategy over the Kempfield Project by directly targeting untested exploration areas which have the potential for delineating undiscovered gold-silver-base metal mineralisation. Currently, we are planning 2022 exploration programs which will incorporate the systematic testing of all new areas defined by the current re-interpretation.

Core Geophysics Compilation and Re-Interpretation

Argent Minerals Limited (Argent) engaged Core Geophysics (Core) to compile and comment on historical geophysical activity related to the current Kempfield tenements held by Argent. This included consolidating and compiling all relevant and available geophysical surveys into a common GIS platform (QGIS) and examining options for suitable further work.

Targets Generated

Although the area has a long history of exploration and mining the area is relatively underexplored SSW and NNE of the current Kempfield Resource area. Based on the current geophysical review further previously unidentified target areas have been located proximal to the Colossal Reef Mine area and east of the known BJ zone and Quarries mineralised areas. The interpretation of airborne and ground geophysical datasets has identified several potential Au-Ag-Cu-Pb-Zn targets. These targets are also presented and are summarised in Figures 2 to 5. The standout geochemical exploration target is located in between the Gully Swamp Mine and the Sugarloaf zone. Extensive barite outcrops coincide with a large silver-load geochemical anomaly which

remains completely untested by drilling. This represents a high priority drill target and will be systematically explored in early 2022 (Refer to Figure 2).

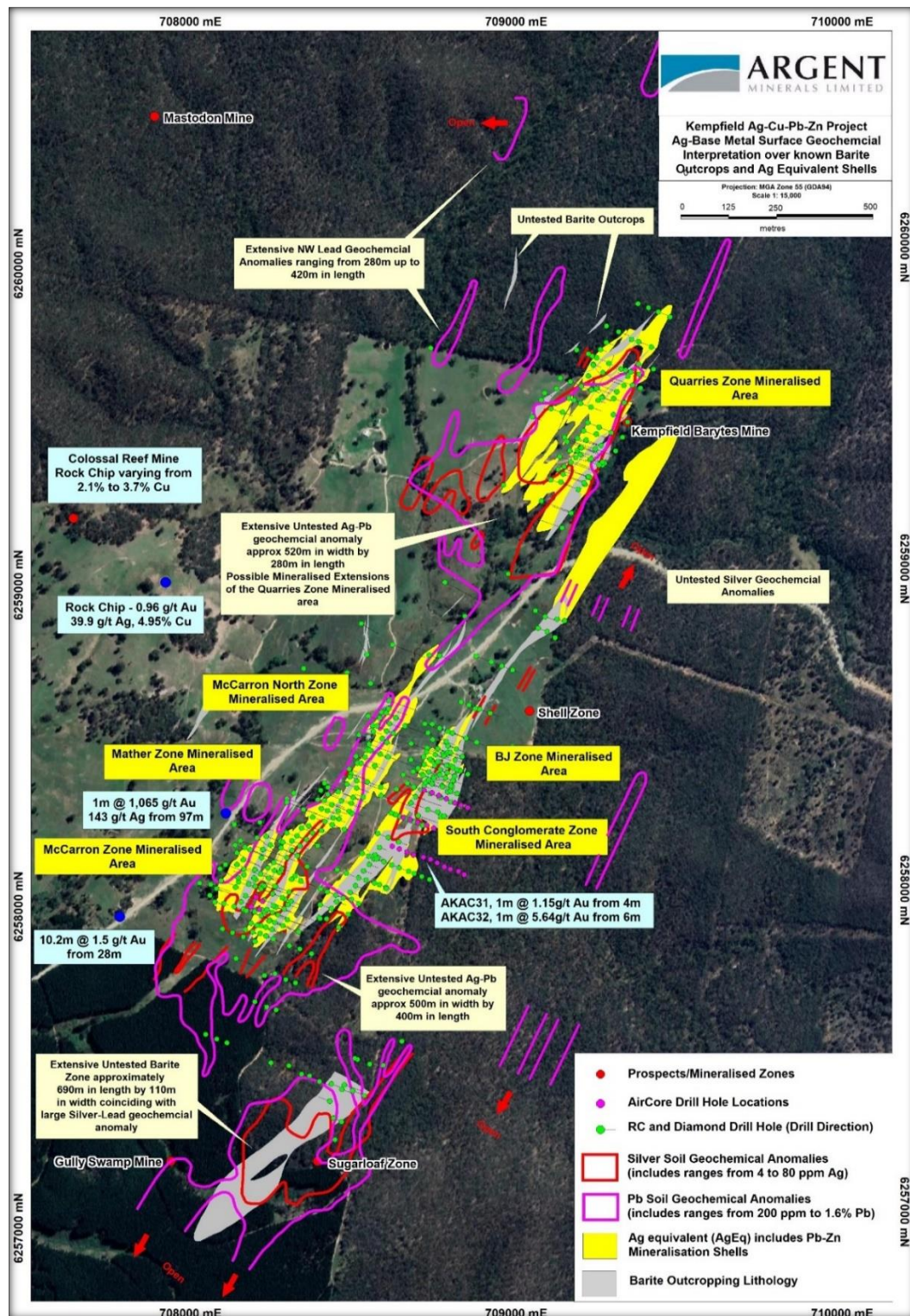


Figure 2 – Location of barite outcrops vs the known JORC Mineralised Shells coinciding with surface geochemical zones and untested geochemical anomalies

Strong untested gravity anomaly is located to the SSW area between the McCarron North and Quarries mineralised areas – this extensive area will further investigated through drilling. Also, three (3) linear zones are situated SSW from the McCarron zone

and South Conglomerate areas which represent walk-up drill targets (Refer to Figure 3). A possible source of the gravity anomalism could be due to known near surface accumulations of barite

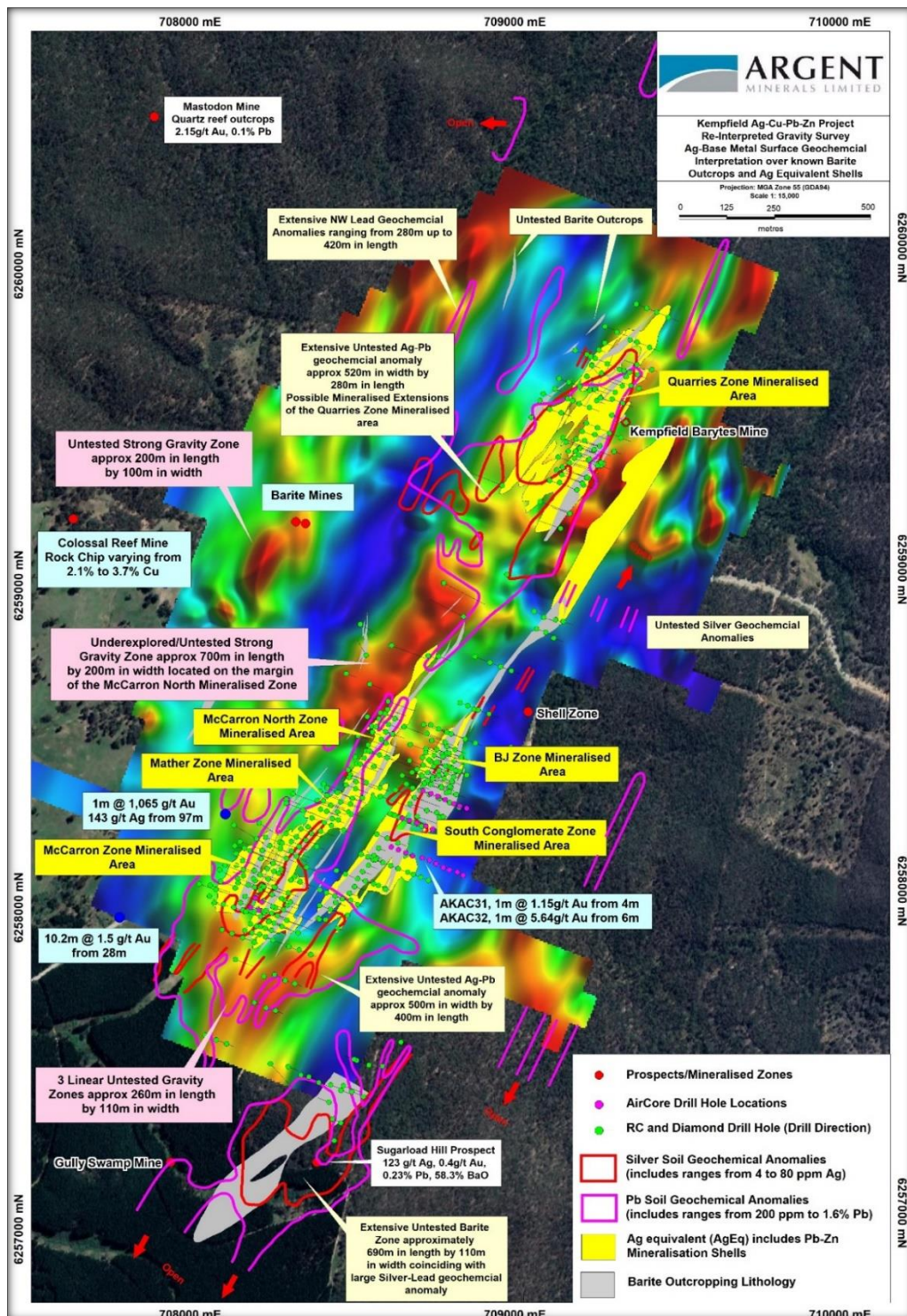


Figure 3 – Location of Extensive Untested Gravity Zone vs the known JORC Mineralised Shells

The Total Magnetic Intensity image highlights “bulls eye” magnetic anomalies south and west of the main deposit. Many magnetic anomalies within magnetic structures have been interpreted as drilling targets and could represent hydrothermal fluids zones (potential base-metal mineralisation) (Refer to Figure 4). Situated NNW of the Kempfield deposit, a large zone interpreted as a regional structure (2km by 200m) could have been the catalyst of the VMS mineralisation over Kempfield.

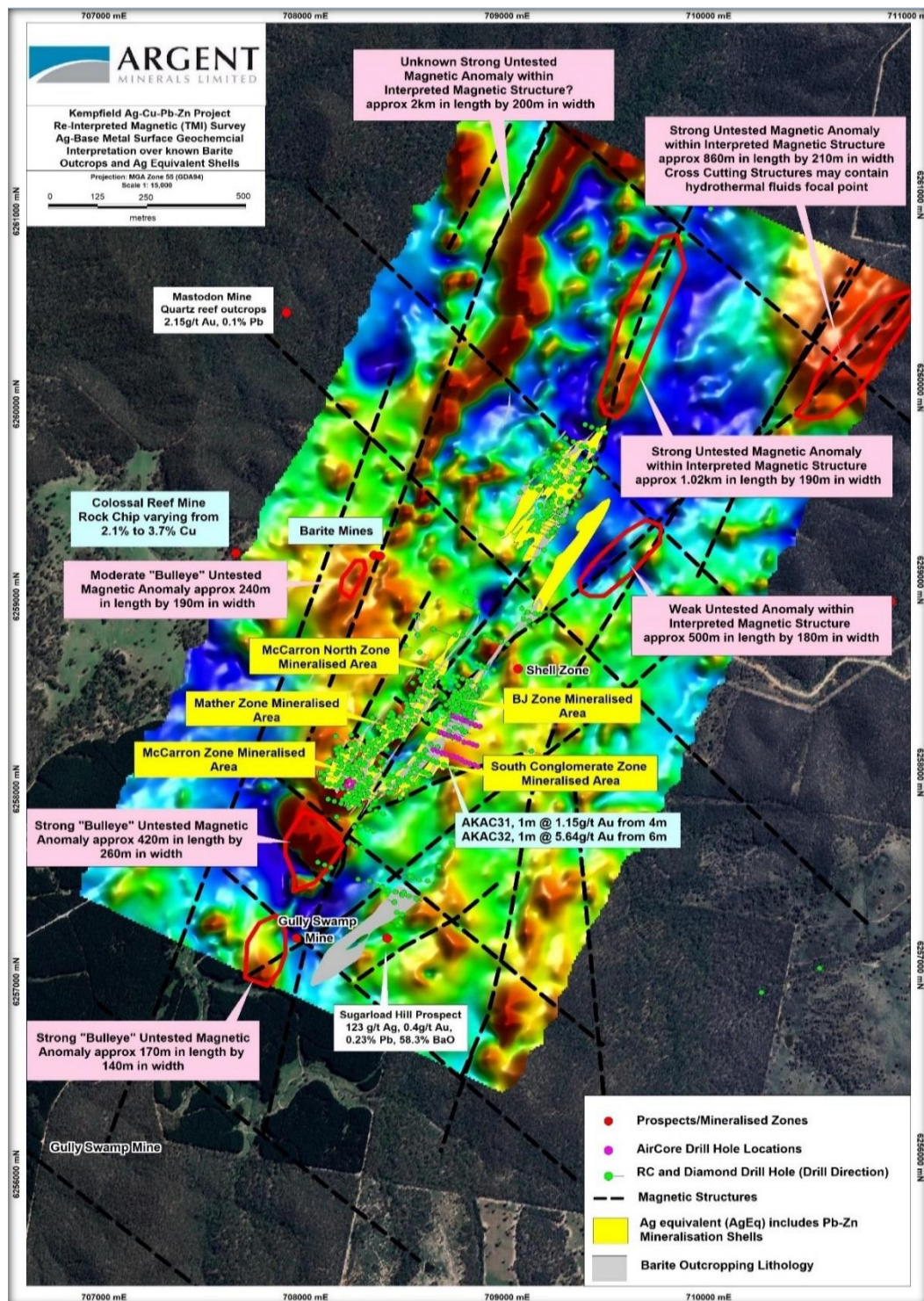


Figure 4 – Location of Untested Magnetic Zones and Potential Mineralised Structures over known JORC Mineralised Shells

Conclusions

The SAM (MMR) surveys highlight responses to known mineralised zones as well as faults over the Kempfield Deposit. The MMR also clearly maps the major barite lenses as distinct resistivity lows (e.g. in Lens 1 - BJ Ore zone). The MMR surveys identified several magnetometric conductivity (MMC) zones considered to be anomalies located west of existing mineralisation in the volcanic/volcanoclastic sequence. The flanks of the MMC highs are considered as target areas as these provide the best correlation to the known ore lenses.

Of the surveys completed IP, has been reported to have been the most effective for delineating ore lenses. This is primarily based on the shallow, pre-1990 surveys, with the more recent 2010 survey providing broad and deeper targets which are relatively untested. The VTEM survey defined several discrete anomalies which requires follow up. High resolution heli-magnetic and radiometric data display significant anomalies associated to the known mineralised zones and provide untested targets for follow up investigation. The magnetic data also highlights major structures which appear to control the mineralisation.

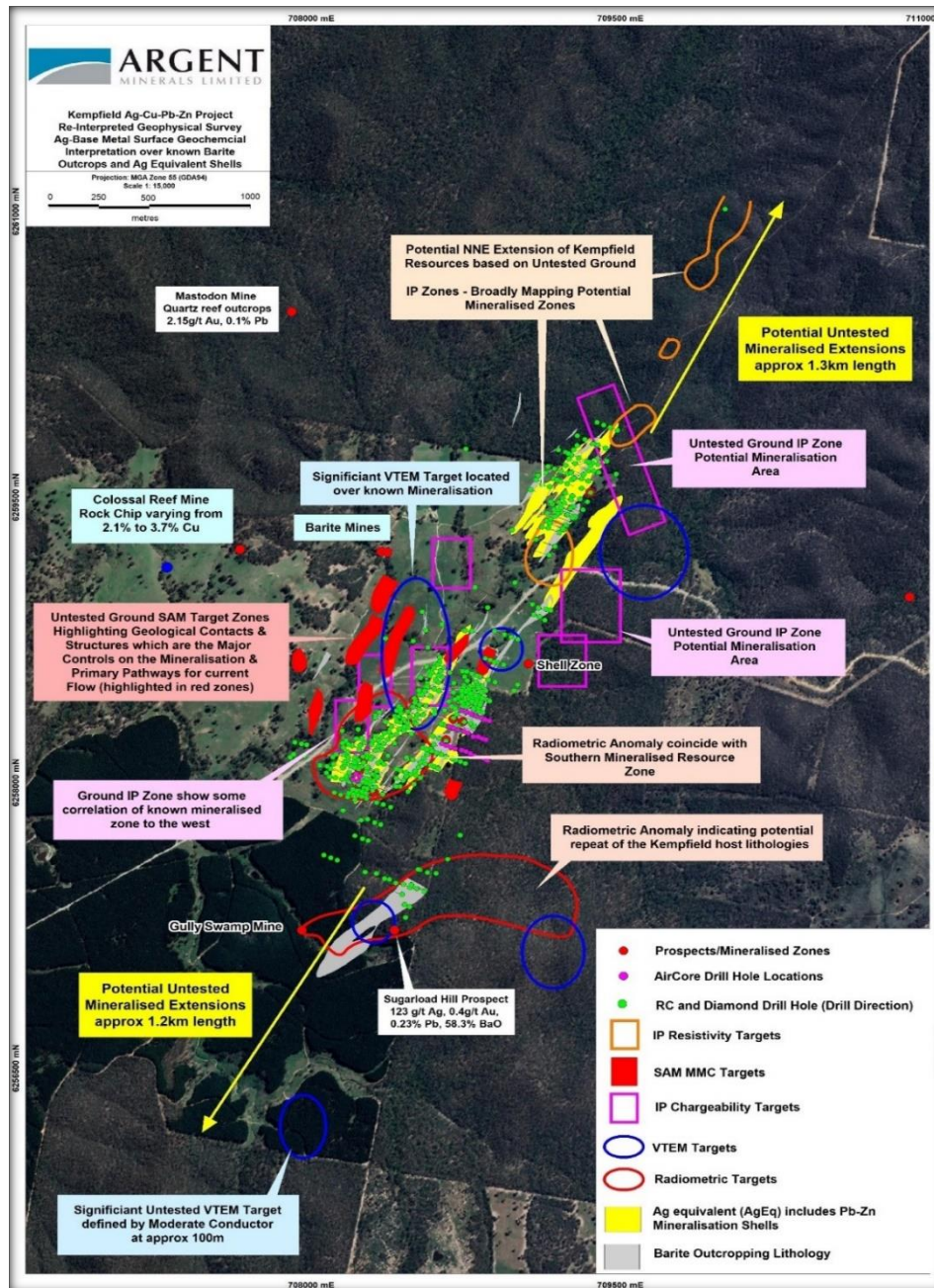


Figure 5 – Location of Untested SAM, Radiometric, IP and VTEM Zones over known JORC Mineralised Shells

Forward Strategy

An appropriate ground strategy would include ground reconnaissance over all the target area to identify potential alteration in the surface geology. In conjunction, rock chip sampling will be undertaken as part of the initial reconnaissance with planning of drilling to commence in 2022.

This ASX announcement has been authorised for release by the Board of Argent Minerals Limited.

-ENDS-

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About Argent Minerals Ltd

Argent Minerals Limited is an ASX listed public company focused on creating shareholder wealth through the discovery, extraction, and marketing of precious and base metals. A key goal of the Company is to become a leading Australian polymetallic producer, mining 1.5 million tonnes per annum with a mine life of the order of 20 years. The Company's project assets are situated in the Lachlan Orogen in New South Wales, Australia, a richly mineralised geological terrane extending from northern NSW through Victoria and into Tasmania. Argent Minerals' three projects, in each of which the Company owns a controlling interest, is strategically positioned within a compelling neighbourhood that is home to Australia's first discovery of gold, and today hosts world class deposits including one of the largest underground copper-gold mines in the southern hemisphere, Newcrest's Cadia Valley Operation.

Competent Persons Statement

The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by George Karageorge. Mr. Karageorge is the Managing Director of Argent Minerals 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. Karageorge 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.

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

References

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ASX Announcement 2013: Argent Minerals Advances Exploration for Kempfield Massive Sulphide Targets

ASX Announcement 2013: Conductor Targets Identified at Kempfield – Ground EM Survey Results and Massive Sulphide Drill Program

ASX Announcement 2013: Argent Set to Drill Massive Sulphide Targets – Dec Start 2013

ASX Announcement 2014: Geophysics Breakthrough in Kempfield Lead/Zinc Detection

ASX Announcement 2014: Kempfield Drill Target Update – Surface MMR Success

ASX Announcement 2014: MMR Indicates New Lead/Zinc Lenses 4, 5 and 6 at Kempfield

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