

**19 May 2020**Company Announcement Officer  
ASX Limited  
Exchange Centre  
20 Bridge Street  
SYDNEY NSW 2000

## **Tuena Gold Project: Project Area Expanded & New Gold Targets Defined**

### **Tuena Gold Project, New South Wales**

- **Three new mineral exploration licenses granted at Tuena expanding the total holdings to 747 square kilometres (from 178 square kilometres).**
- **Licences on the Godolphin-Copperhania-Structural Zone that hosts the multi-million ounce McPhillamys Gold Project (Regis Resources) located to the north and the newly discovered Cullarin Project (Sky Metals) located to the south.**
- **In addition to the previously announced high-grade gold targets at Tuena, two new targets identified with both gold and base-metal signatures potentially related to Volcanogenic Massive Sulphide (VMS) style:**
  - **Lucky Hit South Prospect with a VMS-Gold geochemical signature extending over a 2600 metre by 400 metre zone.**
  - **Markham's Prospect with a VMS-Gold geochemical signature extending over a 1600 metre by 400 metre zone.**
- **Expansion of exploration activities including drilling being planned for commencement in the 3<sup>rd</sup> quarter calendar 2020 (subject to approvals).**

### **Introduction**

Silver Mines Limited (ASX:SVL) ("Silver Mines" or "the Company") is pleased to provide an update on review of recent exploration activities at the Tuena Gold Project located 80 kilometres south of the city of Orange in New South Wales.

The Tuena Gold Project consists of an extensive series of historic hard-rock and alluvial gold mines which operated from the 1850s until the early 1900s.

Mineralisation, as indicated by historic shafts and adits, can be mapped over several kilometres of strike. Mineralisation occurs within splay/horsetail structures associated with an inflection in the Copperhania/Lake George Thrust Faults. This structure is part of the major

Godolphin-Copperhannia-Cullarin Fault Corridor, which is closely associated with mineralisation at the multi-million ounce McPhillamys gold project (Regis Resources) located to the north and the recent Cullarin Project discovery (Sky Metals) located to the south (refer to Figure 1).

Both the McPhillamy's Gold Project and the Cullarin Project are gold rich systems with a clear association to Volcanogenic Massive Sulphide (VMS) style base-metal projects.

At Tuena there are potentially two interrelated deposit target styles present. Firstly, the historic mining activity focused on very high-grade gold bearing lodes/veins. Secondly, the potential for gold and base-metal VMS deposits.

### **New tenements granted**

The Company announces that it has been granted 569 square kilometres of new exploration licences adjoining the Tuena Gold Project and associated with the major Godolphin-Copperhannia-Cullarin Fault Corridor (Figure 1). The new licences are EL8973, EL8974 and EL8975. These licences include extensive historic workings and prospective stratigraphy and structure for the generation of targets throughout the belt. Total holdings in the area is now 747 square kilometres, all 100% held by the Company.

New tenements, EL8974 and EL8975, adjoin the Tuena Gold Project to the northeast, west and south of the existing tenement (Figure 1). The licenses to the west and south are known as the Binda Licences. The Binda Licence is underlain by Silurian and Devonian volcanics/sediments and is transected by both the Binda Thrust and the Copperhannia Fault and associated splays. Devonian granites intrude the sedimentary rocks in the west and southern parts of the licence area. The Binda licences include several historic mines and workings including a cluster of gold occurrences hosted by Devonian granite and Silurian sediments. The historic Bonanza mine, for example, is reported to have operated at a grade of over 1200g/t silver (NSW government database Mine Record 1478). The Binda granite includes several historic occurrences including the Union Jack mine which recorded gold over 31g/t in samples and the Caledonia mine with assays recorded up to 226g/t gold, 0.18% copper, 0.7% lead and 4.9g/t silver (NSW government database 8729MMS0287).

The Bald Hill Licence (EL8974) adjoins the Tuena Gold project to the northeast of the existing tenement. This Licence covers Silurian sediments and volcanics. The area spans several north-south striking faults that are considered as splay structures related to the Copperhannia Fault. The licence also has potential volcanogenic massive sulphide (VMS) style deposits and is a long-strike to the north of Mt Costigan and Peelwood base-metal VMS style mines. Historic workings within the Bald Hill area reference rock-chip assays up to 1.8% zinc and gold in drilling up to 4 metres @ 7.4g/t (NSW government database R00015980 and GS1981/470).

The Newbridge Licence (EL8973) covers an area of 60 square kilometres and is located approximately 6 kilometres along strike from the McPhillamy's Gold Project. The licence geology includes Silurian and Devonian sediments and an extension of the Godolphin Fault transects the area.

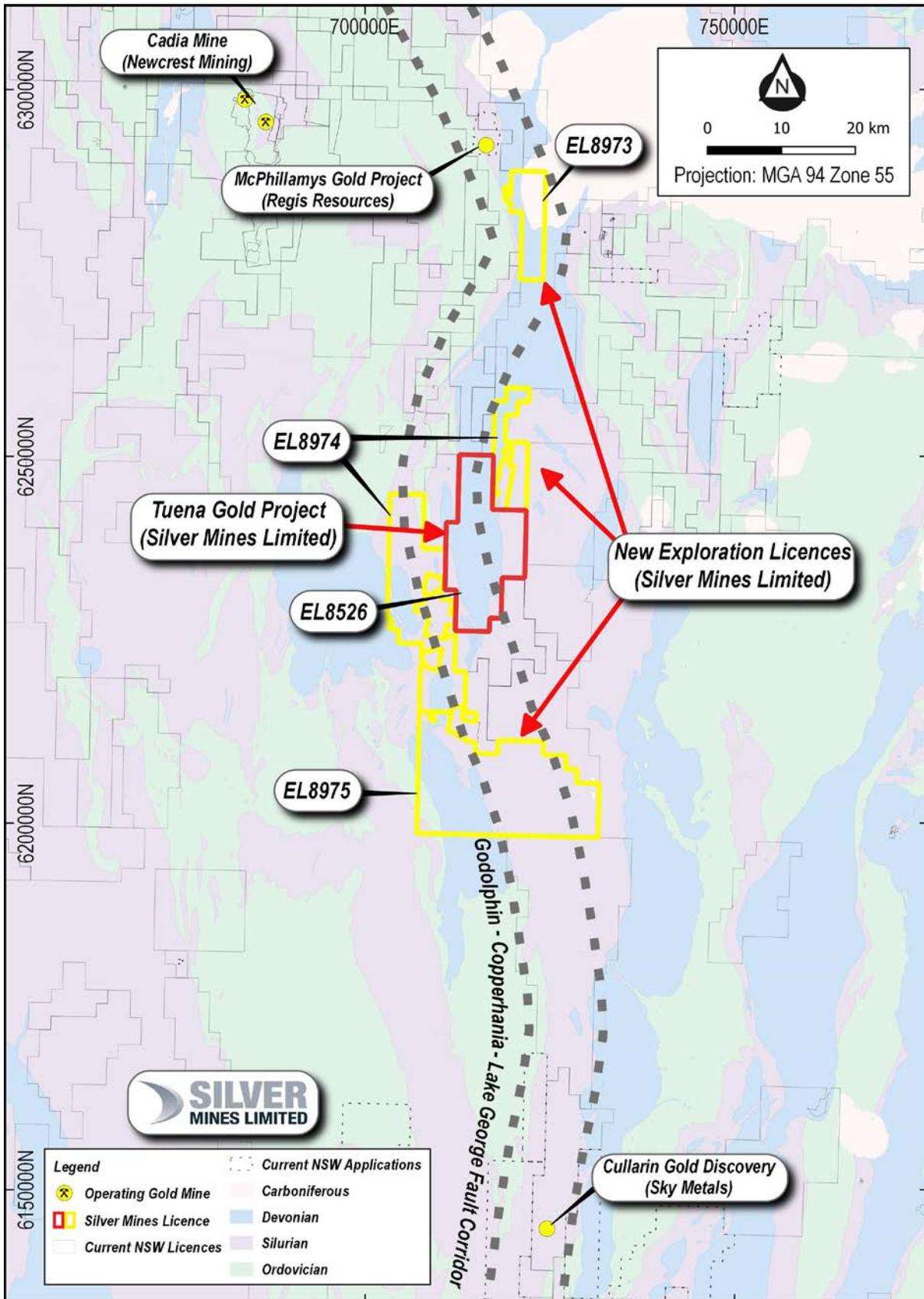


Figure 1: Map showing the Tuena Gold Project relative to the McPhillamy's and Cullarin Projects, including the current Exploration Licences and Licence applications.

### **Multi-metal pathfinders for gold targets identified at Tuena**

The Company has continued to analyse and target specific prospects throughout the large Tuena Project area. This work has involved the integrated analysis of soil geochemistry, detailed airborne magnetics and radiometrics geophysical data; geological reconnaissance and remote sensing data (refer to Company announcement 23/10/2019, and the December 2019 quarterly report).

In addition to the obvious and extensive gold in soil anomalies and high-grade rock results released by the Company (refer Company announcement 23/10/2019), the Company has continued with analysis on the base-metal and pathfinder element data for gold-rich VMS style systems.

The Company has now prioritised two further extensive targets that form part of the on-going prioritisation of targets at Tuena.

#### ***Lucky Hit South Gold+VMS Target***

The Lucky Hit South Target adjoins the existing Lucky Hit historic workings and extends for approximately 2.6 kilometres to the south. At the Golden Dyke to Lucky Hit zone the Company has already identified a >8ppb gold in soil anomaly over 1.4 kilometres of strike length (refer Company announcement 23/10/2019).

At Lucky Hit South, a 2600 metre by 600 metre multi-element anomaly in soil data consists of anomalous silver (averaging 85ppb); bismuth (averaging 188ppb); lead (averaging 12ppm) and tellurium (averaging 22ppb). A rock-chip sample in the Lucky Hit South area yielded 2.7g/t gold (refer Company announcement 23/10/2019). This metal association, along with the geological setting consisting of intermediate volcanics and deep-water sediments is consistent with a VMS style geological setting.

Airborne magnetics data at Lucky Hit South suggests magnetic depletion, which is often associated with large hydrothermal alteration zones.

#### ***Markham's Gold+VMS Target***

The Markham's Target adjoins to the east the Markham's historic workings and extends over a 1600 metre by 400 metre zone. The Markham's prospect is also located 650 metres to the northeast of the Cooper & McKenzie historic workings, where recent work by the Company identified a 850 metre by 200 metre soil anomaly >25ppb Au in with individual results up to 1550ppb Au. At Markham's a multi-element soil anomaly consisting of gold (averaging 12ppb), silver (average 76ppb), bismuth (averaging 253ppb), lead (averaging 20ppm) and tellurium (averaging 31ppb) has been identified.

The Markham's Target is located in the same stratigraphic package as the Lucky Hit South Target, and is located close to the axis of an anticline as seen in the magnetics data.

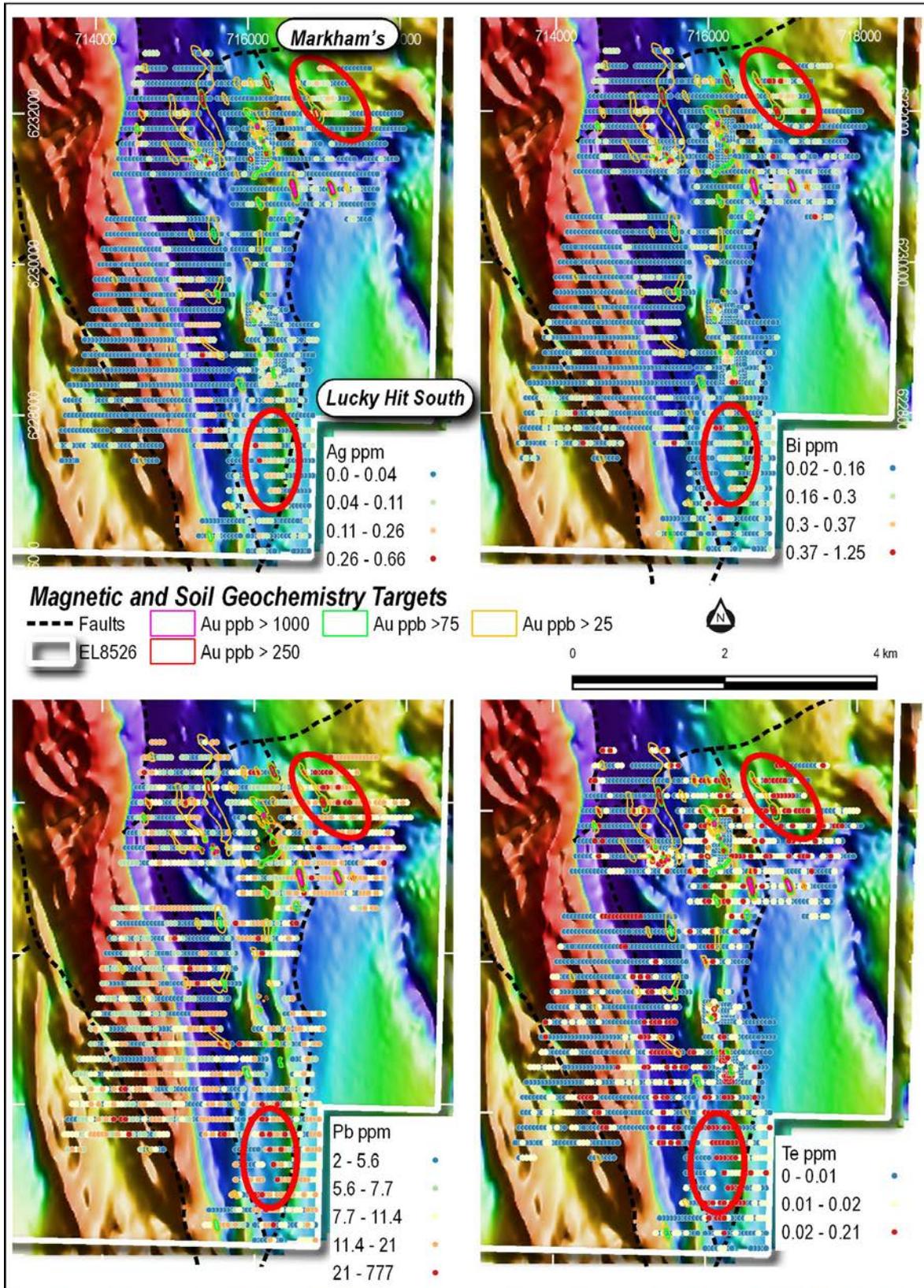


Figure 2: Reduced to pole magnetics and multi-element geochemistry of the Tuena Gold Project highlighting previously identified gold trends and the polymetallic Lucky Hit South and Markham's anomalies in red.

### **Next Steps**

The Company is continuing analysis of the Tuena datasets with the application of its 'integrated technique', multivariate analysis and machine learning developed for targeting in the Bowdens Silver Project area. These techniques are being applied to prioritise existing targets and to potentially generate new targets in the highly prospective Tuena Project area.

It is the intention of the Company to drill test at least four targets, including the gold-only targets and VMS-gold targets. The timing of this drill program is subject to land-access, permitting and restrictions around the Covid-19 pandemic (refer to the Company's March 2020 quarterly report). Initial drilling at Tuena may be commenced in the 3<sup>rd</sup> quarter calendar 2020.

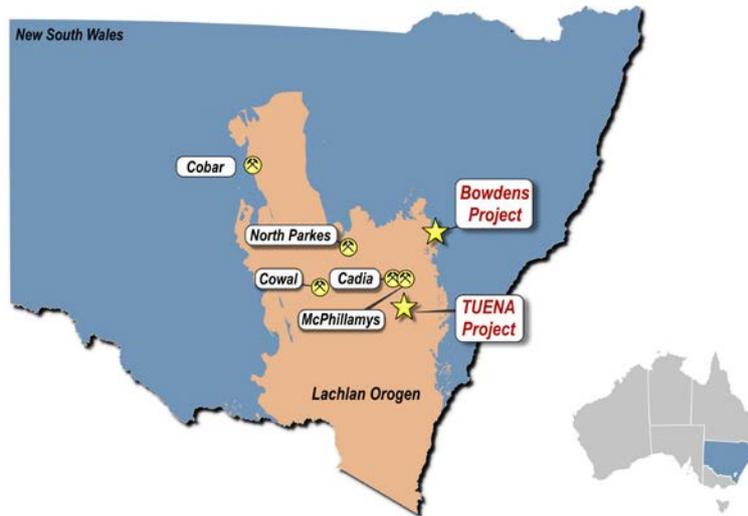
On the regional projects, including the new tenements, the Company intends to complete an initial audit of historic workings and mineral deposit styles. This will be followed by targeted regional reconnaissance work.

### **About Silver Mines Limited**

Silver Mines is a leading Australian precious metals development company. The Company's leading asset is the Bowdens Silver Project located near Mudgee in New South Wales. At Bowdens, the consolidated project area comprises 2,007 km<sup>2</sup> (496,000 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.

Bowdens Silver is the largest undeveloped silver deposit in Australia with substantial resources and a considerable body of high-quality technical work already completed. The projects boast outstanding logistics for future mine development.

In addition to Bowdens Silver, the Company is also actively exploring for base-metals and precious metals at its Barabolar Project located to the north of Bowdens and for gold at its Tuena Gold Project.



*Figure 3. Silver Mines Ltd projects in the Lachlan Orogen.*

**Further information:**

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**Competent Persons Statement**

The information in this report that relates to mineral exploration from the Tuena Gold 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 member 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.

## JORC Code, 2012 Edition – ANNEXURE 1

For JORC tables related to previous soil sampling please refer to release dated 23<sup>rd</sup> October 2019.

### 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"> <li>Nature and quality of sampling (e.g. 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g 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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release.</li> </ul>

Criteria	JORC Code explanation	Commentary
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core were taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibration factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release</li> </ul>

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling is reported in this release</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Tuena Project is located within Exploration Licence No EL8526, held wholly by Silver Mines Limited, through its subsidiary Tuena Resources Limited, and is located approximately 80km south of Bathurst, New South Wales.</li> <li>Newly granted tenements are EL8973, EL8974 and EL8975 and are also held by Tuena Resources Limited .</li> <li>The tenements are in good standing.</li> <li>Each tenement has a 1.00% Gross Royalty attached.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling related to soils and rocks from Tuena reported under this table is based on work conducted solely by Silver Mines/Tuena Resources.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Tuena Project consists of Devonian and Silurian age volcanics and sedimentary rocks which have been regionally and locally deformed during the Tabberabberan orogeny. This has resulted in regional folding and multiple generations of faulting associated with the major Copperhanna Thrust on the</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>western side of the tenement.</p> <ul style="list-style-type: none"> <li>Mineralisation is defined by the existence of historic shafts and audits, and can be observed at surface as structurally controlled shear or vein systems hosted within deformed sediments and volcanics.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>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"> <li>easting and northing of the drill hole collar;</li> <li>elevation or RL (Reduced Level elevation above sea level in metres) of the drill hole collar;</li> <li>dip and azimuth of the hole;</li> <li>down hole length and interception depth; and</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All information is included in Appendix 1 of this report.</li> <li>No drilling is reported in this release.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No averaging or sample aggregation has been conducted.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>The principal mineralized structures appear to strike NW to SE and as such the soil sampling grids are conducted perpendicular to geological orientation.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Maps provided in the body of this report.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or</li> </ul>	<ul style="list-style-type: none"> <li>All laboratory results are reported within the body of this release.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>widths should be practiced to avoid misleading reporting of Exploration Results.</i>	
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><i>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 and potential deleterious or contaminating substances.</i></li> </ul>	<ul style="list-style-type: none"> <li>This report relates to an overall status and description of current exploration knowledge at the Tuena Project.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Further exploration work will be conducted to refine the gold targets generated from this work.</li> </ul>