

**13<sup>th</sup> December 2016**Company Announcement Officer  
ASX Limited  
Exchange Centre  
20 Bridge Street  
SYDNEY NSW 2000

## **GEOPHYSICS AT BOWDENS IDENTIFIES POSSIBLE PORPHYRY SOURCE OF MINERALISATION**

### **Highlights**

- **High resolution aeromagnetic survey completed.**
- **A 1300 metre by 800 metre intrusion identified at Gumarooka adjoining the Bowdens Silver deposit.**
- **Close to surface intrusive interpreted to be an andesitic porphyry and a possible source to Bowdens Silver mineralisation.**
- **Gumarooka is substantial new exploration target with drill planning underway.**
- **Multiple other new targets delineated as part of ongoing interpretation.**

### **2016 Airborne Magnetism Survey**

Silver Mines Limited (ASX:SVL) (“Silver Mines” or “the Company”) is pleased to advise that it has received the data and conducted preliminary interpretations of the new high resolution airborne magnetic and radiometric survey recently completed. This survey is a 100 metre line spaced dataset covering the extensive 1634 square kilometre exploration license package held by Silver Mines Limited. The survey, which consisted of over 20,000 line kilometres of data has been processed and modelled by Fathom Geophysics Ltd and interpreted by the Bowdens Silver geological team.

### **Gumarooka Intrusion**

The new high resolution airborne magnetism data has identified an elliptical body approximately 1300 metres by 800 metres located immediately to the north-west of the Bowdens Silver epithermal deposit (Figure 1).

Apart from one drill hole of the northern margin, the magnetic body has not been previously drilled and is entirely covered by Shoalhaven Group sediments. Intrusions, such as the Gumarooka Intrusion, formed from hot-molten rock and are often the heat and metal sources for epithermal mineralisation such as that seen at Bowdens Silver.

In 2013, a drill hole (BD13147) on the northern margin of this magnetic body intersected 89 metres zone (from 39.6 metres down hole) of a rock type interpreted, in hand-specimen, to be an andesite or trachy-andesite porphyry. Only a small part of this drill hole was assayed (with no appreciable mineralisation), however, unassayed parts show narrow zones (less than 5 metres) of intense alteration and quartz-carbonate-clay veining. Further thin-section microscope work is underway at the University of New South Wales to classify the rock with the previously unassayed core to also be assayed.

Based on modelling and observation from the drill core in BD13147, this rock is older than the overlying mid-Permian Shoalhaven Group sediments and younger than the early Permian Rylstone volcanics making it approximately the same age as mineralisation at Bowdens Silver.

Geophysical modelling places the depth to the top of the main part of the intrusion at between 60 metres and 150 metres.

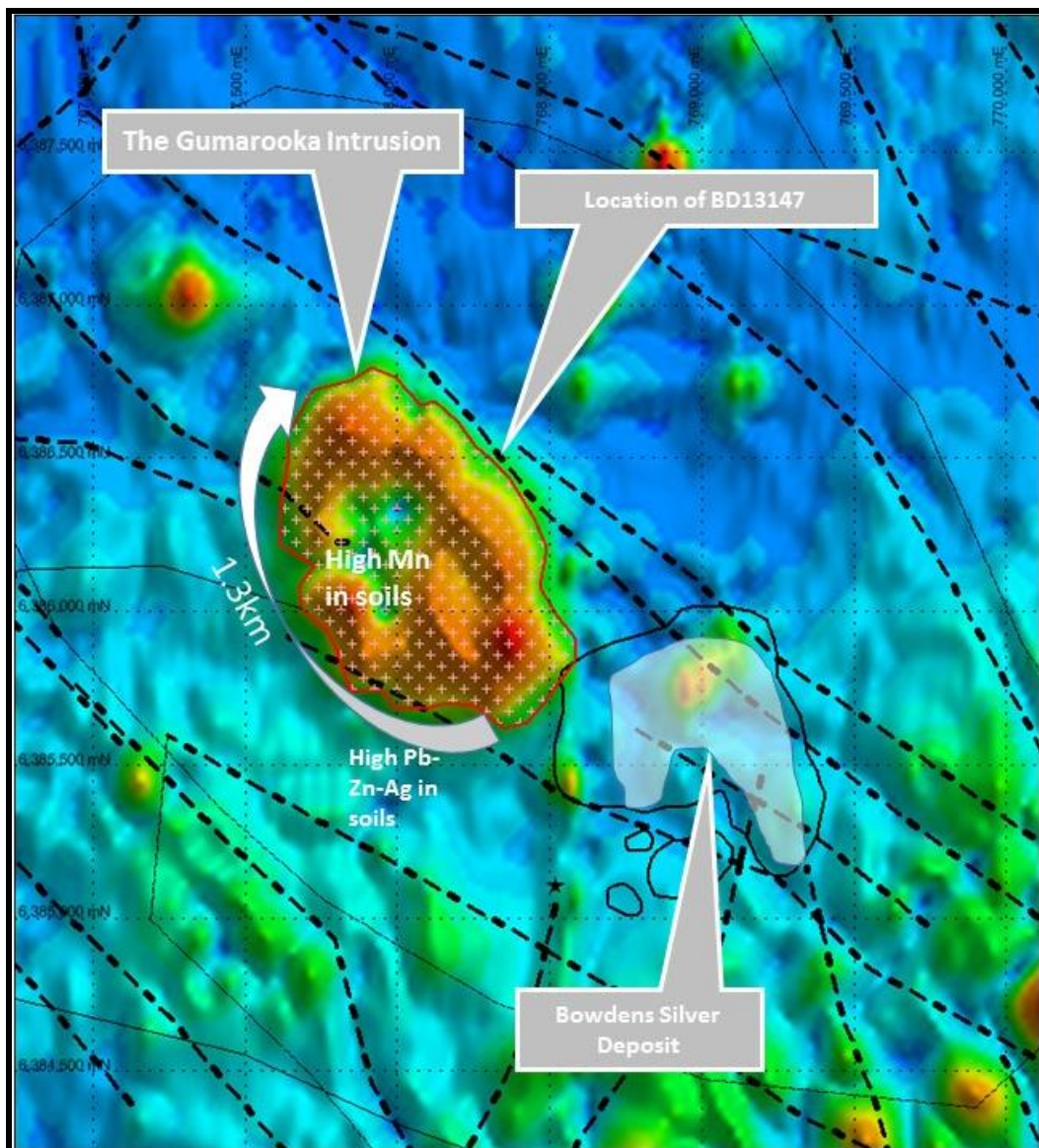


Figure 1 Magnetics image (analytical signal) of Bowdens area showing the Gumarooka intrusion. Black dashed lines are interpreted, from magnetics data to be faults. Grid = 500m

Given that this body is entirely covered by Shoalhaven sediments there is not any base metal or silver geochemistry anomaly associated with this body. However, previous soil geochemistry indicates that above the intrusion there is elevated manganese (>1000ppm Mn with up to 5000ppm Mn identified) which is often an indicator of mineralisation beneath. Furthermore, immediately south of Gumarooka is an undrilled silver-lead soil anomaly (>50ppm Pb) which may be the result of metal bleeding out from under the Shoalhaven Group sediments and the Gumarooka Intrusion to the north.

The entire Gumarooka Intrusion lies within 100% held by Bowdens Silver (Exploration License EL5920 along with all surface rights).

Detail exploration is currently being scheduled for Gumarooka with drilling being planned to commence during the first quarter 2017.

**Other Target Areas**

Outside of Gumarooka, several areas currently being assessed include;

**Gulgowra** - Located approximately 4 kilometres north-west and along strike from Bowdens Silver interpreted with alteration within Rylstone Volcanics coinciding with anomalous surface geochemistry.

**Bara Mine** - Historic mineral occurrences of sediment hosted copper-lead-silver-zinc deposits located approximately 10 kilometres north-west of Bowdens Silver. Interpretation highlights geological structures possibly in association with a granitoid intrusion.

**Havilah** - Magnetic interpretation in this Joint Venture area located to the west of Bowdens Silver indicates historical mineral occurrences and substantial surface geochemistry coinciding with granitic dykes. The primary target is un-drilled.

Further details of these high order target areas will be provided as interpretation completes. In addition, the Company is continuing to interpret the remainder of the magnetics data, with the intention of mapping key geological units and generating new mineral deposit targets.

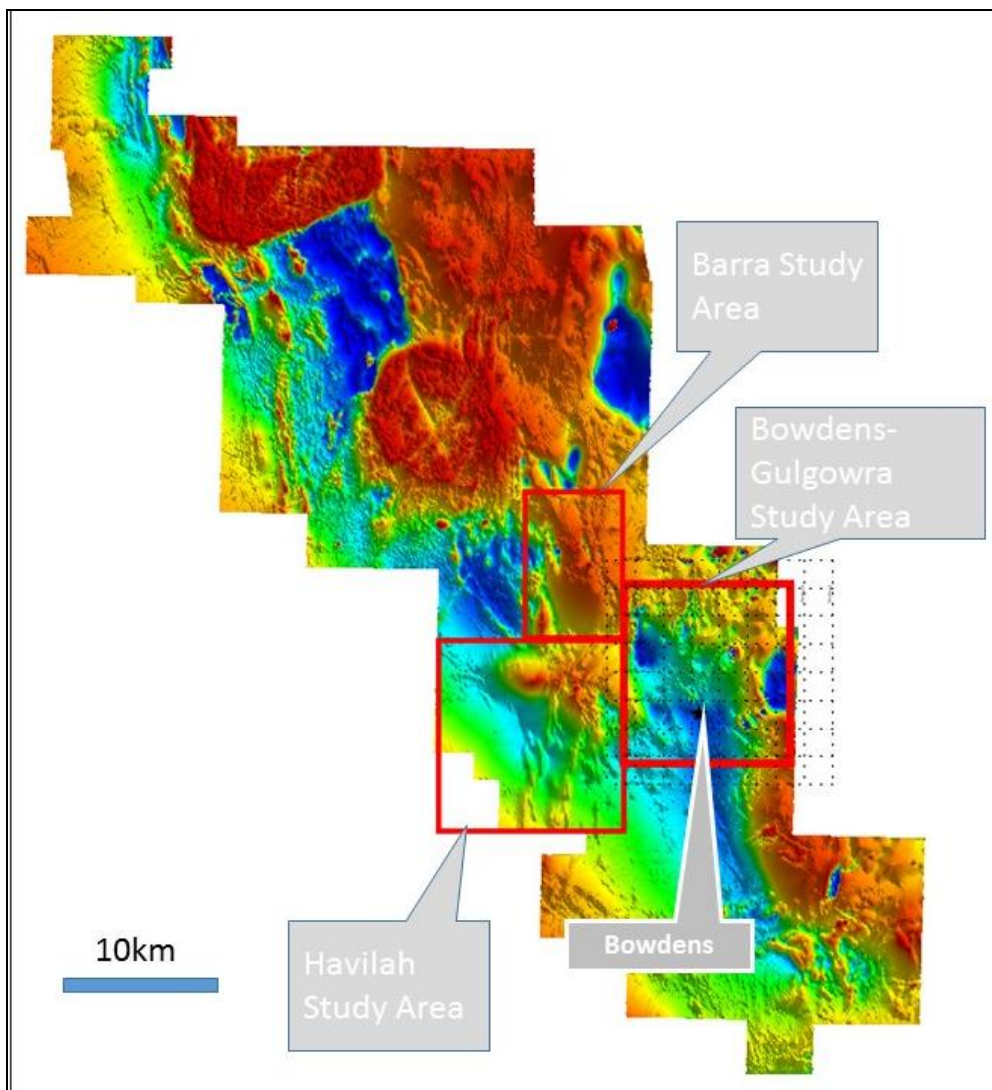


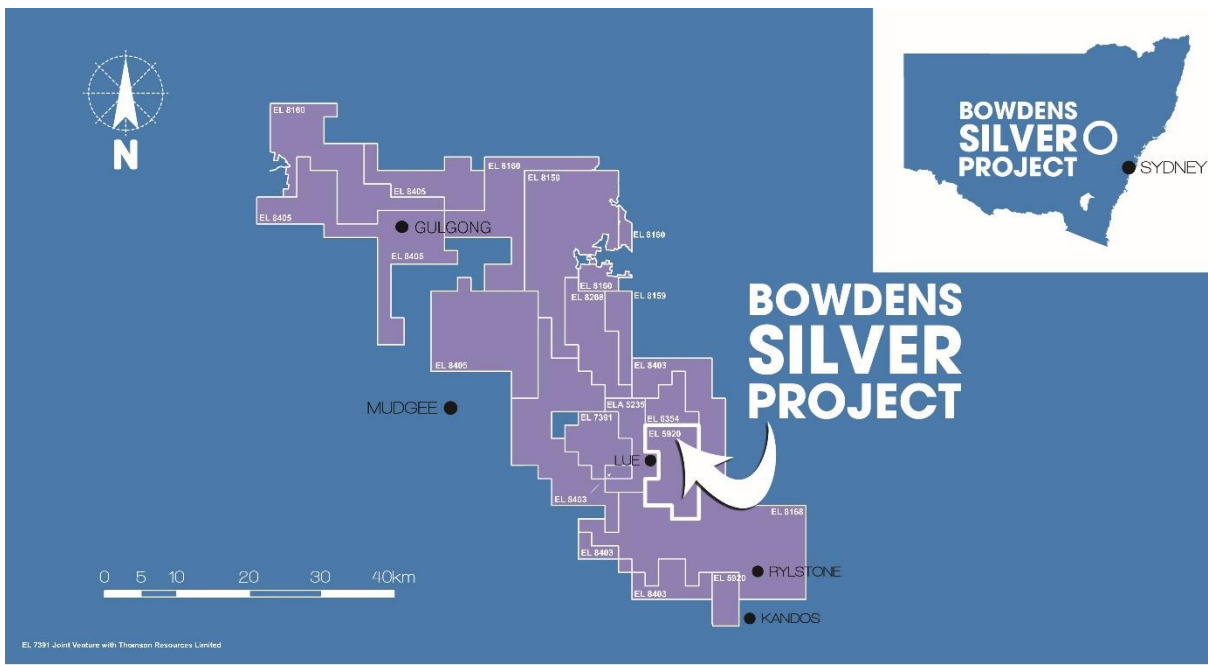
Figure 2. Full extent of new magnetics data over Silver Mines Exploration License Portfolio in the Mudgee region



**About the Bowdens Silver Project**

The Bowdens Silver Project is located in central New South Wales, approximately 26 kilometres east of Mudgee. The recently consolidated project area comprises 1,654 km<sup>2</sup> (408,000 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.

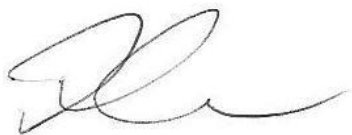
Bowdens Silver is the largest undeveloped silver deposit in Australia with substantial resources and a considerable body of high quality technical work already completed. The projects boast outstanding logistics for future mine development.



*Figure 3. Bowdens Silver tenement holdings in the Mudgee district.*

Yours faithfully

Silver Mines Limited



Trent Franklin

Company Secretary

### About Silver Mines Limited

The Silver Mines strategy has been to consolidate quality silver deposits in New South Wales and to form Australia's pre-eminent silver company.

The Company's goal is to provide exceptional returns to shareholders through the acquisition, exploration and development of quality silver projects and by maximising leverage to an accretive silver price.

### Competent Persons Statement

The information in this report that relates to mineral exploration results is based on information compiled or reviewed by Mr Darren Holden who is an employee of GeoSpy Pty Ltd and an advisor to Silver Mines. Mr Holden is a member of the Australasian Institute of Mining and Metallurgy (MAusIMM) 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.

### Appendix 1 – Drill Hole details for Hole BD13147

*Assays were not completed for this hole, but will be undertaken shortly.*

Hole Id	Easting	Northing	Elevation	Azimuth	Dip	Total Depth
BD13147	768365	6386507	644	184.5	-70	297.5