M I N E R A L S

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Ref: /BSX/609/BSX046

## Quarterly Report for the period ending 30 September 2017

## Highlights

- Entered into a binding heads of agreement to acquire 100% of the Little Gem Project, located in British Columbia, Canada . Little Gem hosts very high grade cobalt and gold mineralization, within a well-endowed and high grade gold mining district;
- Completed acquisition of the Little Gem Project following overwhelming support from Blackstone shareholders;
- **Discovery of a new high grade gold prospect** named Roxey at the Little Gem Project with **surface rock chip samples assaying up to 24 g/t gold & 1.9% copper;**
- Verification rock chip samples taken at the Little Gem Cobalt-Gold prospect returned results of up to 5.0% cobalt & 34 g/t gold, 4.8% cobalt & 89 g/t gold and 0.65% cobalt & 137 g/t gold;
- Second prospect at Little Gem Project, the **Jewel prospect**, **returned assays of up to 98 g/t gold and 3.2% copper**.

## Introduction

During the September Quarter Blackstone focused on the acquisition of a Canadian company that holds an option to acquire a cobalt-gold project called Little Gem located in British Columbia, Canada (Refer Figure One). Little Gem hosts very high grade cobalt and gold mineralization, within a well-endowed and high grade gold mining district.

The company continued to work on finalising priority targets at the Red Gate project for drill testing in the coming months.

Blackstone received results from the first drill program at the Silver Swan South project located in the Eastern Goldfields of Western Australia, and has designed a follow-up aircore program planned to be completed next quarter.

#### BLACKSTONE FAST FACTS

Shares on Issue Share Price Market Cap ASX Code 60.8m \$0.39 \$25.5m **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 5% Cobalt & 30g/t Gold Little Gem Project

British Columbia, Canada

**Cartier Cobalt Project** Quebec, Canada

**Gold and Nickel Projects** Western Australia

-Silver Swan South -Middle Creek -Red Gate

#### **REGISTERED OFFICE**

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## **Canadian Projects**

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Subsequent to the end of the quarter Blackstone Minerals completed its acquisition of Cobalt One Energy Corp ("Cobalt One") which has an option to acquire 100% interest in the Little Gem Cobalt-Gold Project and an option to acquire 100% interest in the Cartier Cobalt-Nickel Project.

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

## Highlights of the Project include:

- Recent rock chip sample from historical adits returned 6.2% cobalt & 46 g/t gold (Refer Image One);
- Surface channel samples of massive sulphides return assays up to 0.4 m @ <u>5.7% cobalt & 1.574 g/t</u> (≈50 oz) gold and 1.8 m & 5.1% cobalt & 17.8 g/t gold;
- Underground adit channel sampling of massive sulphides return multiple high grade intersections including **1.8 m @ 4.4% cobalt & 73 g/t gold** and **2 m @ 3.1% cobalt & 76 g/t gold**;
- Historic drilling from the adits returned multiple intersections including **1.8 m @ 2.4% cobalt & 112 g/t gold**, **3.3 m @ 1.4% cobalt & 12.3 g/t gold** and **2.9 m @ 0.9% cobalt & 12 g/t gold**;
- High grade cobalt and gold mineralization **open along strike and down dip**;
- The Little Gem Project covers an area of 195 km<sup>2</sup> and 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)** which retains the status of the foremost gold producer in British Columbia and the sixth largest in Canada (Refer Figure Two).

The Little Gem Project was discovered in the 1930's by prospectors identifying a pink cobalt-bloom on weathered mineralization 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: **1.8 m @ 2.4% cobalt & 112 g/t gold**, **3.3 m @ 1.4% cobalt & 12.3 g/t gold**, **2.9 m @ 0.9% cobalt & 12 g/t gold**, **4.1 m @ 1.4% cobalt & 11.3 g/t gold and 3.3 m @ 1.4% cobalt & 80 g/t gold** from drilling, and **1.8 m @ 4.4% cobalt & 73 g/t gold**, **2 m @ 3.1% cobalt & 76 g/t gold**, **1.5 m @ 5.4% cobalt & 26 g/t gold and 1.3 m @ 4.0% cobalt & 29 g/t gold** from underground channel sampling and **0.4 m @ 5.7% cobalt & 1,574 g/t gold**, **1.8 m & 5.1% cobalt & 17.8 g/t gold and 0.1 m @ 4.6% cobalt & 800 g/t gold** from surface channel sampling (Refer Figure Four).

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 Two). These are the major geological units and structures important to the mineral deposits either as the host rocks or sources of the mineralizing 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.

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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 (Refer Figure Three) and a further two drill holes completed in 1986.

Blackstone, as part of its due diligence program at the recently acquired Little Gem Cobalt-Gold Project, has discovered a new high grade Gold prospect named Roxey. Surface rock chip samples taken at **Roxey** assayed up to **24 g/t gold & 1.9% copper**. In addition to the discovery at Roxey, Blackstone has also received rock chip results from the **Jewel prospect** located 1.1 km north-northeast of Little Gem, with assays returning up to **98 g/t gold** and **3.2% copper**.

#### Highlights of the sampling program at the Little Gem Project include:

- Surface rock chip samples taken at **Roxey**, **located 1.5 km along strike from the high grade Little Gem Cobalt-Gold prospect** assayed up to **24 g/t gold & 1.9% copper** (Refer Figure Five);
- Verification rock chip samples taken at the Little Gem Cobalt-Gold prospect returned results of up to 5.0% cobalt & 34 g/t gold, 4.8% cobalt & 89 g/t gold and 0.65% cobalt & 137 g/t gold (Refer Image Two);
- Surface rock chip samples were also taken to verify the mineralization at the Jewel prospect located 1.1 km north-northeast of Little Gem and returned up to **98 g/t gold** and **3.2% copper** (Refer Figure Five).

Blackstone recently completed a site visit as part of the due diligence program at the recently acquired Little Gem Cobalt-Gold Project. Samples were taken to verify the mineralisation identified historically at the Little Gem Cobalt-Gold Prospect and the Jewel Gold Prospect and to test other exploration opportunities within the project area. Results led to the discovery of 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 to the cobalt-gold mineralization at Little Gem**. Blackstone visually identified Roxey during the 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**. Mineralization at Roxey is associated with quartz-pyrite altered diorite containing chalcopyrite.

The verification rock chip samples taken at the Little Gem Cobalt-Gold prospect returned results of up to **5.0% cobalt & 34 g/t gold, 4.8% cobalt & 89 g/t gold, 0.65% cobalt & 137 g/t gold and 3.1% cobalt & 24g/t gold** (Refer Image Two). These results confirm the High Grade nature of Little Gem and support historical drill results.

Surface rock chip samples were also taken to verify the mineralisation at the Jewel prospect located 1.1 km north-northeast of Little Gem and returned up to **98 g/t gold** and **3.2% copper**. 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. Mineralization 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.

The Company has commenced its maiden drilling program at the High Grade Little Gem Cobalt-Gold Prospect albeit late in the field season and will release results as soon as available.

#### **Cobalt Market Commentary**

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Cobalt contributes up to 60% of the value of Lithium Ion Batteries which in turn accounts for 42% 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 16% 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\$27.50/lb (US\$61,000/t) over the last 21 months. 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. A recent example was the shutdown of copper mining in the Katanga Province in the DRC due low copper prices which cut 3% of the world's cobalt supply.

#### **Definitive Agreement**

In accordance with the Binding Heads of Agreement Terms, Blackstone Minerals have Executed the Definitive Agreement with Cobalt One obtaining 100% of Cobalt One's Shareholder Agreements to transfer their shares to Blackstone Minerals as well as satisfactory completion of the due diligence.

The Definitive Agreement Execution was finalised with the achievement on 24 August 2017 of Cobalt One's Shareholder Agreements to sell their shares to Blackstone Minerals, upon receiving on 12 October Blackstone's Shareholder approval and then on 20 October receiving approval for an Exemption Order in British Columbia, Canada.

The material terms of the Definitive Agreement are in accordance with the previously announced Binding Heads of Agreement as follows:

- a) the consideration for the Acquisition will be satisfied by the issue of 25,000,000 fully paid ordinary shares subject to Shareholder approval in the Company to the Cobalt One shareholders;
- b) 8,000,000 performance shares each convertible into one fully paid ordinary share in the Company subject to ASX and Shareholder approval on the same terms (Refer BSX Announcement 26 July 2017) will be issued to certain Cobalt One shareholders in association with the Acquisition;
- c) the Company shall assume Cobalt One's obligations under the Gold Bridge Option Agreement for C\$700,000 (being the equivalent of approximately A\$710,000) of staged option payments payable in respect of the Little Gem Gold-Cobalt Project in the following instalments: first payment of C\$200,000 due on completion of the Acquisition, second payment of C\$250,000 due on or before 3 months after completion and a final payment of C\$250,000 due on or before 6 months from the date of completion, upon payment of which, Cobalt One will become the 100% owner of the Little Gem Project:
  - i. in respect of the Little Gem Gold-Cobalt Project, the Company will be required to pay the following royalties:

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- in respect of the first 10,000 tonnes of ore mined from the Project, a 20% net profits interest and a 1% Net Smelter Return (NSR) royalty shall be payable to the current owner of the Little Gem Gold-Cobalt Project; and
- a NSR royalty equal to 2.5% thereafter (over 10,000 tonnes) shall be payable to the current owner of the Little Gem Gold-Cobalt Project.

Image One | Recent sample of mineralisation from the adits at Little Gem assaying 6.2% cobalt and 46 g/t gold



Figure One | Location of the Little Gem Project



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#### MINERALS

Figure Two | Little Gem Geological Setting





#### Figure Three | Little Gem Prospect Locations & Geophysical Targets



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Image Two | Recent sample of mineralisation taken on the site visit to Little Gem assaying 17.5 g/t gold and 0.53% cobalt



Figure Four | Little Gem Local Geology, Works & Drill Holes



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#### Figure Five | Little Gem Project - reconnaissance and verification sampling results with historic drill and channel results



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## **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 (Refer Figure Six). 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 that warrants further follow up work (Refer Figure Seven).

#### Figure Six | Location of the Cartier Project



#### Figure Seven | Cartier Geological Setting





## **Australian Projects**

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

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





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## Red Gate Project (100% interest)

## Introduction

The Red Gate Project consists of the 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 Nine), 140 km northeast of Kalgoorlie. Here 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 September 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 included:-

- Red Gate project already 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 (Refer to Figure Ten and Blackstone Minerals Limited Prospectus, released 15 December 2016);
- 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 have been drill tested (Refer Figure Ten);
- 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 (Refer Figure Ten);
- 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 Nine);
- 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 (Refer Figure Ten);
- 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 Nine| Location of the Red Gate Project



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Figure Ten | Reconnaissance rock samples >1g/t gold from the new porphyry prospect within the Red Gate Shear Zone



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## 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 September Quarter

During the quarter Blackstone received assay results from the first phase of drilling at Silver Swan South. Access limited the coverage of the initial drill program but still several significant gold and nickel results were achieved (See Table One for full set of results). This has allowed a more focused approach in the follow-up aircore program that has been designed and planned for completion in December 2017.

The best gold intersection from the first phase of drilling came from SNAC027 with 3 m @ 2.6g/t gold from 52 m to the end of hole within a broader intersection of 7 m @ 1.3g/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 metres 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 metres.

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 Eleven).
- Infill historical, broad spaced, reconnaissance drilling which intersected up to 3.5g/t gold.
- Target thickening of the ultramafic sequence considered highly prospective for nickel sulphides and located only 10km from the Silver Swan Nickel Mine (Refer Figure Eleven).
- Prioritise both gold and nickel targets for follow up reverse circulation ("RC") drilling.





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Blackstone's initial phase of drilling at Silver Swan South has targeted both gold and sulphide nickel mineralization, associated with ultramafic units along strike from the Silver Swan and Black Swan Nickel Mines (Endowment 166kt Ni metal) and the Kanowna Belle Gold Mine (Endowment +5Moz Au). The programs also tested for basement hosted mineralization, using aircore drilling, to infill gold and base metal anomalism identified by previous reconnaissance style drilling.

Gold targets within the project area are associated with the interpreted northern extension of the Fitzrov 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.

In addition to gold the Company's initial drill programs will also target sulphide nickel mineralisation associated with the ultramafic unit. The ultramafic unit is part of a sequence of komatiites which already hosts both the Silver Swan and Black Swan Nickel deposits only 10 km to the north (Refer Figure Eleven). This was further supported by rock samples taken during a recent geological mapping exercise with one sample (SOSN019A) containing disseminated sulphides, returning 0.1% Cu and 0.1% Ni. Drilling focused on further defining the nickel sulphide target as well as providing access for a potential down hole EM surveys.

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Figure Eleven | Silver Swan South Bedrock Geology Plan



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## **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 Twelve) and consists of 22 prospecting licence applications covering 39.7 km<sup>2</sup> within the Mosquito Creek belt.

## Activities during the September Quarter

During the quarter Blackstone had advanced discussions on Heritage and Access agreements and expects most of the tenements of the project to be granted next quarter.

#### Figure Twelve | Geology of the Middle Creek Project area





Yours sincerely

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Andrew Radonjic Technical Director

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.

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#### Table One | SNS Summary Drill Results - October 2017

Hole	E_MGA51GDA94	N_MGA51GDA94	Azi_MGA	Plunge	EOH_m	From m	To m	Interval	Au g/t	Ni	Cu	Mineralisation
								m		ppm	ppm	
SNAC001	370197	6622600	0	-90	30	28	30	2	0.031	120	<50	31ppb Au in palaeochannel sands 20-24m, 31ppb from 28-30mEOH in weathered dacite
SNAC002	370099	6622600	0	-90	40				failed to			27ppb Au from 28-32m in clavs at top of
			_		-				reach			palaeochannel sands
									basement			1
SNAC003	369995	6622595	0	-90	54				failed to			14ppb Au from 32-36m in clavs at top of
									reach			palaeochannel sands
									basement			F
SNAC004	369898	6622601	0	-90	66	28	32	4	0.056	240	<50	56ppb Au from 28-32m in clays at top of palaeochannel sands, & 30ppb Au in clay beneath palaeochannel sands
SNAC005	369799	6622597	0	-90	73	28	32	4	0.177	210	<50	107ppb Au from 28-36m in clays at top of palaeochannel sands, 23ppb 52-56m within in situ clays?
SNAC006	369695	6622603	0	-90	34				failed to			8m at 53ppb Au from 28m to 34m EOH in
									reach			paleochannel sands when but hit a qz
									basement			?boulder, redrilled as SNAC036
SNAC007	369598	6623031	0	-90	63	28	29	1	0.082	170	<50	82ppb Au from 28-33m in clays just above palaoechannel sands
SNAC007						57	61	4	0.026	<50	<50	26ppb from 57-61m at base of lower palaeochannel sands and top of in situ clays, large shale and qz vein clasts in sand at 56m, terminated at 63m in clay with fresh shale and qzV gravels
SNAC008	369785	6623003	0	-90	12				failed to			Hole terminated at 12m in clay due to rig
									hacomont			manuncuon
SNAC000	270105	6622004	0	00	<b>E</b> 1	22	26	4	0.022	FO	~50	22nnh Au from 22.26m at interface between
SNACOUS	370193	0022904	0	-90	51	32	30	4	0.022	50	<30	hard plastic & in situ clay, blade refusal 51m in dacite
SNAC010	370001	6623010	0	-90	60	56	60	4	0.045	130	70	45ppb Au from 56-60mEOH at weathered basement-paleochannel interface, blade refusal 60m in dacitic tuff
SNAC011	369789	6623009	0	-90	62	60	62	2	0.025	120	<50	25ppb Au from 60-62mEOH at top of in situ clays, redrill of abandoned SNAC008
SNAC012	370100	6622600	0	-90	61	60	61	1	0.014	<50	<50	14ppb Au at EOH in weathered dacite

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Hole	E_MGA51GDA94	N_MGA51GDA94	Azi_MGA	Plunge	EOH_m	From m	To m	Interval	Au g/t	Ni	Cu	Mineralisation
								m		ppm	ppm	
SNAC013	370101	6622121	0	-90	69	44	69	25	0.001	4925	<50	0.56% Ni from 52-69mEOH in weathered
												ultramafic, As up to 570 ppm in overlying
												lake clays
SNAC014	370004	6622094	0	-90	52				failed to			hole abandoned in clay at 52m
									reach			
									basement			
SNAC015	370005	6622092	0	-90	116	56	116	60	0.009	3269	119	peak 4m from 72m at 370ppm Cu & 4920ppm Ni in swelling clay after ultramafic
includes						100	108	8	0.047	3190	105	47ppb Au from 100-108m in swelling clay
								_				after ultramafic
SNAC016	370188	6620901	0	-90	6				NSI	NSI	NSI	tuff basement at 6m
SNAC017	370097	6620902	0	-90	3				NSI	NSI	NSI	mafic basement at 3m
SNAC018	370000	6620901	0	-90	32	0	32	32	0.011	2773	<50	ultramafic clays
SNAC019	369897	6620898	0	-90	54	12	48	36	0.01	5806	115	ultramafic clays
includes						20	44	24	0.001	6567	115	ultramafic clays
includes						28	36	8	< 0.001	8195	155	ultramafic clays
and						44	48	4	0.076	3710	<50	ultramafic clays
SNAC020	369797	6620900	0	-90	63				NSI	NSI	NSI	blade refusal in dacitic tuff
SNAC021	369697	6620906	0	-90	65				NSI	NSI	NSI	blade refusal 65m in dacite
SNAC022	370099	6621298	0	-90	24				NSI	NSI	NSI	blade refusal 24m in dacite
SNAC023	369999	6621306	0	-90	42				NSI	NSI	NSI	blade refusal 42m in dacite
SNAC024	369900	6621306	0	-90	73	56	72	16	0.036	1825	<50	36ppb Au, 1825ppm Ni, 145ppm As, 1025ppm Cr from 56-72m in clay after ultramafic
includes						56	60	4	0.085	2640	<50	
SNAC025	369786	6621300	0	-90	94	32	40	8	0.009	1765	200	several 4m zones to 57ppb Au between 36 & 84m in clays after mafic volcanic?, clays 32- 40m 1765ppm Ni, 1300ppm Cr, 200ppm Cu & 60ppm As
SNAC025						44	48	4	0.057	430	90	
SNAC026	369707	6621298	0	-90	62	56	62	6	0.026	60	<50	26ppb Au from 56-62mEOH in clay & weathered dacite at EOH

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Hole	E_MGA51GDA94	N_MGA51GDA94	Azi_MGA	Plunge	EOH_m	From m	To m	Interval	Au g/t	Ni	Cu	Mineralisation
								m		ppm	ppm	
SNAC027	369308	6620914	0	-90	55	48	55	7	1.26	<50	<50	7m at 1.3ppm Au from 58-55mEOH, includes
												3m at 2.6ppm Au in weathered dacite at EOH
SNAC028	369714	6621701	0	-90	32	28	32	4	0.031	110	<50	31ppb at blade refusal in ferricrete layer
SNAC029	369807	6621699	0	-90	94	24	28	4	0.213	<50	<50	215ppb Au 24-28m at base of palaeochannel,
0140000	260000	((24(00		0.0	70				NO	NO	NO	
SNAC030	369900	6621699	0	-90	/8				INSI	N 51	NSI	end of hole in in situ clay
SNAC031	370001	6621703	0	-90	38				NSI	NSI	NSI	end of hole in feldspar-rich dacite
SNAC032	370101	6621698	0	-90	9				NSI	NSI	NSI	end of hole in dacite
SNAC033	369705	6622117	0	-90	65	64	65	1	0.216	50	<50	81ppb from 24-65m EOH, including 12m at
												151ppb Au from 24m in palaeochannel clays,
												and 1m at 216ppb Au from 64m to EOH in
												pyritic dacite
SNAC034	369791	6622124	0	-90	70	60	64	4	0.011	100	<50	14ppb Au from 32-64m in palaeochannel
												clays & top of in situ clays, end of hole in
												sulphurous silicified volcanic with trace
												pyrrhotite
SNAC035	369899	6622119	0	-90	42				failed to			few 4m zones to 14ppb Au in palaeochannel
									reach			clays, hole failed to penetrate palaeochannel
									basement			clays
SNAC036	369691	6622588	0	-90	72	47	72	25	0.035	<50	<50	35ppb Au from 47-72mEOH, including 4m at
												119ppb from 47m at base of paleochannel
												sands & top of in situ clays, end of hole in
												dacite with trace disseminated pyrite

NSI – No significant intersection

BLACKSTONE

### **Appendix One**

JORC Code, 2012 Edition | 'Table 1' Report

#### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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>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. In cases where 'industry standard' work has been done this would be relatively simple (e.g.: 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g 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> <li>Air Core drilling was used to obtain samples representing 1 m downhole intervals.</li> <li>Drilling and sampling was supervised by a suitably qualified Blackstone Minerals geologist.</li> <li>The Air Core spoils were collected in buckets from the drill rig sample cyclone and laid out in 1 m intervals for logging and sampling.</li> <li>Drill spoils were subsampled by a suitably qualified geologist and field technician using a scoop to produce nominal 4 m composite samples for preparation and assay at ALS Geochemistry, Perth.</li> <li>Each composite sample weighed between 1 kg and 5 kg (average 2.3 kg).</li> </ul>
Drilling techniques	<ul> <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> <li>Air Core drilling to blade refusal, 115 mm rod diameter.</li> </ul>
Drill sample recovery	<ul> <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> <li>Recoveries were logged as visually estimated percentages by a Blackstone Minerals geologist.</li> <li>There is no discernible correlation between Au and Ni grades and visually logged recovery (correlation coefficient &lt;0.01)</li> <li>Water injection was used only when necessary to penetrate palaeochannel clay cover to weathered basement.</li> </ul>
Logging	<ul> <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> <li>The Air Core spoils were qualitatively logged by a suitably qualified Blackstone Minerals geologist.</li> <li>All of the 1916 m drilled was logged on a 1 m interval basis.</li> <li>Mineral Resources have not been estimated.</li> <li>The detail of geological logging is considered sufficient for mineral exploration.</li> </ul>

## M I N E R A L S

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core 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 subsampling 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> <li>The Air Core spoils were collected from the sample cyclone in 1 m intervals.</li> <li>The 1 m interval samples were then subsampled at the drill site by Blackstone Minerals geologist and field assistant using a sampling scoop and composited to nominal for assay at ALS Geochemistry, Perth.</li> <li>93% of the composites produced represented 4 m intervals, &lt;1% of composites represented 6 m intervals, 1% represented 3 m intervals, 4% represented 2 m intervals and 2 % represented 1m intervals.</li> <li>The composite drill samples were submitted to ALS Geochemistry, Perth in their entirety where they were dried, crushed and pulverised to nominally 80% passing 75 microns for assay.</li> </ul>
Quality of assay data and laboratory tests	<ul> <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, calibrations 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> <li>Au was analysed by industry standard 50g charge fire assay with AAS finish to a 0.001 ppm lower limit of detection at ALS Geochemistry, Perth. Over limit (&gt; 1 g/t Au) results were re-assayed by ore grade 50g fire assay with AAS finish to a 0.01 ppm lower limit of detection.</li> <li>Ni, Cu, Pb, Zn, As Cr, Mn, S, Fe and Ca were determined by Olympus Delta Premium 6000 portable XRF with a Rhodium anode using Geochem Mode calibration on pulverised sample at ALS Geochemistry, Perth</li> <li>Commercially certified reference materials were included in ALS batches by the client at a minimum rate of at least one standard per 25 samples.</li> <li>95% of results for the commercial Au assay standards assays are within 10% of the reference values).</li> <li>The portable XRF results for commercial standards are within 20% of the Ni reference values.</li> </ul>
Verification of sampling and assaying	<ul> <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> <li>The assay results are compatible with the observed mineralogy.</li> <li>Twinned holes were not used and not considered necessary at this early stage of exploration.</li> <li>Primary data is stored and documented in industry standard ways.</li> <li>Assay data is as reported by the laboratories and has not been adjusted in any way.</li> <li>Remnant assay pulps are held in storage by the assay laboratories.</li> </ul>
Location of data points	<ul> <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> <li>Drill hole collar locations were determined by handheld GPS considered accurate to ±5 m.</li> <li>All co-ordinates were recorded in MGA Zone 51 datum GDA94.</li> <li>Topographic control is provided by government 250,000 topographic map sheets and a Digital Terrain Model based on the 30 m Shuttle Radar Topographic Mission data.</li> </ul>
Data spacing and distribution	<ul> <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> <li>The Air Core drilling was of reconnaissance nature conducted on 100 to 400 m spacings along MGA E-W traverses spaced c. 400 m apart.</li> <li>All drilled intervals were composite sampled and assayed (see above). Data compositing has not been applied.</li> <li>The reported drill results are not sufficient to establish mineral resources.</li> </ul>

## MINERALS

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <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> <li>The target Archaean basement rocks in the Project area are largely covered by paleochannel sediments to c. 70 m thick, and the Air Core drilling was designed to map top-of-basement geochemistry.</li> <li>The Air Core drill traverses were orientated perpendicular to interpreted basement stratigraphic strike and inferred mineralised faults.</li> <li>The drilling confirms the presence of a N striking ultramafic body prospective for Ni sulfide mineralisation and N to NE striking structures prospective for Au mineralisation.</li> <li>At this reconnaissance stage of geochemical drilling there is insufficient knowledge of potentially economic Au or Ni sulfide mineralisation orientations to evaluate structural sampling bias.</li> </ul>
Sample security	• The measures taken to ensure sample security.	<ul> <li>The chain of custody for samples from collection to dispatch to assay laboratory was managed by Blackstone Minerals personnel. Sample numbers were unique and did not include any locational information useful to non-Blackstone Minerals personnel. The level of security is considered appropriate for such sampling.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>The assay results agree well with the observed mineralogy.</li> <li>No further reviews have been carried out at this reconnaissance stage.</li> <li>Further geochemical drilling to refine the identified Au and Ni sulfide targets is proposed.</li> </ul>

### MINERALS

#### **Section 2 Reporting of Exploration Results**

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

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	<ul> <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> <li>The Silver Swan South exploration targets are all located within granted Prospecting Licences P27/2192, P27/2193, P27/2194, P27/2195 and P27/2196 owned 100% by Black Eagle Pty Ltd which is wholly owned by Blackstone Minerals Ltd.</li> <li>Standard governmental conditions apply to the Prospecting Licences.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	Placer Dome Asia Pacific Ltd was the most significant previous explorer of the target area, conducting reconnaissance Air Core drilling that forms the basis of the targets drill tested by Blackstone Minerals. Results of the historic exploration activities are summarised and discussed in Blackstone Minerals' prospectus, released 15 December 2016 and available from http://blackstoneminerals.com.au
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>The exploration area is within the Eastern Goldfields, Western Australia which is prospective for gold and base metal deposits.</li> </ul>
Drill hole Information	<ul> <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> <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;</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>	All Blackstone Minerals drill hole coordinates, depths, orientations, hole lengths and significant results are given in Table One.
Data aggregation methods	<ul> <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> <li>All drill intersections given in Table One are length weighted averages.</li> <li>Upper cuts have not been applied.</li> <li>Any significantly higher grade zones are listed as included intervals in Table One.</li> <li>Metal equivalent values are not used.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <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> <li>At this reconnaissance stage the geometry of target Au and Ni sulfide mineralisation is not defined.</li> <li>All intersections reported in Table One are down hole.</li> <li>True widths of mineralisation are not known at this stage.</li> </ul>

## MINERALS

Criteria	Explanation	Commentary
Diagrams	<ul> <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>	• An appropriate exploration plan is included in the body of this release.Drill sections are not applicable at this early stage of exploration.
Balanced reporting	<ul> <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> <li>Any significantly higher grade zones are listed as included intervals in Table One.</li> </ul>
Other substantive exploration data	<ul> <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; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>Appropriate reconnaissance exploration plans are included in the body of this release.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Blackstone Minerals proposes to conduct further prospecting, geochemical drilling, petrography and geophysical surveys to follow up the identified targets.</li> <li>An appropriate exploration target plan is included in the body of this release.</li> </ul>



## **Appendix Two Tenements**

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

Project	Location	Tenement	Interest at September 2017
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%

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

Project	Location	Tenement	Interest at beginning of Quarter	Interest at end of Quarter
<b>Mining tenements re</b> Nil	linquished			
<b>Mining tenements ac</b> Silver Swan South	<b>quired</b> Eastern Goldfields	E27/545	0%	100%

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

Project	Location	Tenement	Interest at September 2017
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 relin</b> Nil	quished			
<b>Mining tenements acqu</b> Nil	ired			