



Annual General Meeting

Sydney, Australia

28<sup>th</sup> November 2018

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#### **Silver Mines Limited Introduction**

# UNLOCKING A MAJOR MINERALISED SYSTEM THROUGH EXPLORATION SUCCESS

- Major Exploration Targets:
  - Confirmed significant extensions to mineralisation close to mine.
  - <u>Discovered</u> new base-metal massive sulphide including gold.
  - <u>Discovered</u> porphyritic felsic intrusion under the current resource.
  - <u>Discovered</u> extensive mineralised skarn with Copper/Gold targets.
  - <u>Discovered</u> high grade gold mineralisation at surface.

# DRILLING COMMENCED AT BARABOLAR MAJOR NEW EXPLORATION PROJECT

- Bowdens Silver Feasibility Study Complete
  - One of the largest undeveloped precious metals deposits in Australia and one of the largest new silver developments globally.
- New South Wales, Australia is a <u>safe quality jurisdiction</u>.



## **Silver Mines Limited Snapshot**

Capital Structure	ASX:SVL			
Shares on Issue	633.1m	Options		
Current Share Price	A\$0.04	Sept 2021 @ \$0.06	64.1m	
Undiluted Market Capitalisation	A\$25.0m	Jun 2019 @ \$0.30	9.0m	
Cash end September 2018	A\$2.3m	3 year milestone @ \$0.20	5.0m	
<u>Directors</u>		Institutional Shareholders		
Keith Perrett, Chairman		Paradice Tribeca		
Anthony McClure, Managing Director		Konwave Old Mutual		
Peter Langworthy, Non Executive Director		BlackRock		
Jonathan Battershill, Non Executive Director				
<u>Assets</u>				
Major Exploration Package Central New South New New South New South New South New South New South New Sout	Wales, Australia,	High order targets include precious metals epithermal, base metal VMS, Orogenic Gold, Intrusion Related Porphyry.		
Bowdens Silver Mineral F	Resources	163 Moz Silver	275 Moz Silver Equivalent	
Ore Rese	erve	66 Moz Silver	97 Moz Silver Equivalent	



#### 2018 Financial Year in Review

#### **Corporate**

- Second year of Bowdens Silver ownership and new management.
- A\$7.1 million capital raised.

#### **Bowdens**

7,300 metres of drilling completed.

#### Silver

Initial Mineral Resource (September 2017)

#### **Project**

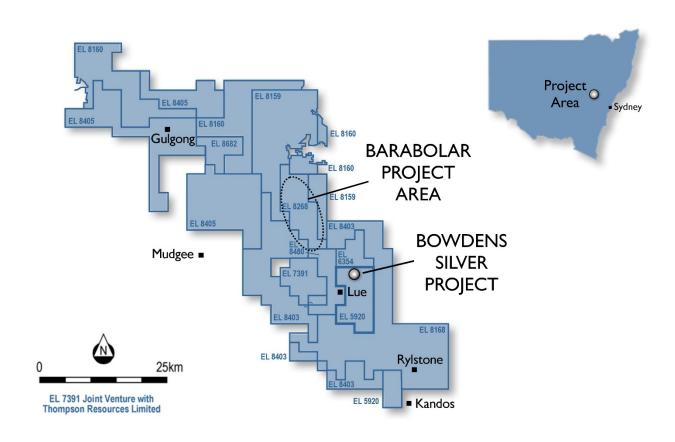
- Maiden Ore Reserve (May 2018)
- Feasibility Study complete (June 2018)
- Environmental Impact Statement (EIS) advanced.

#### **Exploration**

- Exploration strategy continued with considerable success proximal to Bowdens deposit.
- Confirmed that resource is open at depth and extends below current resource.
- Semi-massive and massive and sulphide zone including gold discovered below existing resource.
- Barabolar Project discovery with copper-gold-zinc-lead-silver targets evolving into a substantial exploration play.



#### Quality Jurisdiction - New South Wales, Australia





#### Quality Jurisdiction - New South Wales, Australia

- New South Wales, Australia a quality jurisdiction.
- Major minerals projects in the state include;
  - Cadia/Ridgeway, Newcrest (650,000oz Au, 65,000t Cu pa).
  - Cowal, Evolution (260,000oz Au pa).
  - Northparkes, CMOC (60,000t Cu, 50,000oz Au pa).
  - Plus coal mining exports (170 million tonnes pa).
- Bowdens Silver Project Classified as a State Significant Development.

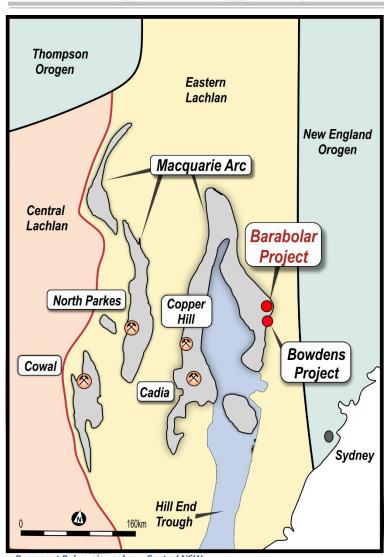


# **Barabolar Project**





#### **Regional Geology**



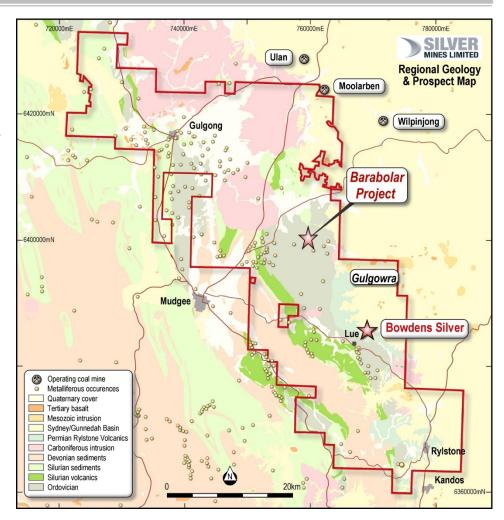
- The Ordovician Macquarie Arc/Lachlan Fold Belt of Eastern Australia contains preserved porphyry volcanic arc environments.
- Macquarie Arc of NSW contains world-class;
  - Cadia/Ridgeway,
  - Cowal,
  - Northparkes and others.
- The Barabolar discovery demonstrates that the eastern limb of the Macquarie Arc has the potential for significant mineral systems.



Basement Paleozoic geology, Central NSW

#### **Regional Geology**

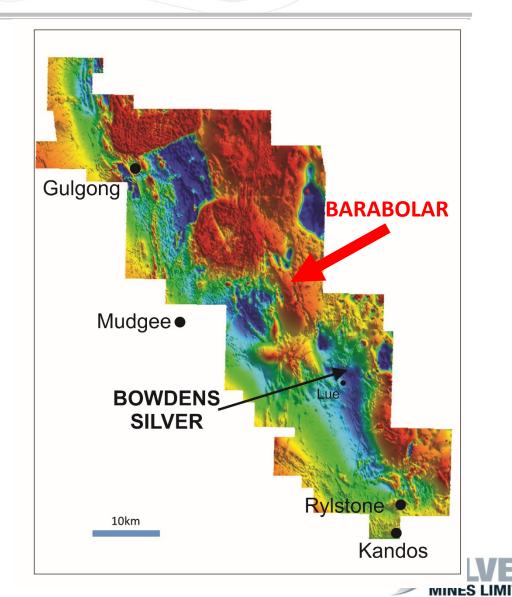
- Extensive tenement holding (2007 km²
   = 496,000 acres) controlled by Silver
   Mines.
- North east corner of Lachlan Fold Belt & Macquarie Arc.
- Wide range of prospective deposit types over different time periods (Ordovician, Siluro-Devonian, Carboniferous and Permian).
- Mineral deposit styles/potential include:
  - Cadia/Ridgeway style Porphyry (Cu-Au-Mo).
  - Woodlawn style Volcanogenic Massive Sulphide (VMS).
  - McPhillamy's style Shear hosted gold with base-metal association.
  - Bowdens Style epithermal (Ag-Zn-Pb).

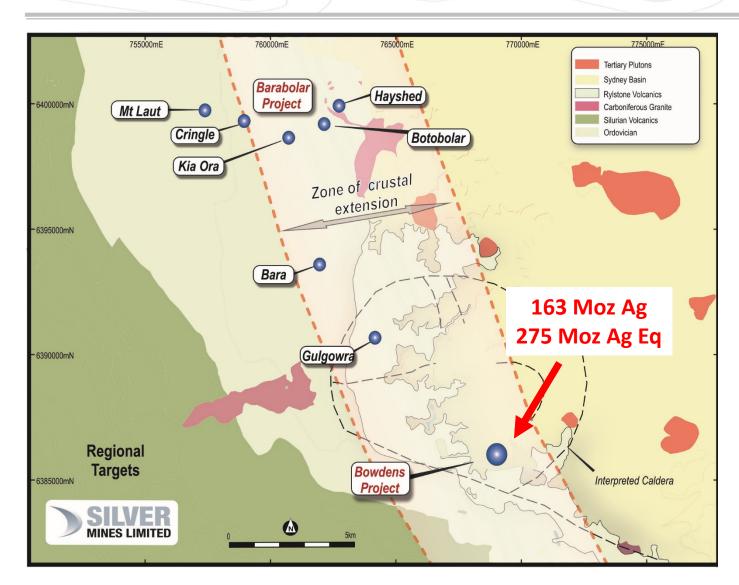




#### **Regional Targets**

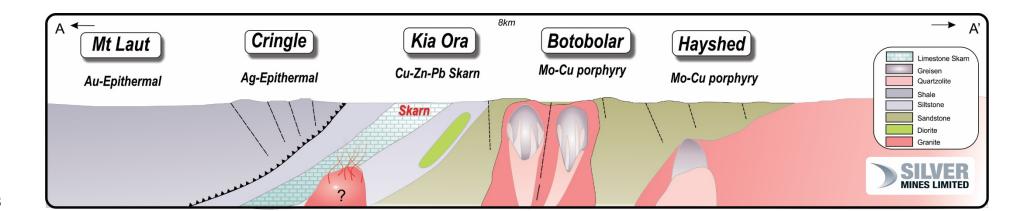
- Silver Mines developing regional intrusive phase mapping.
- Identification of potential sites for caldera proximal deposits such as Bowdens Silver and Coomber.
- Barabolar is an outstanding new discovery currently being drilled.

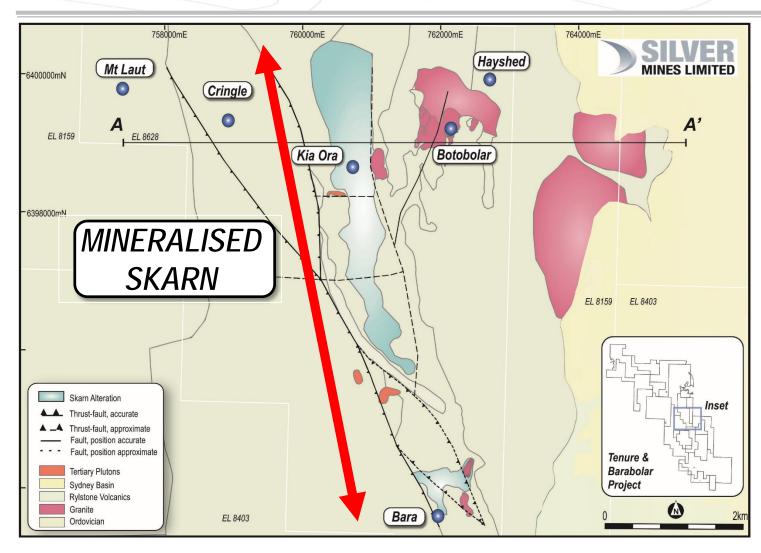




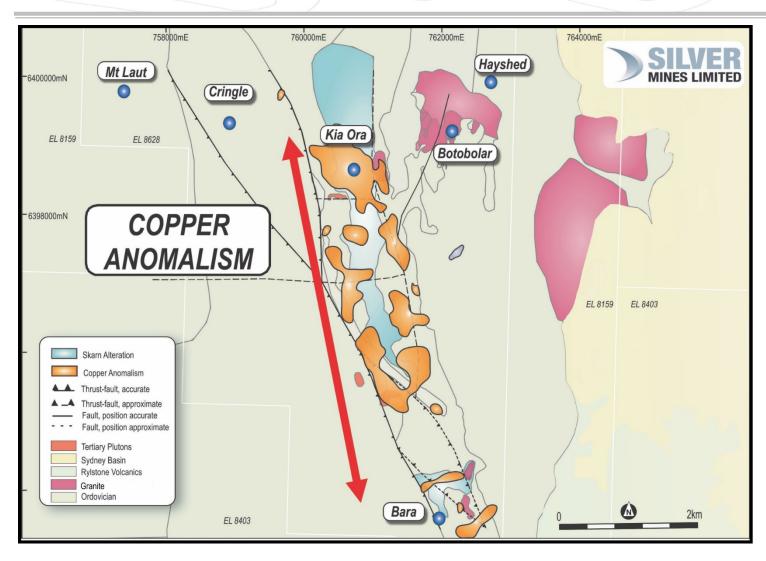


- Barabolar Project area located 10 kilometres northwest of Bowdens.
- 9000 x 2000 metre corridor of base-metal and precious metal soil anomalies.
- Mineralised skarn mapped over 5000 by 800 metres.
- Porphyry system type alteration assemblages.
- Several high order prospects:
  - Kia Ora Skarn (and proximal porphyry): Cu-Ag-Zn-Au.
  - Botobolar / Hayshed: Large molybdenum anomalies, abundant coarse molybdenite in associated felsic porphyry.

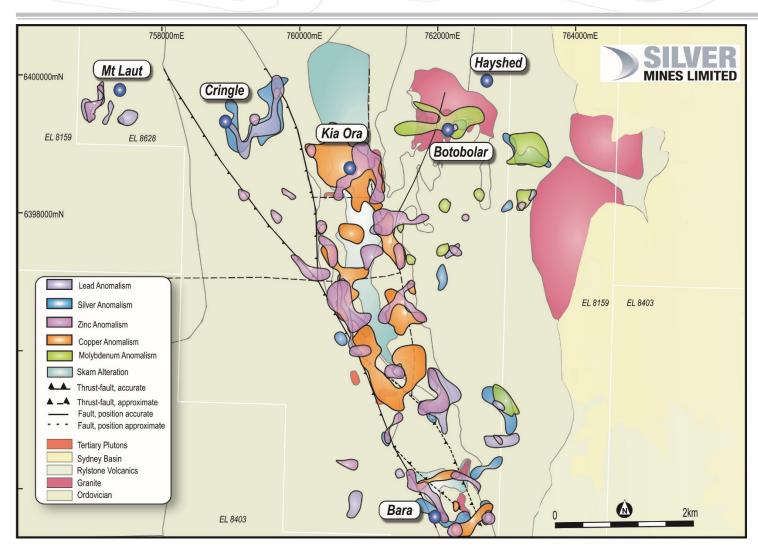
















Bara area rock chip sample

10.3% zinc

6.39% lead

**0.19%** copper

252g/t silver

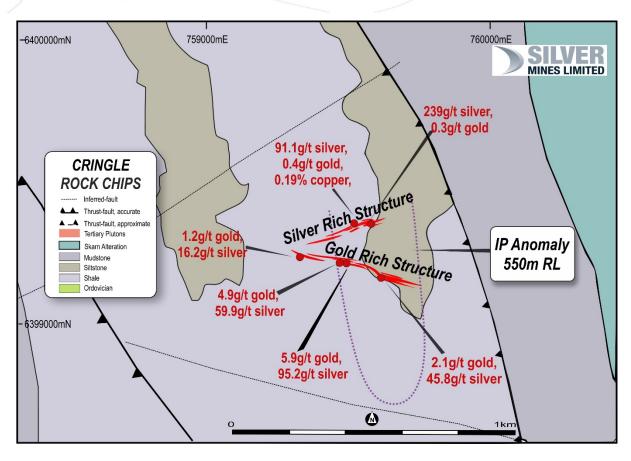
0.16g/t gold

### **Recently Discovered Cringle Prospect**

- Recent mapping and sampling discovers high-grade gold bearing structures at the Cringle Prospect within the Barabolar Project area.
- >400 metres of strike length inferred from mapped gossanous outcrop.
- Both gold and silver-rich structures identified.
- Gold-rich surface rock assays include:

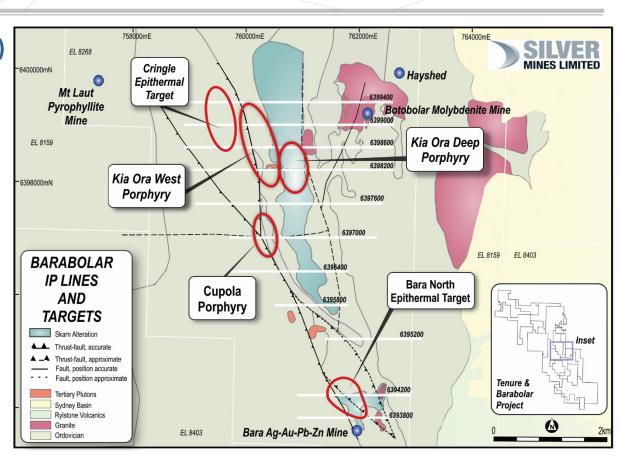
5.9g/t gold and 95.2g/t silver; 4.9g/t gold and 59.9g/t silver; 2.1g/t gold and 45.8g/t silver; 1.2g/t gold and 16.2g/t silver.

- Epithermal gold-silver exploration model.
- 900m x 400m chargeability (IP) anomaly from near surface.
- Cringle will be drilled as part of current Barabolar drilling program commencing in September 2018.



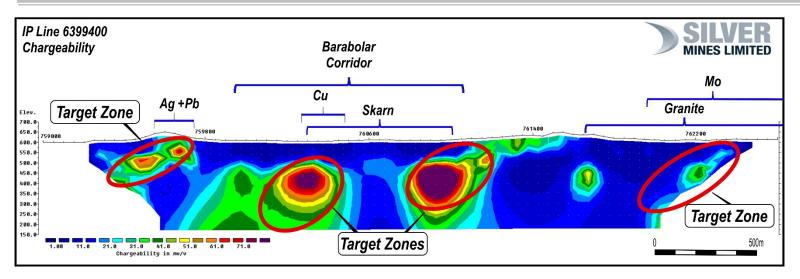
#### **Geophysics Program**

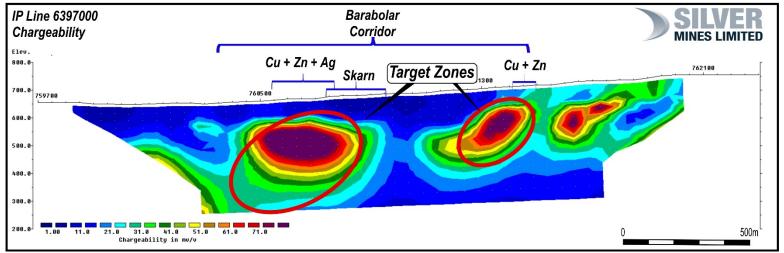
- Induced Polarisation (IP) program (~30 line kms) completed July 2018.
- Full interpretation completed early August 2018.
- 3D magnetic modelling.
- Potential gravity survey.





## **Chargeability – Initial view**







#### Chargeability - Initial view

- Chargeability anomalies inferred to represent sulphide accumulations.
- Very high chargeability responses beneath zones of significant copper zinc silver in soils.
- Coincident with surface mineralisation and mapped skarn and quartzolite units.
- From surface to below 300 metres depth.
- Significant target generation through the convergence of datasets geophysics, geochemistry, geology and structure.
- Multiple drill targets generated.



# **Bowdens Silver Project**



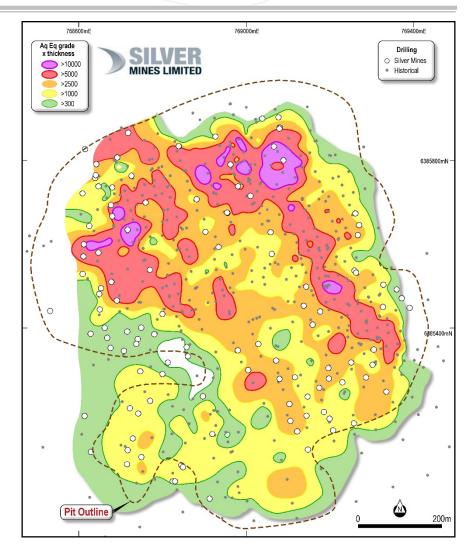


#### **Drilling**

#### Silver Mines drilling has focused on:

- Both infill and extensional drilling.
- Oriented core drilling enabling a detailed structural interpretation of high-grade zones.
- Drilling intersecting basement
   Ordovician rocks resulting in new discoveries at depth.

Company	DD	RC	Total
CRA, Silver Std, Golden Shamrock	8,764	40,965	49,729
Kingsgate	6,146	12,785	18,931
Silver Mines	13,648	14,075	27,723
Total	28,558	67,825	96,383







#### Bowdens Silver Resource (as at September 2017)

30 g/t Ag Eq Cut	Tonnes (Mt)	Silver Eq. (g/t)	Silver (g/t)	Zinc (%)	Lead (%)	Million Ounces Silver	Million Ounces Silver Eq.
Measured	76	72	45	0.37	0.25	111	175
Indicated	29	59	31	0.38	0.25	29	55
Measured & Indicated	105	68	41	0.37	0.25	140	230
Inferred	23	60	31	0.40	0.28	23	45
Total	128	67	40	0.38	0.26	163	275

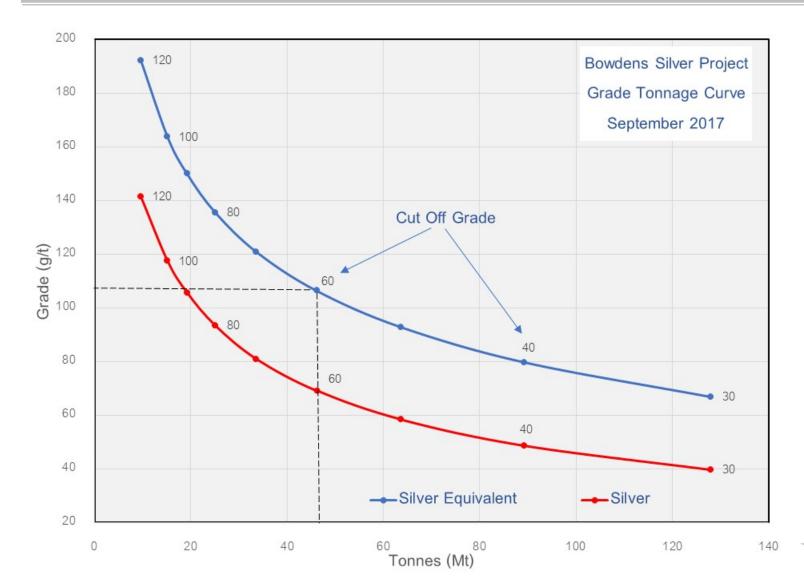
See Appendix 1 and 2.

Announced 19<sup>th</sup> Sept. 2017 - compared to the 2012 Mineral Resource Estimate this resource represents a:

- 51% increase in total silver equivalent ounces
- 22% increase in silver ounces
- 45% increase in total tonnes
- Measured and Indicated Resources increased from 59% to 82% of the total resource.

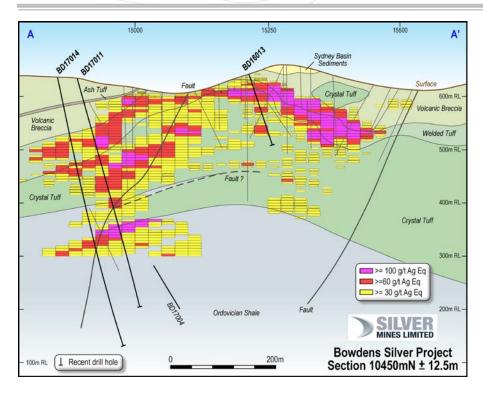


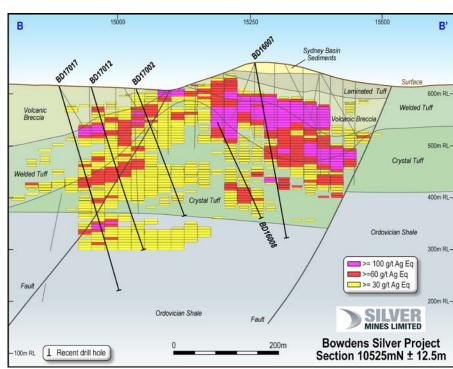
#### Bowdens Silver Resource (Refer to Appendix 1 and 2)





#### **Block Model**





## Bowdens Silver Reserve (as at May 2018)

	Tonnes (Mt)	Silver Eq. (g/t)	Silver (g/t)	Zinc (%)	Lead (%)	Silver Eq. Million Ounces	Silver Million Ounces	Zinc Kilo- tonnes	Lead Kilo- tonnes
Proved	28.6	102.2	69.75	0.44	0.32	93.85	64.05	125.11	91.43
Probable	1.3	84.4	53.15	0.43	0.29	3.60	2.27	5.74	3.91
Total	29.9	101.4	69.01	0.44	0.32	97.45	66.32	130.84	95.33

See Appendix 4.



#### **Feasibility Study**

#### September 2017

Mineral Resource Complete (275 Moz Ag Eq)



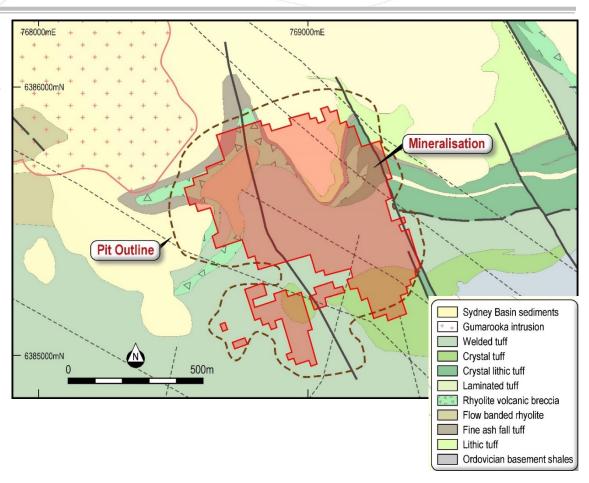
#### May 2018

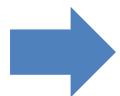
Ore Reserve Complete (97 Moz Ag Eq)



**June 2018** 

Feasibility Study Complete



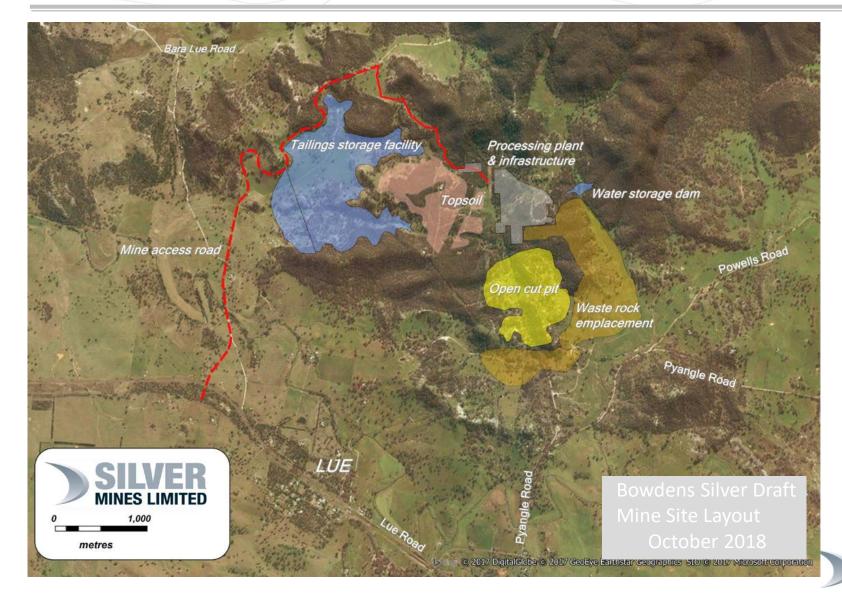


2019/2020

**EIS and Approvals** 



## **Bowdens Silver Mine Development**





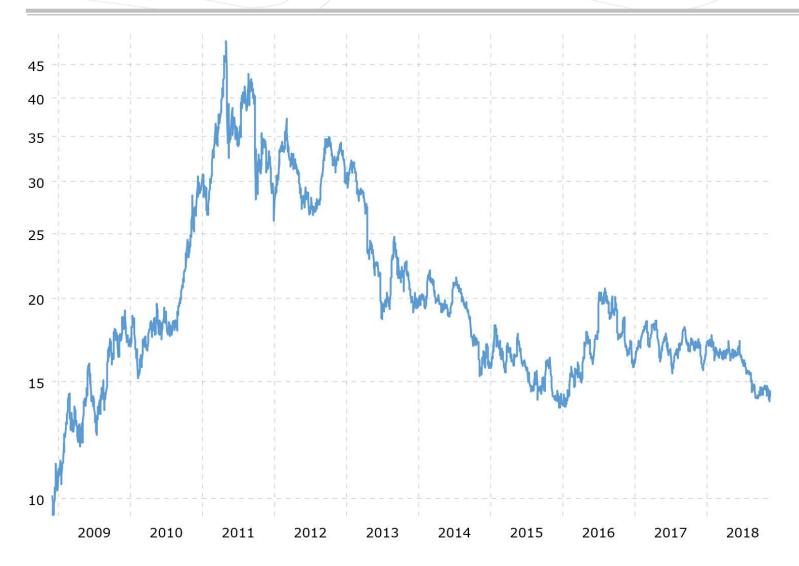
## Feasibility Study Complete (as at June 2018)

Physical Metrics	Unit	Value
Production Life	Years	16
Ore Mined	Mt	29.9
Waste Mined	Mt	48.2
W:O Strip Ratio	Х	1.6
Ag Recovered in Concentrate	Moz	52.91
Zn Recovered in Concentrate	kt	108.0
Pb Recovered in Concentrate	kt	79.3
Financial Metrics	AUD M	USD M
Revenue	1,899.5	1,424.7
Operating Expenses	1,340.8	1,005.6
Operating Margin	558.7	419.0
Undiscounted Cashflow before Tax	257.7	193.3
Undiscounted Cashflow after Tax	155.7	116.7
Project NPV (Pre-Tax)	143.9	107.9
Project NPV (Post Tax)	70.6	52.9
Project IRR (Pre-Tax): Nominal	20	.8%
Project IRR (Post Tax): Nominal	14	.6%
Capital Costs	AUD M	USD M
Initial	246.0	184.5
LOM Sustaining	53.9	40.4
Unit Costs (Ag Basis)	AUD/oz	USD/oz
C1 Costs	15.47	11.60
All in Sustaining Cost (AISC)	17.25	12.94

For full Feasibility Study disclosures refer to the Silver Mines Limited announcement of 14 June 2018. Silver prices assumed for financial modelling were: CY20 = US\$21.50 /oz, CY21 = US\$22.00 /oz, CY22 = US\$22.50 /oz. A zinc price of US\$1.25 /lb was used and a lead price of US\$1.00 /lb.



#### Historical Silver Prices US\$ per Ounce



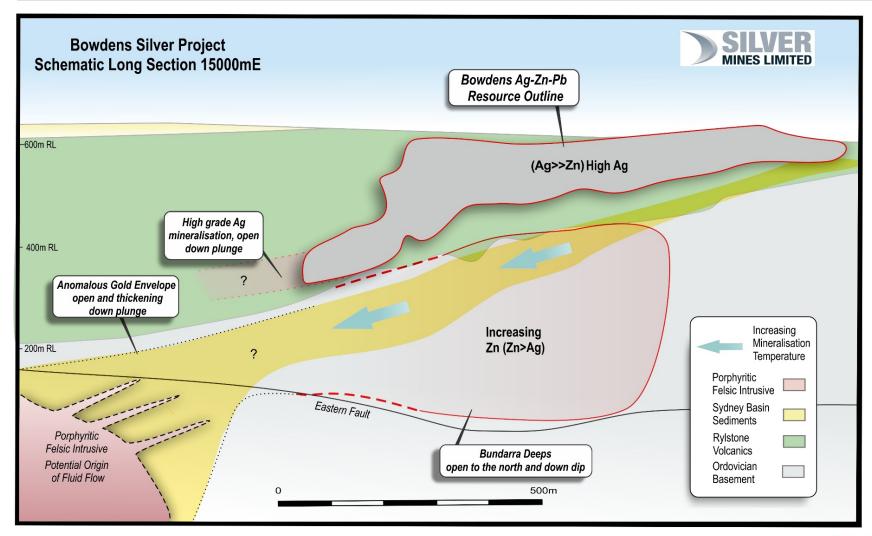


# Near Mine Mineralised System





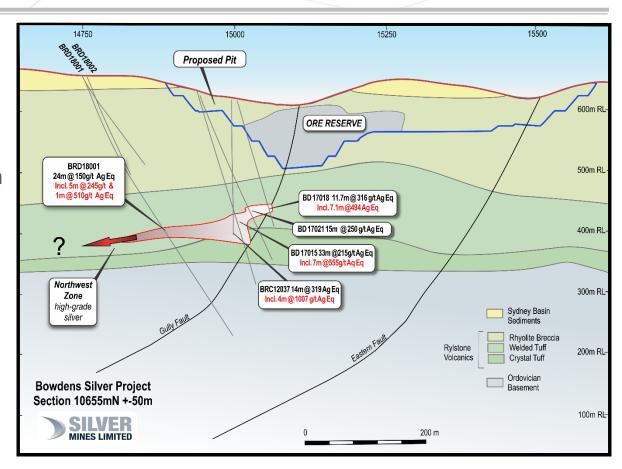
## **Near Mine Mineralised System**





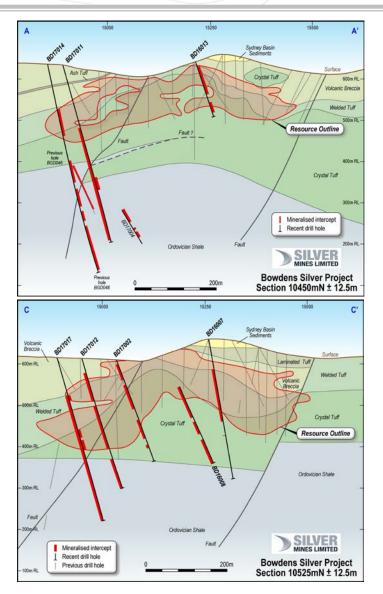
#### Near Mine Mineralised System - Current Drilling

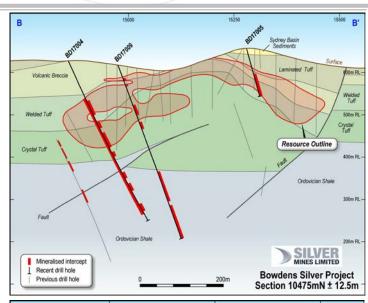
- High-grade silver and base metal mineralisation between 10 and 30 metres
- Currently defined over a strike length of 150 metres and open in several directions.
- Potential for the development of underground mining tonnages.

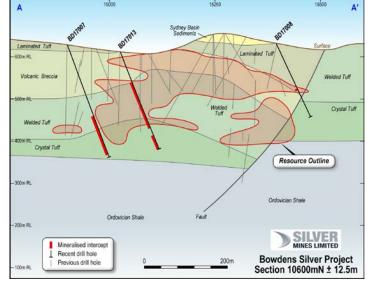




## **Potential Resource Extensions at Depth**

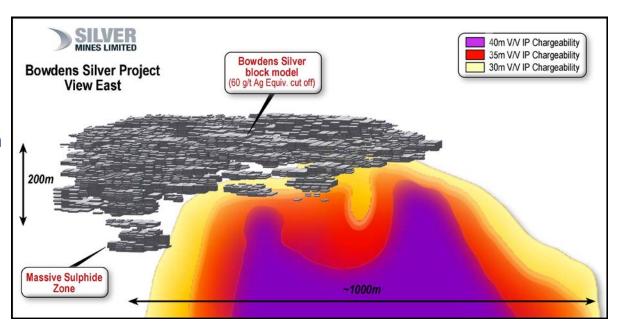






## Major IP Anomaly Identified – Mostly Undrilled

- IP survey suggests
   accumulation of sulphide
   minerals beneath the
   deposit to the south.
- Is there a deep Mt Leyshon equivalent (>3mOz Au) or better?
- Massive sulphide intersections on northern edge of IP anomaly.
- Spectral mineralogy indicates the deposit is zoned from south (cooler) to north (hotter).





#### Massive Sulphide Discovery – Bowdens Deeps

- Massive to semi-massive sulphide discovery.
- ~100 metres below the Mineral Resource.
- Mineralised zone over 315 metres.
- Significant gold content.
- Results include:
- 31.25m @ 3.24% Zn, 1.88%
   Pb, 23g/t Ag, 0.4g/t Au
   (218g/t AgEq) including;
- 18.25m @ 4.6% Zn, 3.0% Pb
   31g/t Ag, 0.52g/t Au (313g/t AgEq).



 The mineralised system is interpreted to be vectoring to the northwest and remains totally open along strike and down dip.



#### Discovery of Porphyritic Intrusion – Bowdens Deeps

- Significant discovery of porphyritic felsic intrusion beneath the Bowdens Silver deposit.
- The intrusion is associated with strong metal zonation consistent with potential porphyry associated gold-copper mineralisation.



- Highly anomalous molybdenum content to the north west of Bowdens (high level indicator in mineralised porphyry systems).
- The mineralised system is interpreted to be vectoring to the northwest and remains totally open along strike and down dip.



#### **Looking Forward**

- Barabolar is an outstanding exploration play drilling commenced
  - Geological and structural to expand to the west.
  - Soil program highlighting extensive Cu-Mo-Zn-Ag-Au anomalism to be expanded to the west.
  - Induced Polarisation (IP) program (~30 line kms) complete.
  - Full interpretation completed.
  - 3D magnetic modelling.
  - Up to 7,500 metres drilling commenced October 2018.
    - 5,000 metres specific shallow target drilling to 200 metres depth.
    - 2,500 metres + deeper drilling in selected areas.
- Completion of Bowdens Silver Environmental Impact Statement first half 2019
- Submission for Development Consent
- Stronger Market for Precious Metals?







#### Appendix 1 – Bowdens Silver Resource (as at September 2017)

30 g/t Ag Eq Cut	Tonnes (Mt)	Silver Eq. (g/t)	Silver (g/t)	Zinc (%)	Lead (%)	Million Ounces Silver	Million Ounces Silver Eq.
Measured	76	72	45	0.37	0.25	111	175
Indicated	29	59	31	0.38	0.25	29	55
Measured & Indicated	105	68	41	0.37	0.25	140	230
Inferred	23	60	31	0.40	0.28	23	45
Total	128	67	40	0.38	0.26	163	275

The Bowdens Mineral Resource Estimate has been compiled by H&S Consultants Pty Ltd using Multiple Indicator Kriging and the reporting is compliant with the 2012 JORC Code and Guidelines. For full disclosures refer to the Silver Mines Limited announcement of 19 September 2017.

- 1. Bowdens' silver equivalent: Ag Eq (g/t) = Ag (g/t) + 33.48\*Pb (%) + 49.61\*Zn (%) calculated from prices of US\$20/oz silver, US\$1.50/lb zinc, US\$1.00/lb lead and metallurgical recoveries of 85% silver, 82% zinc and 83% lead estimated from test work commissioned by Silver Mines Limited.
- 2. Bowdens Silver Mineral Resource Estimate is reported to a 30g/t Ag Eq cut off and extends from surface and is trimmed to 300 metres RL which is approximately 320 metres below surface representing a potential volume for open-pit optimisation models.
- 3. In the Company's opinion, the silver, zinc and lead included in the metal equivalent calculations have a reasonable potential to be recovered and sold.
- 4. Variability of summation may occur due to rounding.



#### Appendix 2 - Bowdens Silver Resource (as at September 2017)

Cut off g/t Ag Eq	Tonnes (Mt)	Silver Eq. (g/t)	Silver (g/t)	Zinc (%)	Lead (%)	Million Ounces Silver	Million Ounces Silver Eq.
0	397.2	30.7	17.6	0.18	0.12	225	392
10	261.7	43.7	25.2	0.26	0.17	212	368
20	185.2	54.6	31.7	0.32	0.21	189	325
30	127.9	66.8	39.6	0.38	0.26	163	275
40	89.2	79.7	48.6	0.43	0.29	139	229
50	63.6	92.8	58.4	0.47	0.33	119	190
60	46.1	106.3	69.1	0.51	0.36	102	158
70	33.7	120.8	80.9	0.54	0.39	87	131
80	25.1	135.5	93.4	0.57	0.42	75	109
90	19.2	149.9	105.6	0.59	0.45	65	93
100	15.1	163.7	117.5	0.62	0.47	57	80
120	9.6	192.3	141.4	0.67	0.53	44	59

## **Appendix 3 - Silver Mines Resource Inventory**

Deposit name	Tonnes (Mt)	Silver Eq.	Silver (g/t)	Silver (Moz)	Silver Eq. (Moz)	Status
Bowdens Silver	128	67	40	163	275	100% owned
Webbs <sup>1</sup>	1.5	345	245	11.7	16.5	100% owned
Conrad <sup>1</sup>	2.6	206	105.4	9.0	17.5	100% owned
Total				184	309	

<sup>1.</sup> For further information on the Webbs and Conrad Projects refer to the Silver Mines Limited website.



#### Appendix 4 – Bowdens Silver Reserve (as at May 2018)

	Tonnes (Mt)	Silver Eq. (g/t)	Silver (g/t)	Zinc (%)	Lead (%)	Silver Eq. Million Ounces	Silver Million Ounces	Zinc Kilo- tonnes	Lead Kilo- tonnes
Proved	28.6	102.2	69.75	0.44	0.32	93.85	64.05	125.11	91.43
Probable	1.3	84.4	53.15	0.43	0.29	3.60	2.27	5.74	3.91
Total	29.9	101.4	69.01	0.44	0.32	97.45	66.32	130.84	95.33

The Bowdens Reserve has been compiled by AMC Consultants Pty Ltd and is based on the September 2017 Mineral Resource Estimate generated for Silver Mines by H & S Consultants Pty Ltd (see ASX announcement 19 September 2017). For full disclosures refer to the Silver Mines Limited announcement of 30 May 2018.

- 1. Calculations have been rounded to the nearest 100,000 t, 0.1 g/t silver and 0.01% zinc and lead grades respectively. The Ore Reserve is reported by economic cut-off grade with appropriate consideration of modifying factors including costs, geotechnical considerations, mining and process recoveries and metal pricing.
- 2. Bowdens' silver equivalent: Ag Eq (g/t) = Ag (g/t) + 33.48\*Pb (%) + 49.61\*Zn (%) calculated from prices of US\$20/oz silver, US\$1.50/lb zinc, US\$1.00/lb lead and metallurgical recoveries of 85% silver, 82% zinc and 83% lead estimated from test work commissioned by Silver Mines Limited.



#### **Board of Directors**

#### **Keith Perrett, Chairman**

Mr Perrett has had a long involvement in agriculture as a producer and industry leader at local, state, national and international levels. He was formerly Chairman of the Grains Research and Development Corporation (GRDC), the National Rural Advisory Council (NRAC), the Wheat Research Foundation, and President of the Grains Council of Australia.

#### **Anthony McClure, Managing Director**

Mr McClure graduated with a Bachelor of Science (Geology) degree from Macquarie University in 1986. He has had 30 years technical, management and financial experience in the resource sector worldwide in project management and executive development roles. He has also worked in the financial services sector within the mineral and energy sectors.

Mr McClure is currently a director of unlisted public company Mekong Minerals Limited (since October 2010) and listed company Planet Gas Limited (since August 2003). He is also a past director of Bolnisi Gold NL and European Gas Limited.

#### Peter Langworthy, Non-Executive Director

Mr Langworthy graduated with a Bachelor of Science (Geology) degree (Hons) from Macquarie University in 1986. His career spans 30 years in mineral exploration and project development both in Australia and internationally. His industry experience includes senior management roles with WMC Resources Limited, PacMin Mining Limited, and Jubilee Mines NL. Mr Langworthy led the management team that was responsible for numerous discoveries that led to the outstanding success of Jubilee Mines.

Mr Langworthy is currently Managing Director of Gateway Mining Limited (since 2018) and Chairman of Syndicated Metals Limited (since March 2012). Mr Langworthy previously held directorships with Northern Star Resources Limited, Talisman Mining Limited, Falcon Minerals Limited, Pioneer Resources Limited and Capricorn Metals Limited.

#### Jonathan (Jo) Battershill, Non Executive Director

Mr Battershill graduated with a Bachelor of Engineering (Geology) degree (Hons) from the Camborne School of Mines, United Kingdom in 1995. His career spans over 20 years in mining, business development and finance both in Australia and internationally. His industry experience includes senior operational and business development roles with WMC Resources Limited as well as significant stockbroking experience at Hartleys, Citigroup and UBS both in Sydney and London. Mr Battershill was consistently voted one of the leading mining analysts in Australia between 2009 and 2015 by institutional investors.

Until recently, Mr Battershill was the Global Mining Strategist (Executive Director) with the UBS investment bank in London and is currently the Principal of JJB Advisory Limited, a private advisory and consulting firm based in the UK.



#### **Competent Persons Statements**

#### Ore Reserve

The information in this report that relates to Ore Reserves within the Bowdens Silver Project is based on information compiled or reviewed by Mr Adrian Jones of AMC Consultants Pty Ltd who is a consultant to the Company. Mr Jones is a member of the 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 Jones consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

Mr Jones visited the Bowdens mine site during April 2017 to review the operations, consider the conditions of the site, and assess the data collection methods and techniques used by site personnel.

The Ore Reserve has been prepared by Mr Adrian Jones, AMC Consultants Pty Ltd, after peer review of the mining section of the Feasibility Study. Other experts relied upon include H & S Consultants Pty Ltd, GR Engineering Services Limited, ATC Williams Pty Limited. and Jacobs Australia Pty Limited, for Mineral Resources, Metallurgy & Process Design and Tailing Storage Facility design. Work on environmental, marketing and logistics and the financial modelling were undertaken by other consultants on behalf of the Company and certified by representatives of Silver Mines.

#### **Mineral Resources**

The information in this report that relates to Mineral Resources is based on work compiled by Mr Arnold van der Heyden who is a Director of H & S Consultants Pty Ltd. Mr van der Heyden is a Member and Chartered Professional (Geology) of the Australian 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 van der Heyden consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

#### **Exploration and Drill Results**

The information in this report that relates to mineral exploration drill results from Bowdens Silver is based on information compiled or 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.