

28th June 2022

Company Announcement Officer
ASX Limited
Exchange Centre
20 Bridge Street
SYDNEY NSW 2000

Drilling Commenced at the Barabolar Project

HIGHLIGHTS:

- Drilling resumes at the Barabolar Project.
- Diamond drilling targeting the Mt Laut Pyrophyllite and Crossroad area which represent possible mineralised porphyry copper-gold targets.
- Targets include geophysical anomalies (magnetics and gravity) as well as anomalous surface geochemistry of gold, copper, silver, zinc and lead in soil and rock chips.
- Drilling represents the first modern exploration in the area for more than 27 years.
- Initial program of 2,000 metres to be completed by end of September quarter.

Introduction

Silver Mines Limited (ASX:SVL) (“Silver Mines” or “the Company”) is pleased to announce that exploration activities have resumed at the Barabolar Project (Figure 1) which is located approximately 26 kilometres east of Mudgee and 10 kilometres northwest of the Company’s Bowdens Silver Project in Central New South Wales (Figure 2).

The Barabolar Project is a high-quality exploration project located within the highly prospective Macquarie Arc that also hosts world-class mineral systems such as the Cadia-Ridgeway porphyry copper-gold deposit. Barabolar consists of an extensive corridor of gold, copper, silver, zinc and lead soil and rock chip anomalies.

Managing Director Anthony McClure commented “*At the outset of Covid-19, we deferred work at Barabolar and focussed on areas with our own freehold land in and around the Bowdens Silver Project. It is great news for the Company to recommence drilling activities at the exciting Barabolar Project given its considerable anomalism on surface with significant mineralised porphyry potential. We currently have three diamond rigs continuing at Bowdens Silver and one at Barabolar.*”



Figure 1. Diamond drill rig at the Barabolar Project.

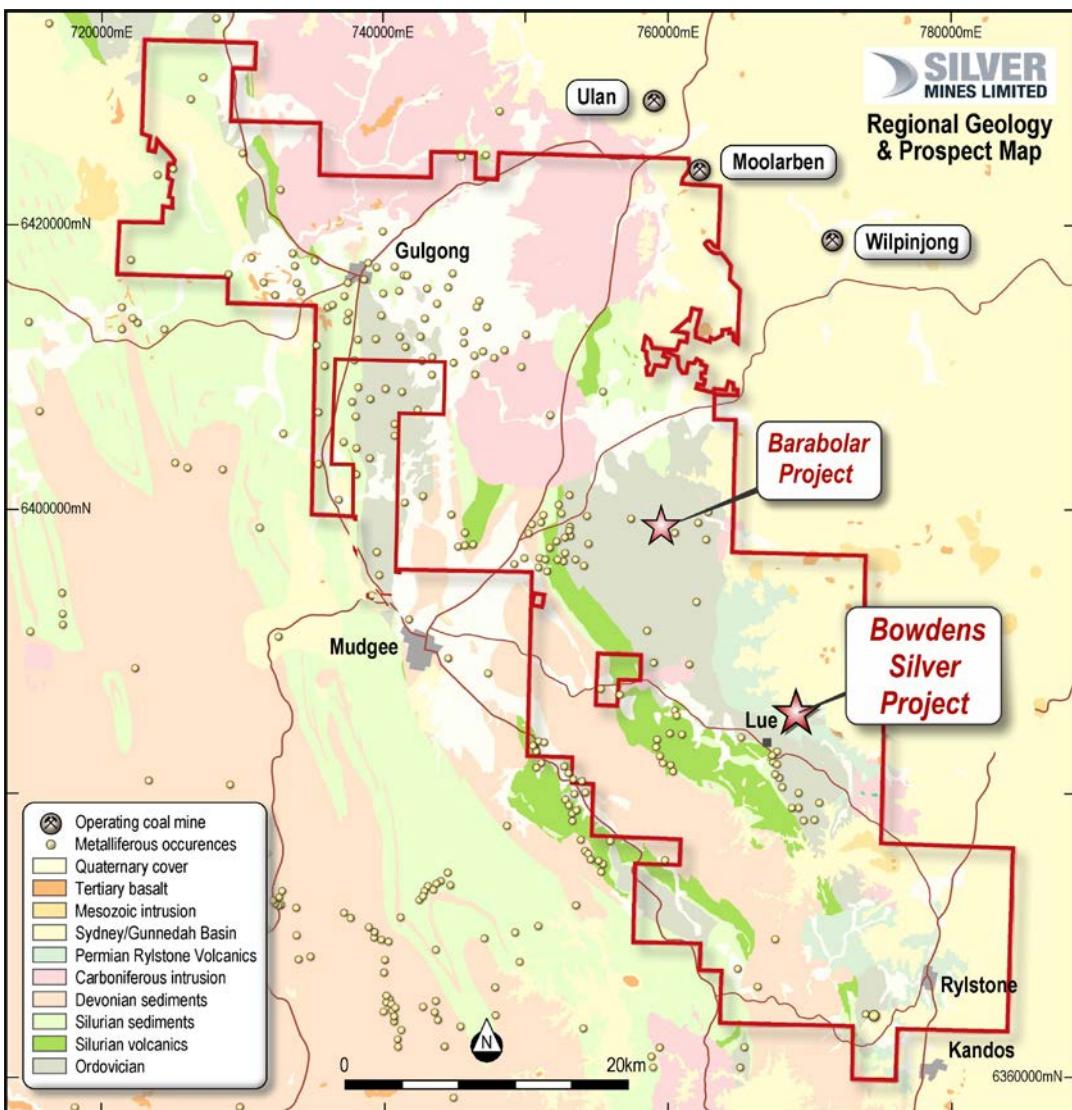


Figure 2. Location of the Barabolar and Bowdens Silver Projects relative to Mudgee with regional geology.

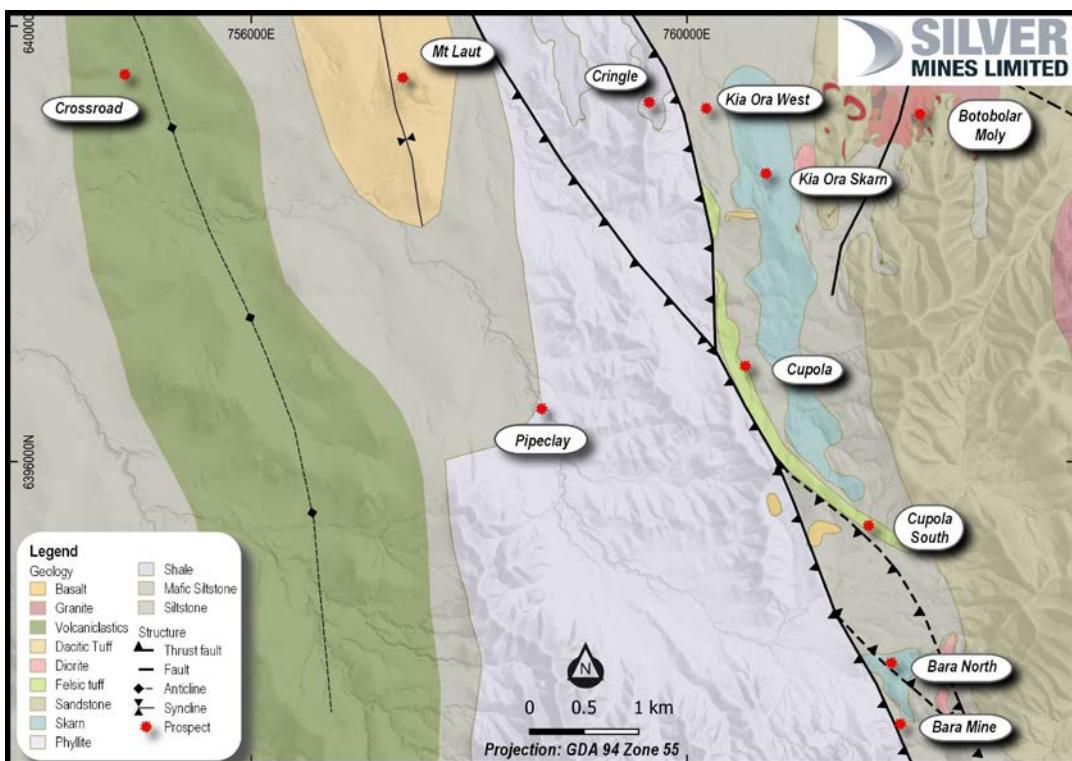


Figure 3. Geology and prospects of the Barabolar Project.

Drill Targets

The Company has generated numerous high priority drill targets from multiple exploration datasets around the Mt Laut pyrophyllite quarry and Crossroad prospect areas (Figure 3). Immediately within this area are silica-sericite flooded volcaniclastics and volcanics of andesitic to dacitic composition with pyrite and gossanous quartz veins. Major west dipping faults (interpreted from digital elevation models and surface measurements) are likely the fluid pathways to exposed zones such as the pyrophyllite quarry and other prospects further to the east.

In 2019, the Company completed a gravity survey to determine whether a clear intrusive signature exists within the Barabolar Project area. The Crossroad target represents a potential intrusive source to alteration and mineralisation as the gravity data has identified numerous “low” responses with the standout target being coincident with a magnetic high and potassium anomaly (radiometric data). The magnetic high is potentially a result of high temperature potassic alteration (biotite-orthoclase-magnetite) within an intrusion. This represents a priority target for deep drilling.

Machine Learning (ML) algorithms, applied to the Company's extensive surface sample database and geophysical/remotely sensed datasets, have also identified areas within the Barabolar Project as being outliers geochemically within the Company's broader tenement holding. These areas are Cringle and Mt Laut through to Crossroad, highlighted in both predictive models and in sampled data. Significantly, when multivariate outlier analysis is performed using alkaic and acidic zone elemental enrichment around porphyry systems as previously defined, the outliers are situated around significant geophysical responses (magnetic high and gravity low). (See Figure 4).

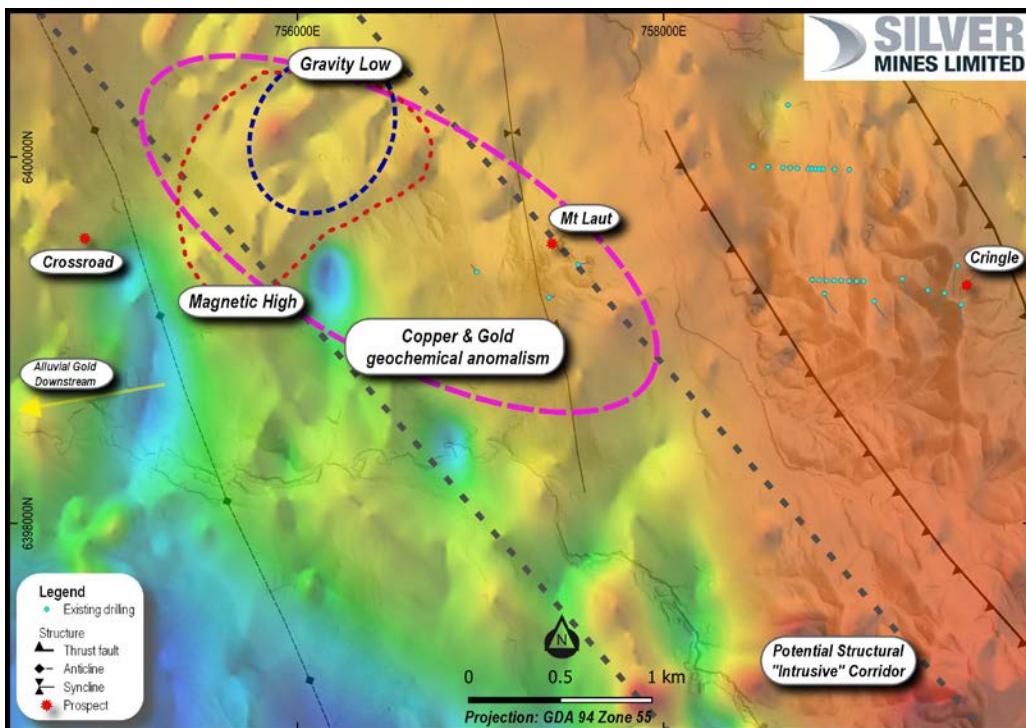


Figure 4. Geophysical anomalous and chemistry used in drill targeting.

Detailed previous soil sampling shows zoned base metals and significant tellurium values around the geophysical responses, especially at the pyrophyllite quarry. Previous rock samples from the area have shown anomalous gold and copper as well as anomalous pathfinder metals such as bismuth, lead, arsenic and zinc.

Historic Exploration

Silver Mines has completed two short programs of reconnaissance exploration drilling in the eastern section of the Barabolar project in 2018 and 2019 covering an area from the Bara Mine in the south to Cringle in the north (refer ASX announcements dated 28th August 2018, 3rd October 2018, 9th April 2019, 13th June 2019 and various quarterly reports in between).

The area between Cringle and Crossroad has had limited previous exploration and is dominated by Ordovician aged andesitic volcanics and sediments. Shallow RC drilling conducted during the mid- 1990's around the Mt Laut pyrophyllite quarry identified significant increases in silica-sericite-pyrite alteration within andesitic and dacitic volcanics. This historic drilling logged increases in base metal sulphides (including chalcopyrite) within quartz veins, though the drilling was assayed for gold only¹. This alteration and metal association suggests that Mt Laut is part of an outer phyllitic zone to an intrusive system (or high sulphidation epithermal), with distal advanced argillic alteration in the form of talc and pyrophyllite at surface. This may represent the upper expression of the porphyry system.

¹ Refer to NSW Government open file report – GS1998_262.R00020304 with work completed by Central West Gold.



Figure 5. South wall of the Mt Laut pyrophyllite quarry showing altered volcanics with a westerly dip (image looking south).

Exploration Program

The Company currently has four drilling rigs with three continuing at the Company's flagship Bowdens Silver Project and one at the Barabolar Project. The initial program at Barabolar is expected to comprise at least 2,000 metres of diamond drilling.

About the Barabolar Project

The Barabolar Project is located in central New South Wales, approximately 26 kilometres east of Mudgee (Figure 6). The consolidated project area comprises 1,950 km² (480,000 acres) of titles covering approximately 80 kilometres of strike of the highly mineralised Rylstone Volcanics. Multiple target styles and mineral occurrences have potential throughout the district including analogues to Bowdens Silver, high-grade silver-lead-zinc epithermal and volcanogenic massive sulphide (VMS) systems and copper-gold targets.

The rocks of the Barabolar Project are Ordovician age (the same age as Cadia-Ridgeway) and include sedimentary and volcanic rocks, an extensive skarn (highly altered microdiorite) and several porphyritic intrusions. The presence of pyrophyllite alteration along with areas of intensive silicification and argillic alteration are indicative of high-level preservation of a system and consistent with copper-gold porphyry targets. Nearby to Barabolar, the Company owns the Bowdens Silver Project which is the largest undeveloped silver deposit in Australia with substantial resources and a considerable body of high-quality technical work already completed. The project is in the final stages for mine approval.

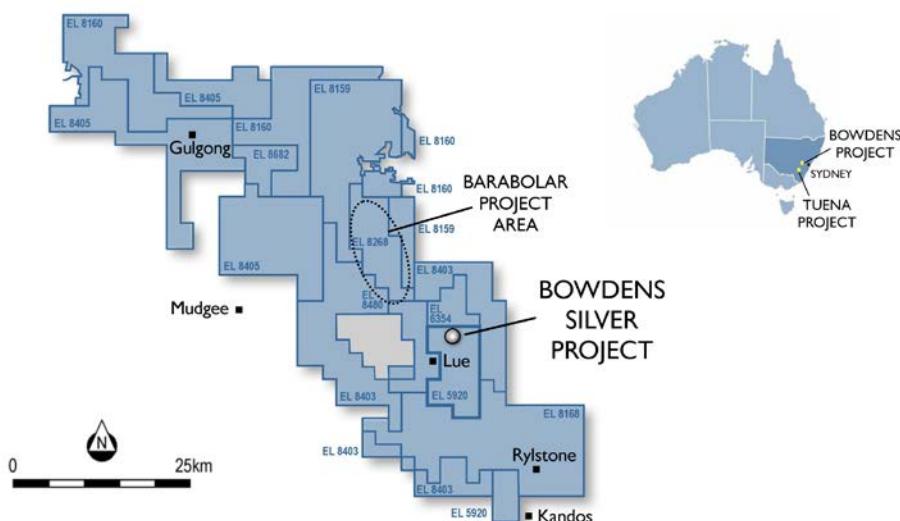


Figure 6. Silver Mines Limited tenement holdings in the Mudgee district.

This document has been authorised for release to the ASX by the Company's Managing Director, Mr Anthony McClure.

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Competent Persons Statement

The information in this report that relates to mineral exploration from the Bowdens Silver Project is based on information compiled by the Bowdens Silver team and reviewed by Darren Holden who is an advisor to the Company. Dr Holden is a Fellow of the Australasian Institute of Mining and Metallurgy 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' (JORC code). Dr Holden consents to the inclusion in this report of the matters based on the information in the form and context in which it appears