

Ref: /BSX/609/BSX063

# Quarterly Report for the period ending 31 December 2017

## Highlights

- Blackstone's first drill hole at Little Gem has intersected **3.0% cobalt and 44 g/t gold** with the following significant results:  
**4.3 m @ 1.0% cobalt & 15 g/t gold;** including  
**1.1 m @ 3.0% cobalt & 44 g/t gold.**
- Initial results from the maiden drilling at Little Gem are consistent with historic drilling and adit channel sampling which returned average grades of **3% cobalt and 20 g/t gold**;
- Blackstone quadrupled the cobalt-gold target zone at Little Gem to **48 km of untested strike potential** of geology **analogous to the world class Bou-Azzer Cobalt district in Morocco** (over 100kt of cobalt production over 75 years);
- Oversubscribed placement to institutional and sophisticated investors raised \$5.0 million (before costs) with strong demand from new institutional investors from Australia, Asia and North America.

## Introduction

During the December Quarter, Blackstone commenced its maiden drilling program at the very high grade Little Gem Cobalt-Gold Project in British Columbia, Canada (Refer BSX Announcement 9 January 2018). The first successful diamond drill hole tested the upper portion of the alteration zone and was terminated (due to mechanical issues) halfway through the mineralised target (Refer Figure Two). The successful drill hole intersected massive, semi-massive and disseminated mineralisation with grades of up to 3.0% cobalt and 44 g/t gold. The initial results from the maiden drilling at Little Gem are consistent with historic drilling and adit channel sampling which returned average grades of 3% cobalt and 20 g/t gold.

The Company now looks forward to completing the maiden drill program upon recommencement in Q2 2018, to follow up the outstanding initial results and to further understand the full potential of the Little Gem prospect. Future drilling at Little Gem will be focused on delineating the extents of the mineralisation with potential to deliver a maiden resource in the medium term.

## BLACKSTONE FAST FACTS

Shares on Issue	86.7m
Share Price	\$0.45
Market Cap	\$39m
ASX Code	BSX

## BOARD & MANAGEMENT

**Non-Exec Chairman**  
Hamish Halliday

**Managing Director**  
Scott Williamson

**Technical Director**  
Andrew Radonjic

**Non-Exec Directors**  
Bruce McFadzean  
Stephen Parsons  
Michael Konnert

**Joint Company Secretaries**  
Michael Naylor  
Jamie Byrde

## ADVANCING THE FOLLOWING PROJECTS

**High Grade (3% Cobalt & 20 g/t Gold) Little Gem Project**  
British Columbia, Canada

**Cartier Cobalt-Nickel Project**  
Quebec, Canada

**Gold and Nickel Projects**  
Western Australia

- Silver Swan South
- Red Gate
- Middle Creek

## REGISTERED OFFICE

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## M I N E R A L S

During the December Quarter, Blackstone acquired extensive land holdings along strike from the Little Gem Cobalt-Gold Project (Refer BSX Announcement 9 November 2017). The acquisition sees the Company take control of a commanding land position over a mineralised belt proven to host very high grade gold and cobalt. Blackstone has increased its target strike zone from 12 km to over 48 km of strike, with the Little Gem Project now covering 335 km<sup>2</sup> of tenure.

The acquisition was made during the first phase of exploration at the Little Gem Project, where the Company has confirmed the high grade cobalt and gold mineralisation is associated with the contact between serpentinized ultramafics and granodiorites. This style of mineralisation is analogous to the world class Bou-Azzer cobalt district in Morocco, which has produced over 100,000 tonnes of Cobalt metal and tens of tons of Gold.

On the Australian Projects Blackstone is awaiting full results from the second phase aircore drill program at the Silver Swan South project located in the Eastern Goldfields of Western Australia. The Company expects to receive the results over the coming weeks and further drilling is planned for during the March Quarter. During the December Quarter the company continued to work on finalising priority targets at the Red Gate project for drill testing in the coming Quarter. Blackstone has advanced the tenement applications for the Middle Creek project and has been granted a portion of the Middle Creek tenements, the Company expects the remaining tenements to be granted during the March Quarter.

## Canadian Projects

### Little Gem Project (right to earn 100% interest)

Subsequent to the end of the quarter Blackstone Minerals announced outstanding results from the first hole of a maiden drilling program at the very high grade Little Gem Cobalt-Gold Project in British Columbia, Canada (Refer Figure Three and BSX Announcement 9 January 2018).

#### Highlights of the Project include:

- Blackstone's first drill hole intersected massive, semi-massive and disseminated mineralisation (Refer Image One) with the following significant results:
  - **4.3 m @ 1.0% cobalt & 15 g/t gold;** including
  - **1.1 m @ 3.0% cobalt & 44 g/t gold.**
- Initial results from the maiden drilling are consistent with historic drilling and adit channel sampling which returned average grades of **3% cobalt and 20 g/t gold;**
- The first hole has only tested the upper portion of the mineralised target with **multiple zones of massive sulfide (Co-Au) mineralisation** identified within a broader alteration halo (Refer Figure Two);
- Maiden drilling is consistent with historic underground drilling from adits including:
  - **1.8 m @ 2.4% cobalt & 112 g/t gold;**
  - **3.3 m @ 1.4% cobalt & 80 g/t gold;** and
  - **3.3 m @ 1.4% cobalt & 12.3 g/t gold.**
- Results from historic adit channel sampling at Little Gem include:
  - **1.8 m @ 4.4% cobalt & 73 g/t gold;**
  - **2.0 m @ 3.1% cobalt & 76 g/t gold;** and
  - **1.5 m @ 5.4% cobalt & 26 g/t gold.**

## M I N E R A L S

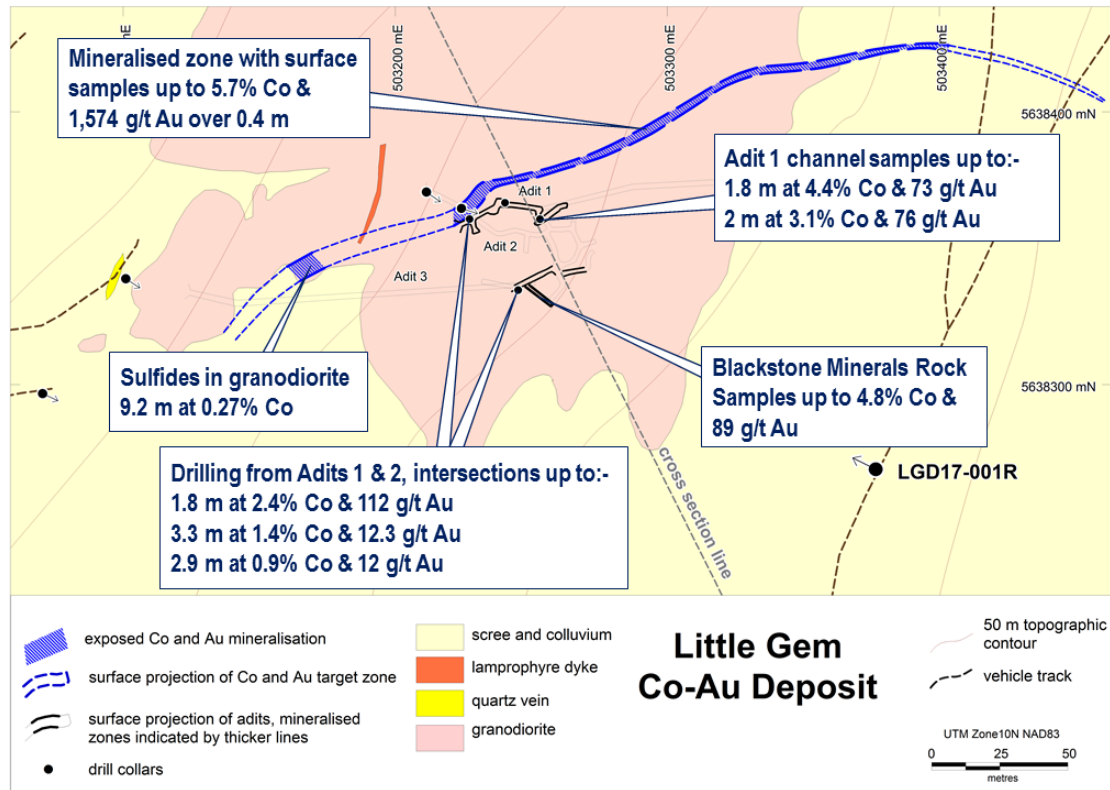
- The Little Gem Project covers a large land holding with **48 km of untested strike potential** of geology **analogous to the world class Bou-Azzer primary Cobalt district in Morocco** (Refer Figure Four);
- Little Gem is favourably located **less than 15 km along strike from the Bralorne-Pioneer mining complex (endowment of 4.4 Moz at 17 g/t Au)**.

Image One | Little Gem drill hole LGD17-001R mineralised intersection



## M I N E R A L S

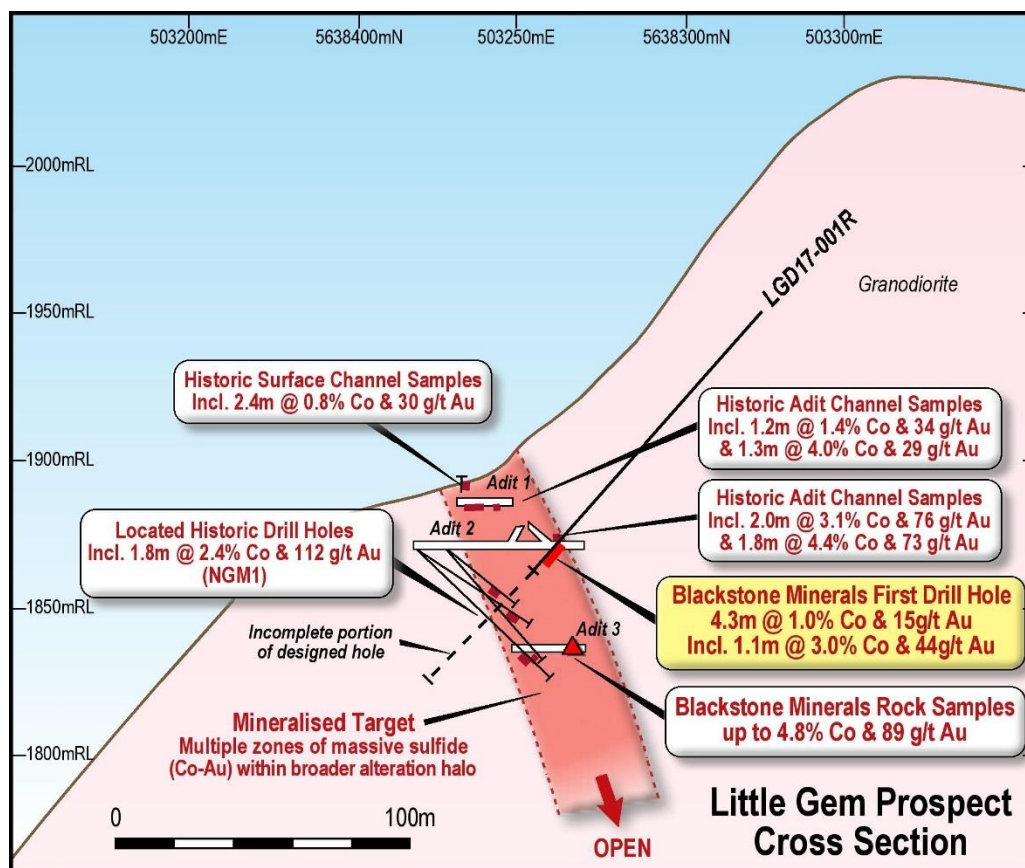
Figure One | Little Gem Plan of Local Geology, Underground workings & Drill Holes





## M I N E R A L S

Figure Two | Little Gem Cross Section showing drill hole LGD17-001R



The Little Gem Project was discovered in the 1930's by prospectors identifying a pink cobalt-bloom on weathered mineralisation that led to three adits being developed. A total of 1,268 m of drilling was completed from underground and detailed channel sampling was taken from the adits. Results from this work generated some exceptional Cobalt and Gold assays including:

### Historic drilling

1.8 m @ 2.4% cobalt & 112 g/t gold;  
3.3 m @ 1.4% cobalt & 12 g/t gold; and  
4.1 m @ 1.4% cobalt & 11 g/t gold.

### Underground channel sampling

1.8 m @ 4.4% cobalt & 73 g/t gold; and  
2.0 m @ 3.1% cobalt & 76 g/t gold.

### Surface channel sampling

0.4 m @ 5.7% cobalt & 1,574 g/t gold; and  
0.1 m @ 4.6% cobalt & 800 g/t gold.

Little Gem is mostly underlain by granite of the Coast Plutonic Complex and ultramafic rocks on what is interpreted to be the northern extension of the Cadwallader fault zone (Refer Figure Four). These are the major geological units and structures important to the mineral deposits either as the host rocks or sources of the mineralising fluids that gave rise to the Bridge River mining camp. The camp has 60 mineral localities including the Bralorne-Pioneer mining complex (**endowment of 4.4 Moz at 17 g/t Au**) which retains the status of the foremost gold producer in British Columbia and the sixth largest in Canada. Little Gem is only 15 km along strike to the north of the Bralorne-Pioneer mining complex.

There has been very little modern day exploration at Little Gem with the main activities being airborne geophysical surveys (including magnetic, radiometric and electromagnetic ("EM") surveys) in the 1970's and a further two drill holes completed in 1986.

The second mineral occurrence at the Little Gem Project is the historic Jewel Gold Prospect which supported some gold production from 1938 to 1940 and is located only 1.1 km north-northeast of the Little Gem Mine. Since Blackstone began working on the Little Gem Cobalt-Gold Project it has verified the mineralisation identified historically at the Little Gem Cobalt-Gold Prospect and the Jewel Gold Prospect and discovered a new high grade Gold prospect named Roxey.

The Roxey Gold prospect is located 1.5 km west-southwest of the Little Gem Cobalt-Gold prospect and is along strike of the cobalt-gold mineralisation at Little Gem. Blackstone visually identified Roxey during the due diligence site visit and took rock chip samples within the target area which assayed up to **24 g/t gold, 1.9% copper & 24 g/t silver** (Refer BSX Announcement 6 September 2017). Mineralisation at Roxey is associated with quartz-pyrite altered diorite containing chalcopyrite.

Surface rock chip samples taken to verify the mineralisation at the Jewel prospect returned up to **98 g/t gold and 3.2% copper** (Refer BSX Announcement 6 September 2017 for full set of results). These results confirm what Blackstone's recent investigation has revealed with historical samples of up to **0.6 m @ 75 g/t gold and 0.45m @ 153 g/t gold** from underground and surface channel sampling, and up to **6.9 g/t gold, 19.25% copper & 137 g/t silver** from underground rock chip sampling (Refer BSX Announcement 6 September 2017 for full set of results). Mineralisation at Jewel sits in an ultramafic near the easterly trending/steep south dipping contact with the quartz diorite/granodiorite that hosts the Little Gem Prospect.

Figure Three | Location of the Little Gem Project

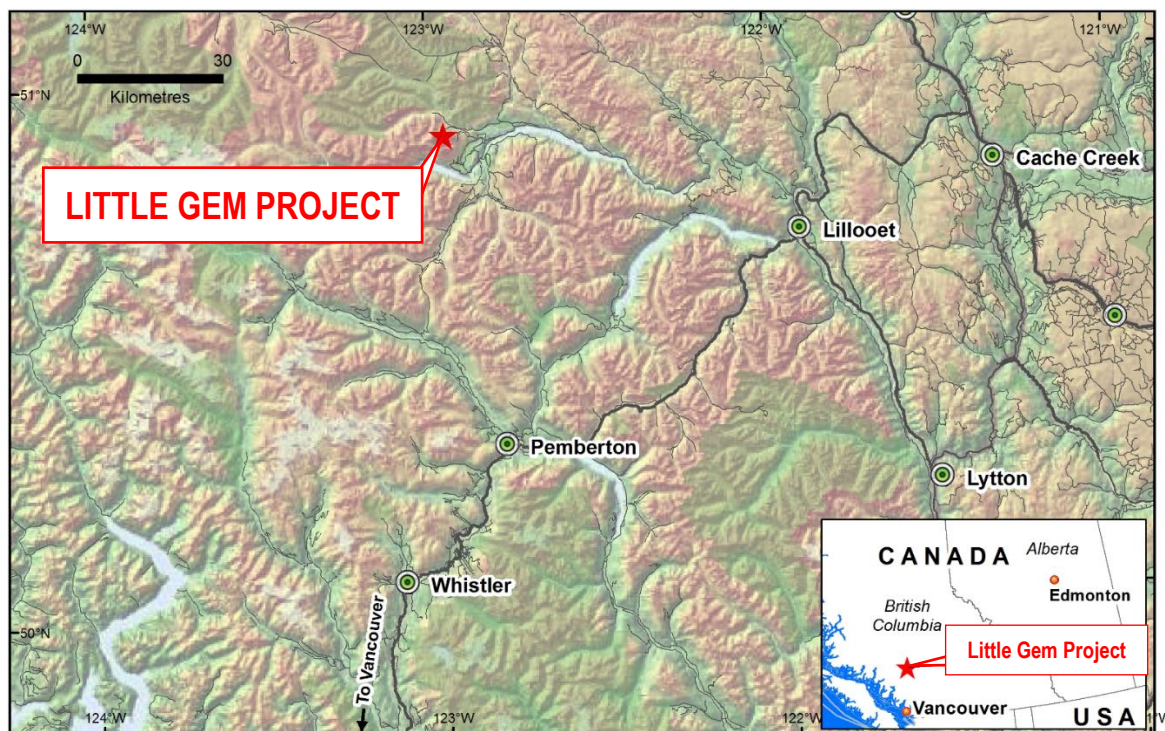
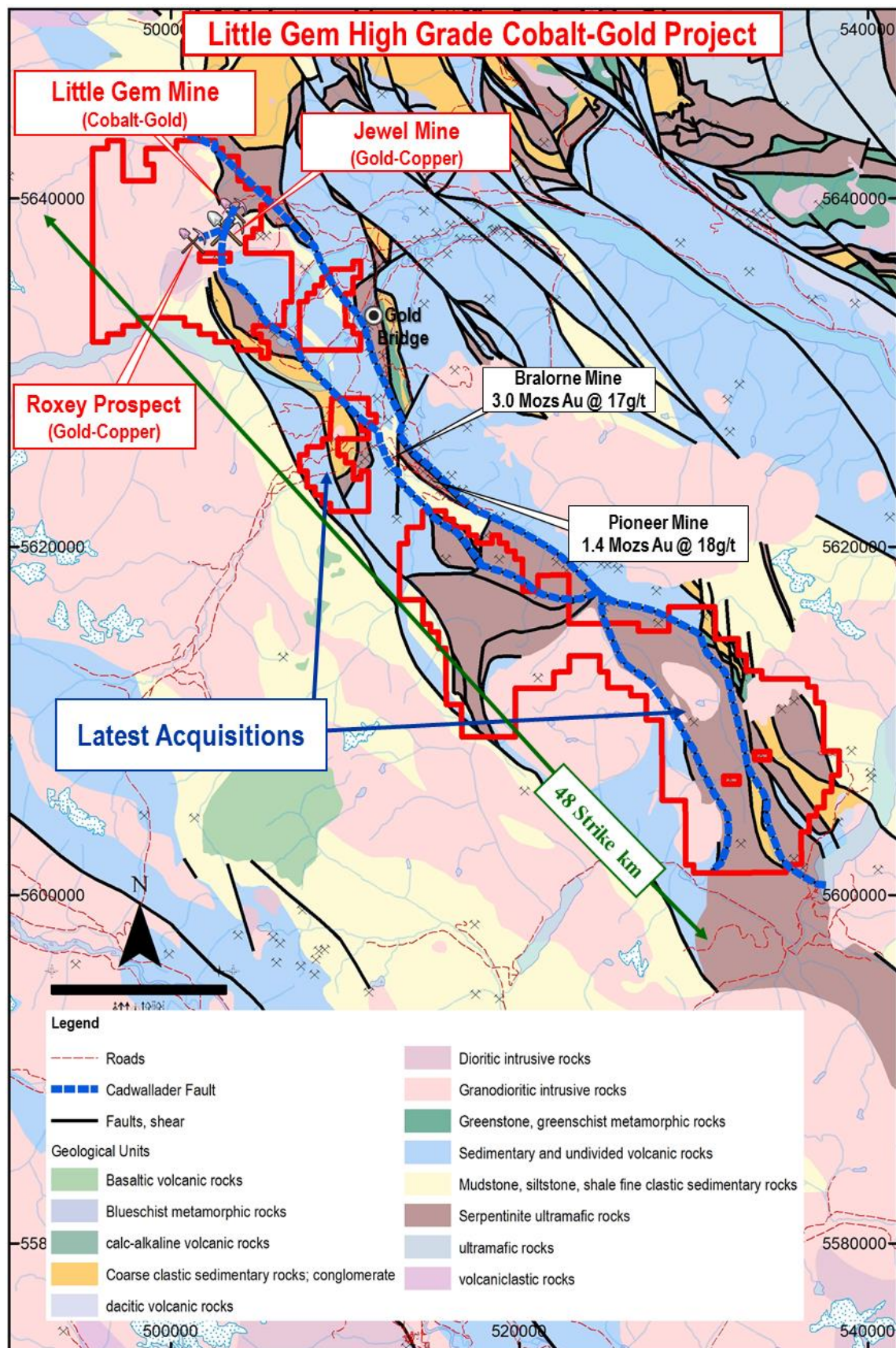




Figure Four | Little Gem Geological Setting



## **Cartier Project (right to earn 100% interest)**

The Cartier Cobalt-Nickel Project (9 km<sup>2</sup> of tenure) is located 440 km north-east of Quebec City. Historic exploration (1990's) on the project for Voisey's Bay Style Nickel and Copper has identified Cobalt within two prospects named Lac St Pierre Zones 1 & 2, the Company has commenced follow up work to understand the full potential of the Cartier Project.

## **Cobalt Market Commentary**

Cobalt contributes up to 60% of the value of Lithium Ion Batteries which in turn accounts for greater than 50% of demand for cobalt. The lithium ion battery is projected to become the world's most significant source of power with the use in electric vehicles ("EV") being the key driver. Bloomberg forecasts 35% of vehicles sold by 2040 will be electric, currently only 1% of global sales are EVs. Consequently, cobalt demand is expected to rise at 5% compound annual growth rate ("CAGR") over the next 4 years. Cobalt's other main use at 20% is in superalloys which compliments the battery demand as high-tech industry grows.

Cobalt is expected to have a supply deficit as currently mining is only just meeting demand. The cobalt price has risen significantly from US\$10/lb (US\$22,000/t) to US\$36/lb (US\$80,000/t) over the past 2 years. Current prices are still well short of the 2008 high of US\$52/lb (US\$115,000/t) which was the last time cobalt was in deficit.

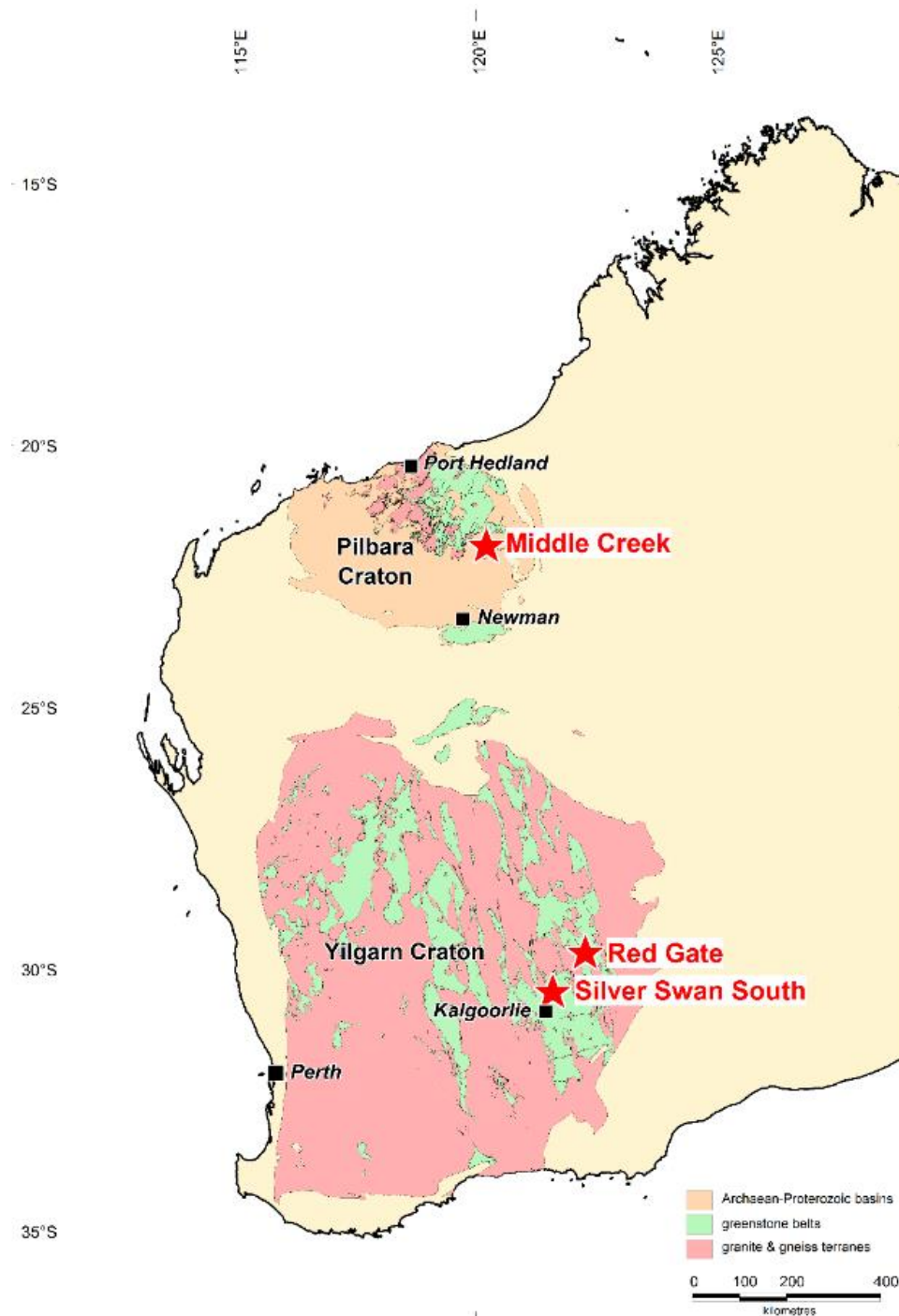
Approximately 98% of the world's supply of cobalt comes from copper and nickel production with 15 mines representing half of the world's supply. This makes the supply stream for cobalt highly sensitive to disruptions caused by mine related issues. Currently more than 50% of the world's supply of cobalt is a by-product of copper production from the Democratic Republic of Congo (DRC).



### Australian Projects

Blackstone has three Australian projects (Silver Swan South, Red Gate and Middle Creek), which are all located in Western Australia and are prospective for gold, the Silver Swan South project is also prospective for nickel sulphides. (Refer to Figure Eight).

**Figure Eight | The locations of the Australian Projects**



## Silver Swan South Project (100% interest)

### Introduction

The Silver Swan South Project comprises of one granted exploration licence E27/545 and six granted prospecting licences, P27/2191 – 2196 covering an area of 47.2 km<sup>2</sup>. The Project is along trend of the massive nickel sulphide Silver Swan Deposit (pre-mining ore reserve of 655 kt at 9.5% Nickel) and associated deposits (pre-mining resource of 10.4 Mt at 1.0% Nickel), and only 8 km northeast of the major Kanowna Belle Gold Mine (+5 Moz gold endowment).

### Activities during the December Quarter

During the Quarter Blackstone commenced the second phase of drilling at Silver Swan South to follow up on the significant gold and nickel results from the first phase of drilling. The best gold intersection from the first phase of drilling came from SNAC027 with 3 m @ 2.6 g/t gold from 52 m to the end of hole within a broader intersection of 7 m @ 1.3 g/t gold to the end of hole, sitting in weathered dacite. Drill hole SNAC033 also returned an interesting result with 1 m @ 0.21 g/t gold at the bottom of hole within pyritic dacite.

The best nickel intersection from the first phase of drilling came from SNAC015 with 4 m @ 0.5% nickel and 180 ppm copper from 68 m and 1 m @ 0.3% nickel, 52 ppm copper and 36ppb platinum and palladium from the bottom of hole. Drill hole SNAC019 also returned an interesting result of 12 m @ 0.8% nickel and 143 ppm copper from 24 m.

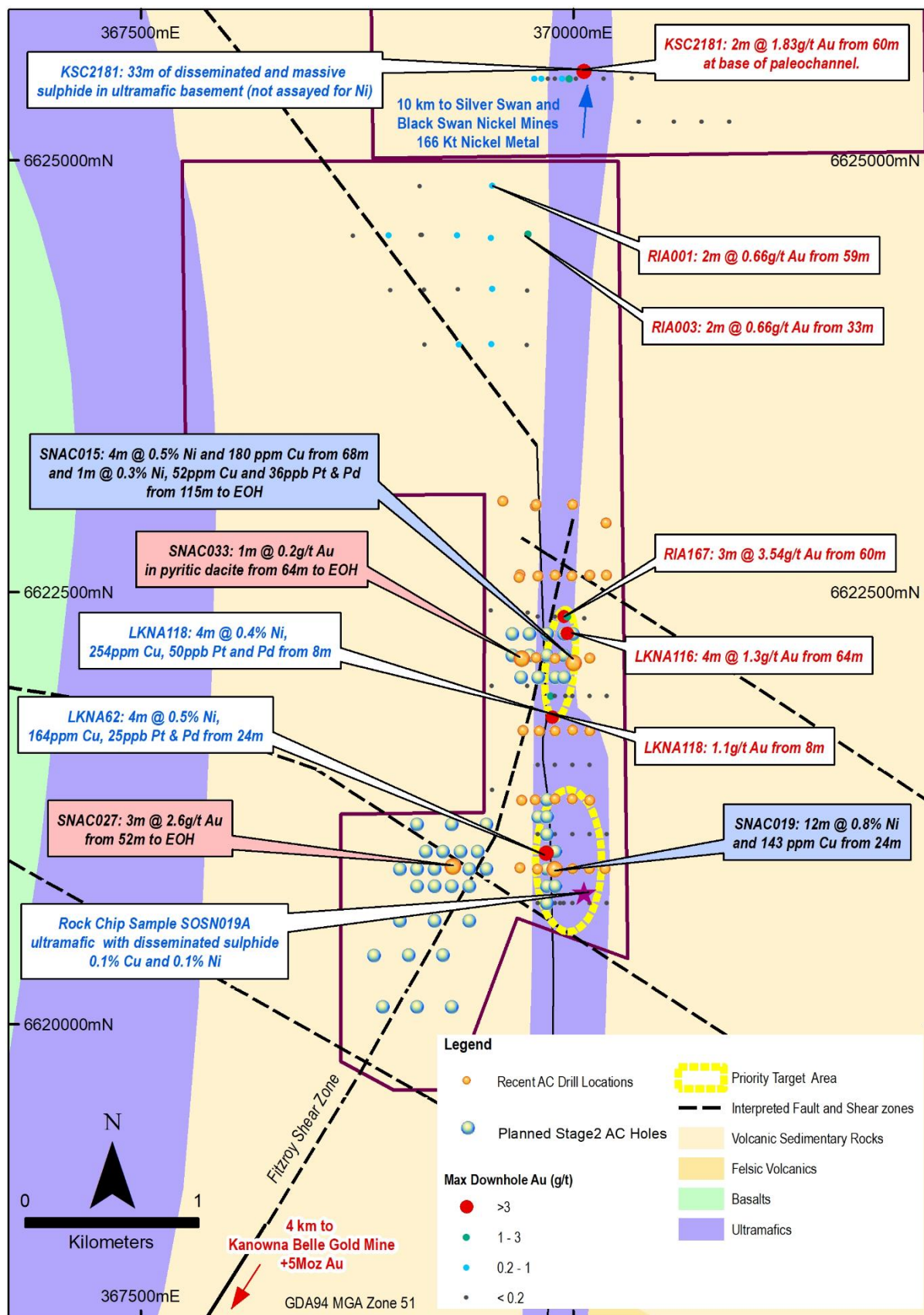
Blackstone's initial drilling at Silver Swan South is targeting both gold hosted by structural targets along strike from the Kanowna Belle Gold Mine (endowment +5Moz Au), and nickel sulphide mineralisation associated with ultramafic units along strike from the Silver Swan and Black Swan Nickel Mines (endowment 166kt Ni metal). The initial programs are designed to test for basement hosted mineralisation, using air core drilling, to improve definition of gold and base metal anomalism identified by previous reconnaissance style drilling.

This initial phase of drilling will focus on the following:

- Further definition of gold targets associated with the interpreted northern extension of the Fitzroy Shear (controlling host structure at the Kanowna Belle Gold deposit) located 8 km along strike (Refer Figure Nine);
- Infill historical, broad spaced, reconnaissance drilling which intersected up to 3.5 g/t gold;
- Target thickening of the ultramafic sequence considered highly prospective for nickel sulphides and located only 10 km from the Silver Swan Nickel Mine (Refer Figure Nine);
- Prioritise both gold and nickel targets for follow up reverse circulation ("RC") drilling.

Gold targets within the project area are associated with the interpreted northern extension of the Fitzroy Shear Zone, controlling structure for mineralization at Kanowna Belle. Previous vertical reconnaissance drilling has intersected up to 3 m @ 3.5 g/t gold and 4 m @ 1.3 g/t gold under transported lake clays. Blackstone's drill program focused on further defining the gold target in anticipation of follow up RC drilling.

Figure Nine | Silver Swan South Bedrock Geology Plan





## Red Gate Project (100% interest)

### Introduction

The Red Gate Project consists of one granted Exploration Licence E31/1096 covering an area of 145.2 km<sup>2</sup>. The Project is centred 10 km north of the Porphyry Gold Mine (0.9 Moz gold endowment) (Refer Figure Ten), 140 km northeast of Kalgoorlie. Historical exploration work has mostly targeted the Porphyry North Prospect where shallow, out cropping mineralisation has been defined. There is the potential to discover further mineralisation at Porphyry North and several other prospects nearby.

### Activities during the December Quarter

During the quarter Blackstone continued to work on finalising priority targets for drill testing in the coming months.

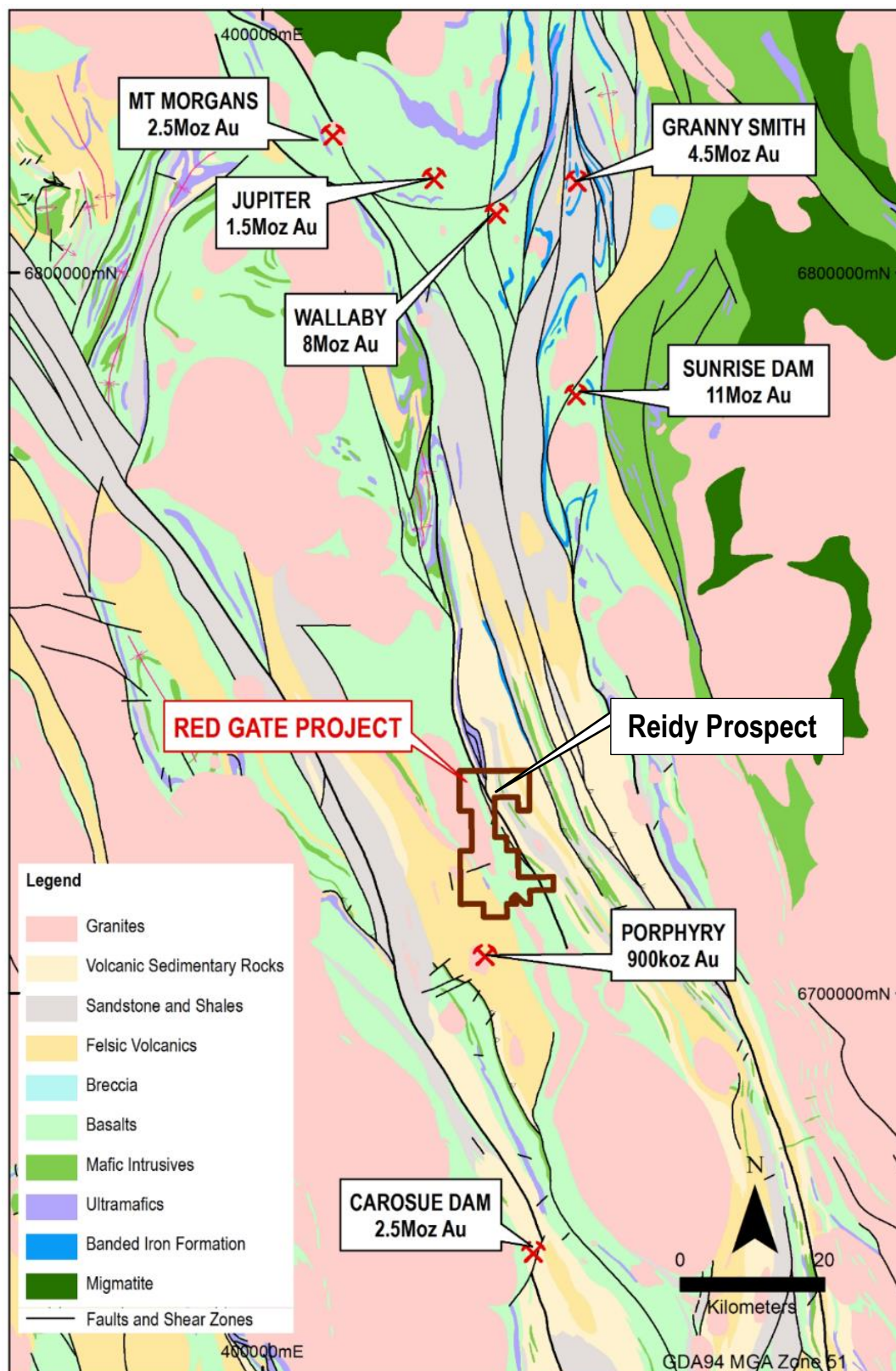
Highlights of the Red Gate Project include:-

- The Red Gate project hosts porphyries with high grade gold mineralisation including 10 m @ 8.5 g/t from 9 m at Porphyry East, 14 m @ 3.7 g/t from 1 m at Porphyry North & 12 m @ 9.2 g/t from 8 m at Porphyry West;
- The Porphyry North and Porphyry West prospects have shallow gold mineralisation coincidental with IP anomalies whilst the new porphyry zone at Porphyry South has a substantially larger IP anomaly that has yet to be drill tested;
- Red Gate Shear Zone already hosts mineralised porphyries at Porphyry North and Porphyry West and contains the recently identified Porphyry South Prospect which is a large untested IP anomaly;
- The Reidy Prospect is interpreted to be within or immediately adjacent to the **Claypan Shear Zone**, host to recent significant gold discoveries such as Breaker Resources, Lake Roe Project (Refer Figure Ten);
- The new prospect is within the Red Gate Shear Zone and was identified through a recent reconnaissance surface sampling program that returned rock chips results of up to 79 g/t gold;
- The Red Gate Shear Zone is less than 10 km north of the historic Porphyry Gold Mine that has a gold endowment of 900,000 ozs (Produced 1.33 Mt @ 3.4 g/t gold\* and has a current Indicated JORC resources of 7.2 Mt @ 2.1 g/t gold\*\* and Inferred JORC resources of 3.7 Mt @ 2.1 g/t gold\*\*).

\* Riedel Resources Website

\*\* Saracen Mineral Holdings Limited Annual Report 2016

Figure Ten| Location of the Red Gate Project



### Middle Creek Project

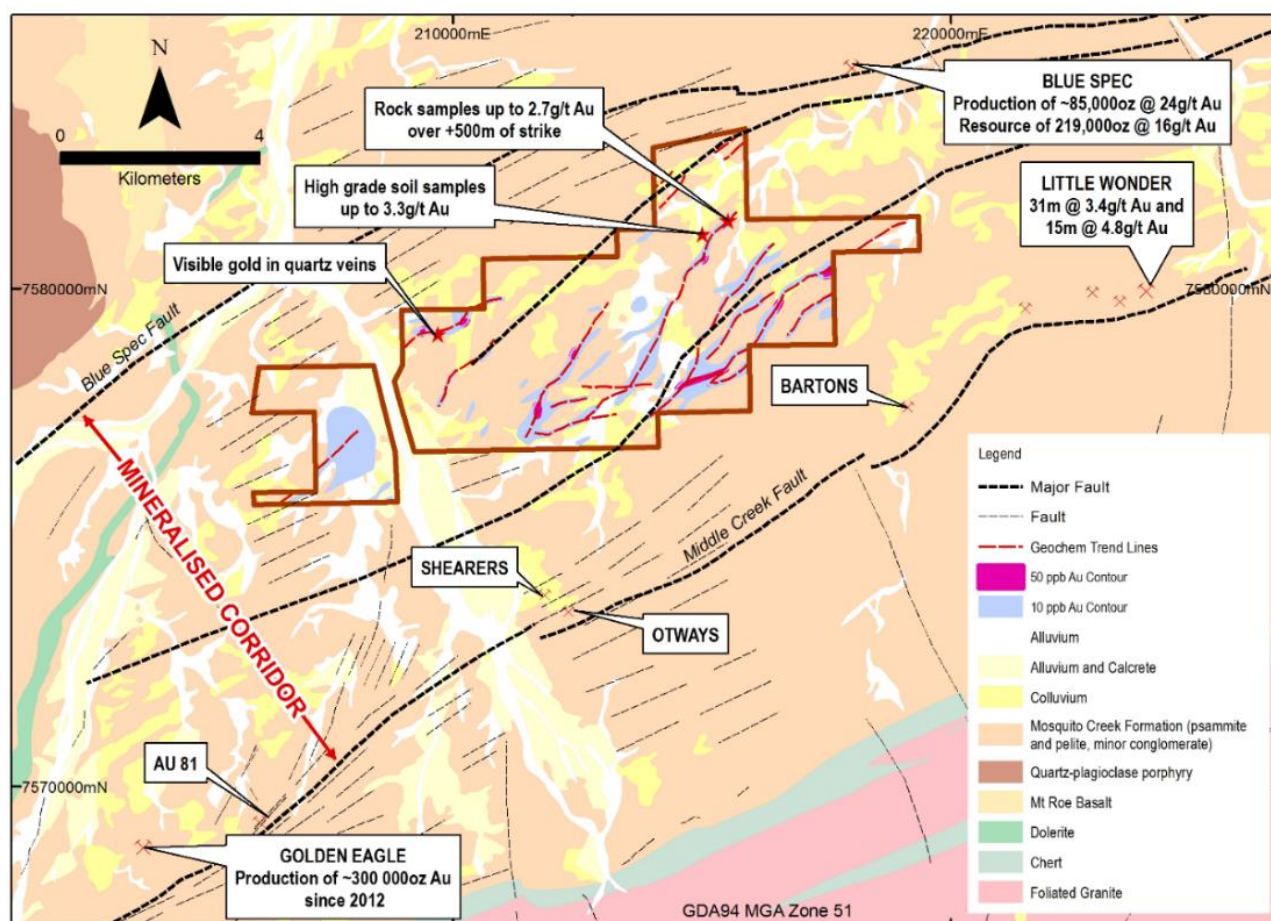
#### Introduction

The Middle Creek Project is adjacent to Millennium Minerals Limited's Nullagine Gold Project (where the Golden Eagle operations have produced ~400 kozs gold since 2012), in the Pilbara region of Western Australia (Refer Figure Eleven) and consists of 22 prospecting licence applications covering 39.7 km<sup>2</sup> within the Mosquito Creek belt.

#### Activities during the December Quarter

During the quarter Blackstone advanced the tenement applications for the Middle Creek project and has been granted a portion of the Middle Creek tenement package, the Company expects the remaining tenements to be granted during the March Quarter.

Figure Eleven | Geology of the Middle Creek Project area





Yours sincerely



**Scott Williamson**  
**Managing Director**  
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### **About Blackstone**

Blackstone Minerals Limited (**ASX code: BSX**) is actively exploring the very high grade Little Gem Cobalt-Gold project in British Columbia, Canada. Blackstone is the first company in over 60 years to undertake systematic exploration for Cobalt at Little Gem and within the surrounding district. Blackstone owns a large land holding with 48 km of untested strike potential of highly prospective geology analogous to the world class Bou-Azzer primary Cobalt district in Morocco. Blackstone is actively exploring for nickel and gold in the Eastern Goldfields and gold in the Pilbara region of Western Australia. Blackstone has a board and management team with a proven track record of mineral discovery and corporate success.

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by Mr Andrew Radonjic, a full time employee of the company and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Andrew Radonjic has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking 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'. Mr Andrew Radonjic consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## Appendix One| Tenements

### Mining tenements held at the end of December 2017 Quarter

Project	Location	Tenement	Interest at December 2017
Little Gem	British Columbia, Canada	501174, 502808	100%
	British Columbia, Canada	503409, 564599	100%
	British Columbia, Canada	573344, 796483	100%
	British Columbia, Canada	844114, 1020030	100%
	British Columbia, Canada	1047915, 1055449	100%
	British Columbia, Canada	1046246, 1046253	100%
	British Columbia, Canada	1050797, 1052563	100%
	British Columbia, Canada	1052564, 1052989	100%
	British Columbia, Canada	1052990, 1052991	100%
	British Columbia, Canada	1052992, 1052993	100%
	British Columbia, Canada	1055836, 1055837	100%
	British Columbia, Canada	1055838, 1055839	100%
	British Columbia, Canada	1055840, 1055859	100%
	British Columbia, Canada	1055860, 1055861	100%
	British Columbia, Canada	1055862, 1055863	100%
	British Columbia, Canada	1055864	100%
Cartier	Quebec, Canada	2459824, 2459825	100%
	Quebec, Canada	2459826, 2459827	100%
	Quebec, Canada	2459828, 2459829	100%
	Quebec, Canada	2463107, 2463108	100%
	Quebec, Canada	2463109, 2463110	100%
	Quebec, Canada	2463111, 2463112	100%
	Quebec, Canada	2463113, 2463114	100%
	Quebec, Canada	2463115,	100%
Silver Swan South	Eastern Goldfields	E27/545	100%
	Eastern Goldfields	P27/2191	100%
	Eastern Goldfields	P27/2192	100%
	Eastern Goldfields	P27/2193	100%
	Eastern Goldfields	P27/2194	100%
	Eastern Goldfields	P27/2195	100%
	Eastern Goldfields	P27/2196	100%
Red Gate	Eastern Goldfields	E31/1096	100%
Middle Creek	Western Australia	P46/1901, P46/1905	100%
	Western Australia	P46/1906, P46/1907	100%
	Western Australia	P46/1907, P46/1908	100%
	Western Australia	P46/1909, P46/1910	100%
	Western Australia	P46/1911, P46/1912	100%
	Western Australia	P46/1918, P46/1919	100%

## Mining tenements acquired and disposed during the December 2017 Quarter

Project	Location	Tenement	Interest at beginning of Quarter	Interest at end of Quarter
<b>Mining tenements relinquished</b>				
Nil				
<b>Mining tenements acquired</b>				
Little Gem	British Columbia, Canada	501174, 502808 503409, 564599 573344, 796483 844114, 1020030 1047915, 1055449 1046246, 1046253 1050797, 1052563 1052564, 1052989 1052990, 1052991 1052992, 1052993 1055836, 1055837 1055838, 1055839 1055840, 1055859 1055860, 1055861 1055862, 1055863 1055864	0%	100%
Cartier	Quebec, Canada	2459824, 2459825 2459826, 2459827 2459828, 2459829 2463107, 2463108 2463109, 2463110 2463111, 2463112 2463113, 2463114 2463115,	0%	100%
Middle Creek	Western Australia	P46/1901, P46/1905 P46/1906, P46/1907 P46/1907, P46/1908 P46/1909, P46/1910 P46/1911, P46/1912 P46/1918, P46/1919	0%	100%

## Beneficial percentage interests in joint venture agreements at the end of the Quarter

Project	Location	Tenement	Interest at December
Nil			



**Beneficial percentage interests in farm-in or farm-out agreements acquired or disposed of during the Quarter**

Project	Location	Tenement	Interest at beginning of Quarter	Interest at end of Quarter
<b>Mining tenements relinquished</b>				
Nil				
<b>Mining tenements acquired</b>				
Nil				