

**13 June 2019**

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

## **BARABOLAR APPROVALS TO EXPAND DRILLING PROGRAM TO LARGE NORTHERN ANOMALY**

### **HIGHLIGHTS**

#### **Cringle Prospect**

- Regulatory approvals now received which allow the expansion of the drilling program to test major anomaly to the north at Cringle.
- Recently returned surface rock samples up to 0.5g/t gold, 18.2g/t silver, 1.88% lead and 0.137% copper.
- Rock samples expand the Cringle target area by approximately 1,000 metres by 1,200 metres.
- Portable XRF analysis of first pass reconnaissance drilling indicates zones 10 metres to 20 metres wide with anomalous zinc, lead and arsenic.
- Drilling at Cringle includes 7 holes for a total of 1,386 metres completed to date with assays pending.

#### **Kia Ora West Skarn Prospect**

- Two reverse circulation holes, one with a diamond core tail, for 475 metres completed with assays pending.
- Veined and disseminated chalcopyrite (copper sulphide) of <3% observed over widths of 82 metres as well as galena (lead sulphide) and sphalerite (zinc sulphide).
- High temperature garnet skarn and biotite hornfels indicates close proximity to a potential porphyry source.

## Introduction

Silver Mines Limited (ASX:SVL) (“Silver Mines” or “the Company”) is pleased to report that approvals have been received to expand the current drilling program to test a major anomaly to the north of Cringle (see Figure 1) highlighted as “New Gossan Structure”. Recent mapping and rock chip sampling returned high grade surface mineralisation and expanded the Cringle target area to 1,000 metres by 1,200 metres.

The “New Gossan Structure” displays a higher tenor of arsenic anomalism in soils in comparison to other mineralised structures at Cringle. The footprint of the mineralisation at surface is much wider than previous structures mapped in the Cringle area with clear stockwork gossanous veining in outcrop over several metres’ width. With approvals now in place, this structure represents an exciting new drill target. Structures at Cringle have now been mapped with several orientations including WNW-ESE; N-S and NE-SW striking surface mineralised zones.

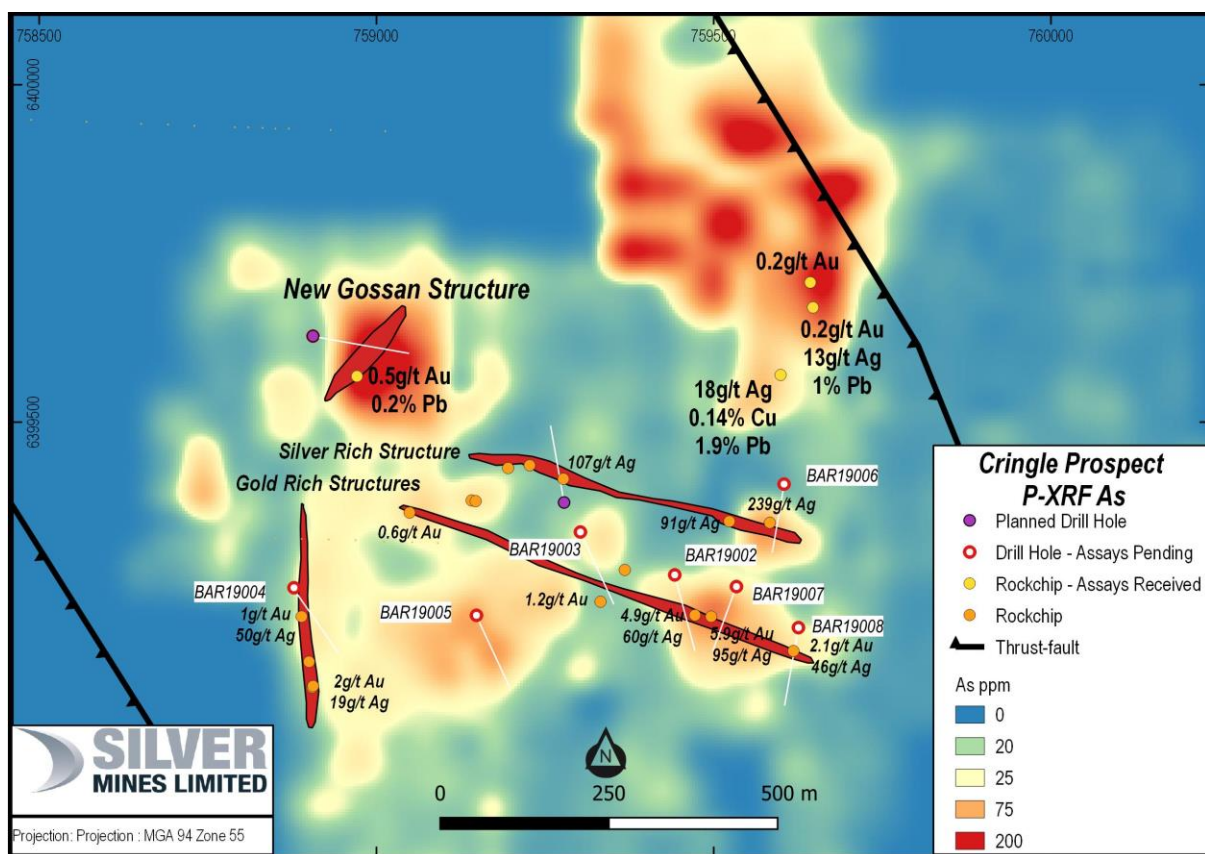


Figure 1. Cringle Prospect rock chip and arsenic anomalism map (refer to releases dated 17 September 2018 and 20 March 2019 for further information).

## Update from the Cringle Prospect

The Cringle Prospect, located in the northwest of the Barabolar Project, consists of highly anomalous gold-silver-lead-copper rock samples within a broad arsenic-silver-lead soil

anomaly. (Refer to releases dated 17 September 2018 and 20 March 2019). The principal host rocks are sediments and shales of the Ordovician Adaminaby Formation.

Recent rock sampling and mapping at Cringle has returned several highly anomalous samples elevated in gold, silver, lead, copper and zinc (refer to Figure 1 and Table 1). Samples were collected from outcropping sediments with multiple gossanous veins (refer Figure 2). These samples have expanded the footprint of surface anomalism at Cringle to an area in excess of 1000 metres by 1200 metres.

The first pass drilling, consisting of 7 reverse circulation holes for a total of 1,374 metres of drilling, has been completed. Laboratory assays are pending, however, portable XRF analysis indicates several zones of 10 to 20 metres wide with elevated base-metals.



Figure 2. Lead-copper-silver-gold gossanous veins from Cringle.

### **Update from the Kia Ora West Prospect**

The Kia Ora West prospect is also part of the Company's Barabolar Project. At Kia Ora West, a 1200 metre by 600 metre induced polarisation chargeability anomaly coincides with a 400 metre by 150 metre copper in soils anomaly and porphyritic volcanics at surface (refer Company release dated 16 August 2018).

To date, two reverse circulation holes have been completed, with one hole (BAR19009) extended with diamond core. In hole BAR19009, skarn style alteration has been intersected from 203 metres to 285.1 metres down hole. Associated with the skarn alteration is an increase in pyrrhotite (iron sulphide) along with veined and disseminated chalcopyrite (copper iron sulphide) and galena (lead sulphide) (refer to Figures 3-6).



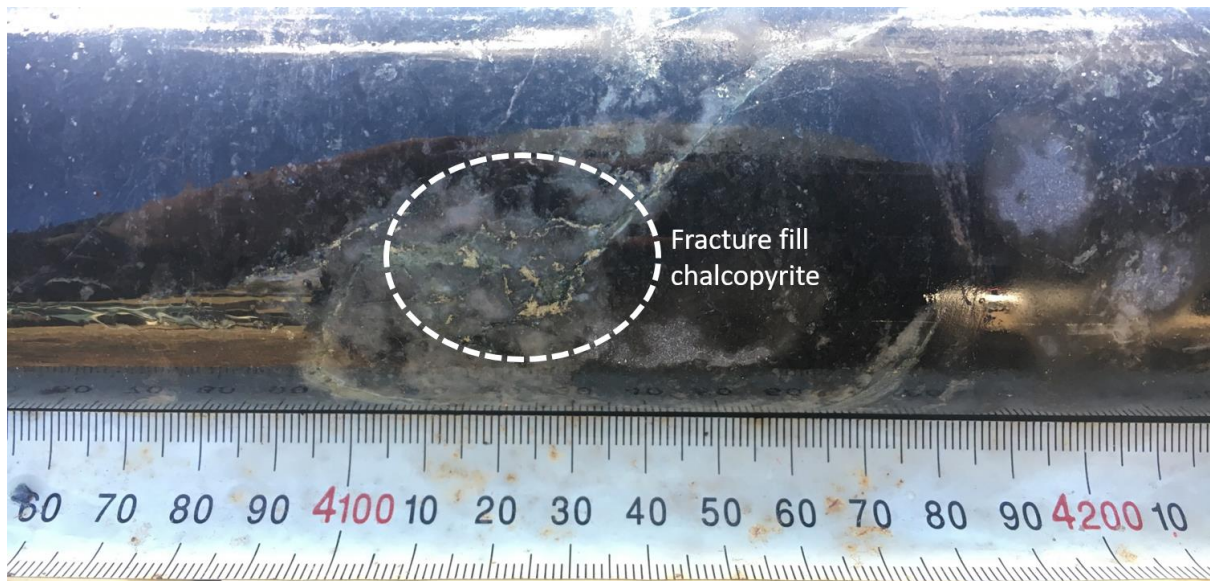


Figure 3. Copper sulphide mineralisation at Kia Ora West.

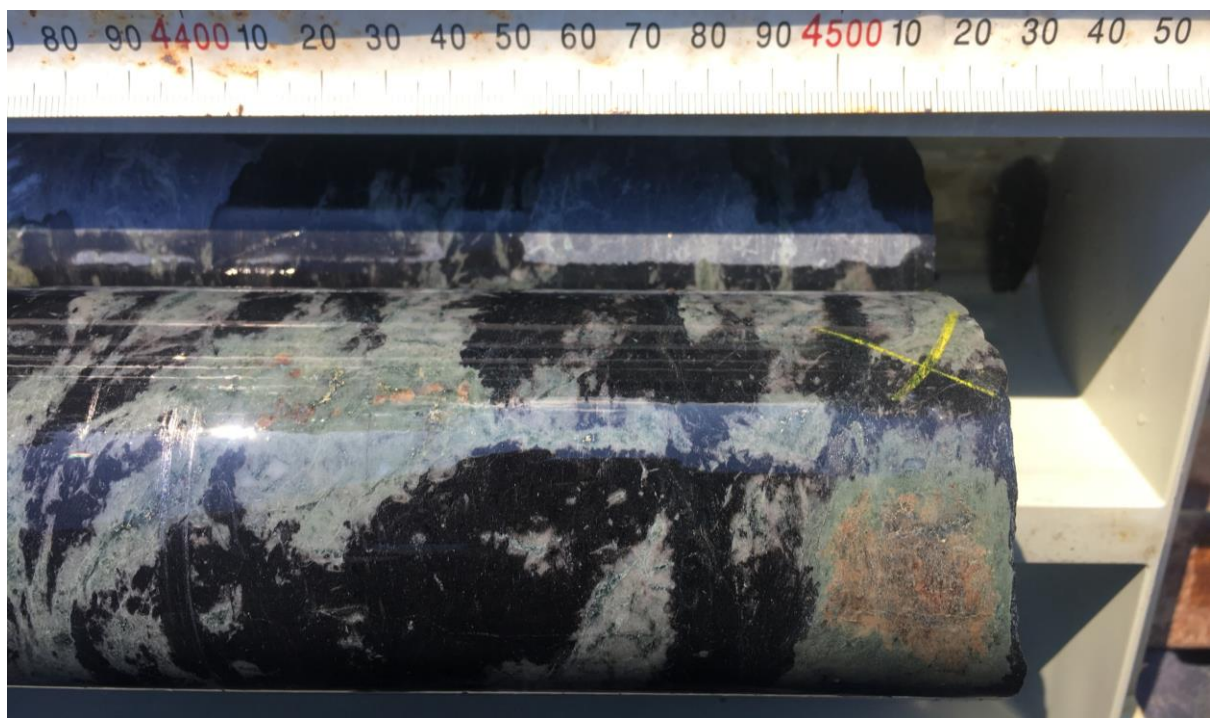


Figure 4. Copper sulphide mineralisation within skarn alteration from the interval 235m to 251m at Kia Ora West.





*Figure 5. Lead and Zinc sulphide mineralisation within garnetite from the interval 279m to 282m at Cringle.*



*Figure 6. Lead and Zinc sulphide mineralisation within garnetite from the interval 279m to 282m at Cringle.*

### **Exploration Program**

The Cringle and Kia Ora West prospects, are part of the Company's regional Barabolar Project located near Mudgee, eastern New South Wales, Australia.

The rocks of the Barabolar Project area 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-sulphidation epithermal systems consistent with copper-gold porphyry targets and peripheral low-sulphidation epithermal targets.

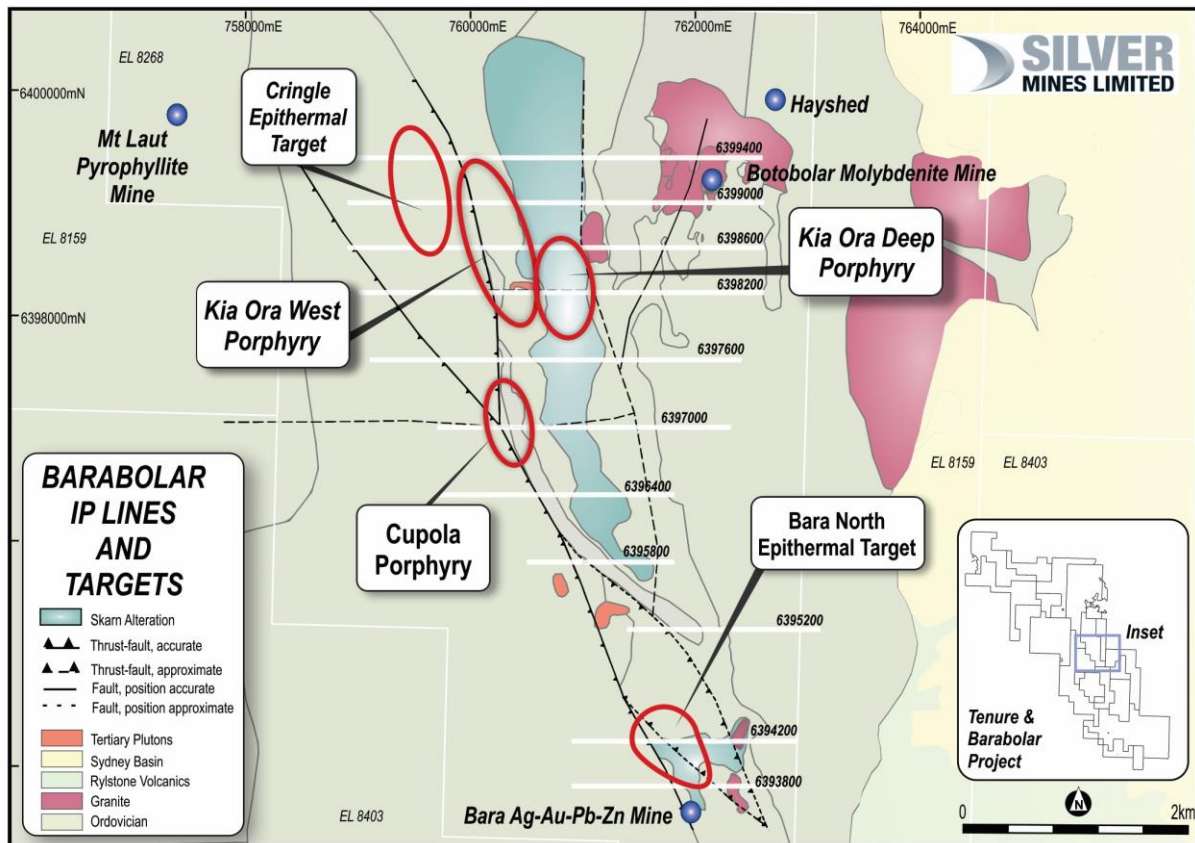


Figure 7. Barabolar Project and geology map.

### **About the Silver Mines Barabolar Project Area**

The Barabolar Project is located in central New South Wales, approximately 26 kilometres east of Mudgee (refer to Figure 8). The recently consolidated 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 and Macquarie Arc. 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 porphyry and skarn hosted copper-gold-molybdenum 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 projects boast outstanding logistics for future mine development.

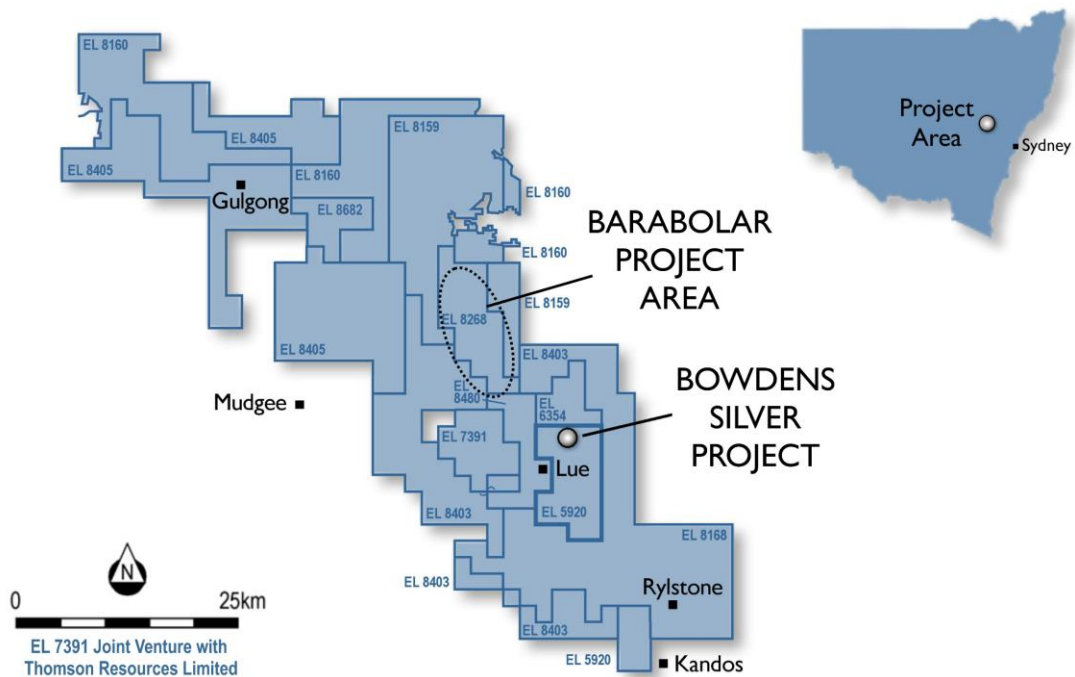


Figure 8. Silver Mines Limited tenement holdings in the Mudgee district.

#### Further information:

Anthony McClure  
 Managing Director  
 Silver Mines Limited  
 +61 2 8316 3997

Luke Forrestal  
 Associate Director  
 M+C Partners  
 +61 411 479 144

#### **Competent Persons Statement**

The information in this report that relates to mineral exploration from the Barabolar Project is based on information compiled by the Bowdens Silver team and reviewed by Mr Darren Holden who is an advisor to the Company. Mr 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). Mr Holden consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

Table 1. New rock chip samples and results as reported in the body of this release.

Sample ID	Easting (m)	Northing (m)	Silver (ppm)	Arsenic (ppm)	Copper (ppm)	Lead (ppm)	Zinc (ppm)	Gold (ppm)
66497	759599	6399570	18.20	179	1370	18850	305	<0.01
66498	759647	6399670	13.10	4910	277	10300	40	0.23
66499	759675	6399701	<0.5	370	431	304	51	0.02
66500	759643	6399707	<0.5	2550	186	122	23	0.22
67414	758999	6399660	<0.5	919	85	53	246	0.01
67415	758995	6396653	<0.5	4130	259	93	111	0.02
67416	758989	6399638	<0.5	3340	386	36	209	0.01
67417	758980	6399626	1.20	1475	112	1640	216	0.50

Table 2. New drill collar locations with results pending for all holes. No new results released within this report for drilling.

Prospect	Hole ID	GDA94 East	GDA94 North	RL (m)	Dip	Azimuth (grid)	Depth (m)	Drill Type	Comment
Kia-Ora West	BAR19001	760118	6398562	643.18	-60	57	140	RC	Assays pending
Cringle	BAR19002	759442	6399273	638	-55	165	192	RC	Assays pending
Cringle	BAR19903	759303	6399335	616.75	-55	166	192	RC	Assays pending
Cringle	BAR19004	758877	6399253	626.69	-55	153	192	RC	Assays pending
Cringle	BAR19005	759148	6399213	627	-55	156	192	RC	Assays pending
Cringle	BAR19006	759604	6399406	647	-55	209	210	RC	Assays pending
Cringle	BAR19007	759533	6399256	661.48	-55	201	210	RC	Assays pending
Cringle	BAR19008	759625	6399194	661.97	-55	190	198	RC	Assays pending
Kia Ora West	BAR19009	760025	6399212	615.86	-60	94	335.2	RC with diamond tail	Assays pending



## Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<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>Rock chip sampling was undertaken with a geologist hammer to collect adequate sample for assay. Samples were collected to cover the strike and width of the main mineralised extent of the host lithology. Samples were around 1.5kg in weight, placed in calico bags and assigned a sample number. Industry approved certified reference material (standards) samples are inserted at a ratio of 1:50. Samples are placed in polyweave bags at the Bowdens Silver office and delivered by Bowdens Silver employees directly to ALS in Orange for analysis by ME-ICP61 and Au-AA25.</li> </ul>
<b>Drilling techniques</b>	<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 assays reported. NA</li> </ul>
<b>Drill sample recovery</b>	<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</li> </ul>	<ul style="list-style-type: none"> <li>No drilling assays reported. NA</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	
<b>Logging</b>	<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 assays reported. NA</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<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 assays reported. NA</li> <li>Rock chip samples collected from outcrop of altered and mineralised material.</li> <li>All rock sample submitted to the laboratory were under the required 3kg limit and did not require splitting or sub-sampling before analysis.</li> <li>All samples were dry at time of collection</li> <li>Sample size was appropriate for the grain size of the material sampled.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<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>Rock chip samples dispatched to ALS Laboratories in Orange, NSW for sample preparation by crushing and pulverising. Samples then undergo 33 element analyses by 4 acid digestion using method ME-ICP61 and by fire assay method Au-AA25 for gold. Industry approved standard samples are inserted every 50 samples to check for quality control at the lab.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Verification of sampling and assaying</b>	<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>Primary assay data is sent electronically from the lab to the SVL database administrator and then entered into the geological database for validation.</li> <li>All assays are matched with the pre-entered field information and loaded directly from the output provided by the laboratory with no manual entry of assays undertaken.</li> <li>No adjustments were made or required to be made to the assay data.</li> </ul>
<b>Location of data points</b>	<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>Rock chip samples are surveyed with a hand-held GPS unit which has an accuracy to around 3m.</li> <li>Coordinates are MGA Zone 55 (GDA94).</li> </ul>
<b>Data spacing and distribution</b>	<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>Rock chip sampling was designed to adequately cover the natural outcrop from 1 to 3 square metres.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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>Rock sample results are from natural outcrop. Structural orientation is inferred from geological mapping.</li> <li>The orientation of mineralisation is yet to be fully established.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>All samples bagged on site under the supervision of senior geologists and field hands with sample bags tied with cable ties before being driven by site personnel to the ALS laboratory in Orange, NSW (~200km from the site)</li> </ul>
<b>Audits or reviews</b>	<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>Data and sampling reviewed by Darren Holden of GeoSpy Pty Ltd, an advisor to the Company.</li> <li>Internal review of sampling techniques for rock chips has been carried out.</li> </ul>



## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<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 Barabolar Project is located wholly within Exploration Licence No EL8268, held wholly by Silver Mines Limited and is located approximately 26km east of Mudgee, New South Wales.</li> <li>The tenement is in good standing.</li> <li>The project has a 1.85% Gross Royalty over 100% of EL8268.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The Barabolar Project area encompasses a number of previously separate prospects which have been variously explored by previous companies. These companies include, but are not limited to, Australian Anglo American Prospecting, Newmont Limited, Silver Standard Australia and Central West Gold Limited. The most significant results from some of this work has been detailed in previous releases (refer presentation 24/08/2018).</li> </ul>
<b>Geology</b>	<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 Barabolar Project represents a potential porphyry Cu system with associated skarn and epithermal mineralisation, hosted within Ordovician sediments and volcanics.</li> <li>Mineralisation includes vein hosted peripheral epithermal quartz sulphide veins and breccia fill quartz carbonate veins.</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</li> </ul>	<ul style="list-style-type: none"> <li>All information is included in Appendix 1 of this report.</li> </ul>

Criteria	JORC Code explanation	Commentary
	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.	
<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 weighted averages reported. Data has not been cut. No metal equivalents reported.</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>No drilling assays reported. NA.</li> <li>Insufficient information is available at this stage to ascertain the true dip of structures reported here. Therefore, the true width of the intercepts cannot be known.</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 widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>All samples collected from the recent program shown in appendix 1. Drilling is ongoing with results expected to provide an assessment of mineralised zones encountered.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No significant exploration results have been omitted.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral</li> </ul>	<ul style="list-style-type: none"> <li>This report relates to ongoing exploration work designed to further</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>extensions or depth extensions or large-scale step-out drilling).</i></p> <ul style="list-style-type: none"> <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>	<p>define the broad hydrothermal system within the Barabolar Project area.</p>