



Positioned to meet demand from Asia's growing lithium-ion battery industry | ASX: BSX

ASX RELEASE  
31 January 2020

## Quarterly Report for the period ending 31 December 2019

### Highlights

- During the quarter Blackstone announced the King Cobra discovery and recently announced assays from the discovery hole intersected **60m @ 1.3% Nickel from 32m including 13.9m @ 2.25% Nickel from 49m** (see Figures 1 & 2 and ASX announcement dated 20th January 2020 for full details);
- Blackstone's drillhole BP19-03 which returned **45m @ 1.2% Nickel from 56m** is now interpreted as an earlier intersection of King Cobra mineralisation (see ASX announcement dated 6th August 2019 & 17th September 2019 for full details);
- Blackstone's drilling has now intersected the **King Cobra (KCZ) discovery zone over 200m of strike length, with the KCZ interpreted to be open along strike to the north west and south east and down dip to the north east** (see Figure 1);
- Hole BP19-29 returned **the most significant downhole intersections seen to date** at the Ta Khoa Nickel-PGE Project, with **60m @ 1.3% Nickel including 13.9m @ 2.25% Nickel from the King Cobra Zone, and 142m @ 0.41% Nickel** including 11.9m @ 1.09% Nickel from the underlying previously unnamed Ban Duoi Zone (BDZ);
- During the quarter Blackstone signed an indicative, non-binding **MOU with Korea's largest EV battery cathode manufacturer, Ecopro BM** with a view to formalising a Joint Venture on the downstream processing infrastructure project in association with Blackstone's Ta Khoa Nickel-PGE Project;
- Blackstone is continuing its aggressive drilling program at Ban Phuc with four drill rigs testing the disseminated mineralisation (DSS), including **two rigs on priority step-out drilling testing for potentially significant expansions to the known Ban Phuc DSS orebody** and the down dip feeder zone target at the King Cobra target zone (see Figure 1);
- Blackstone has purchased inhouse electromagnetic (EM) and Induced Polarisation (IP) equipment and has **commenced an extensive ground-based geophysical survey of the Ta Khoa project**.
- Blackstone is **well funded to deliver a maiden resource for the Ban Phuc DSS and a scoping study with a strong cash position of \$2.83 million**

## Ta Khoa Nickel-PGE Project

Blackstone Minerals Limited (**ASX code: BSX**) has entered into a binding term sheet for the exclusive option to acquire a 90% interest in the Ta Khoa Nickel-PGE Project. The Ta Khoa Nickel-PGE Project is located 160km west of Hanoi (see Figure 5) in the Son La Province of Vietnam and includes an existing modern nickel mine built to Australian Standards, which is currently under care and maintenance. The Ban Phuc nickel mine successfully operated as a mechanised underground nickel mine from 2013 to 2016. Blackstone recently announced drilling at the King Cobra discovery intersected 60m @ 1.3% Nickel from 32m. The King Cobra discovery includes the first-ever intersection of massive sulfide vein and breccia styles of sulfide mineralisation within the Ban Phuc intrusion and may provide vectors towards the high grade 'feeder zone' mineralisation.

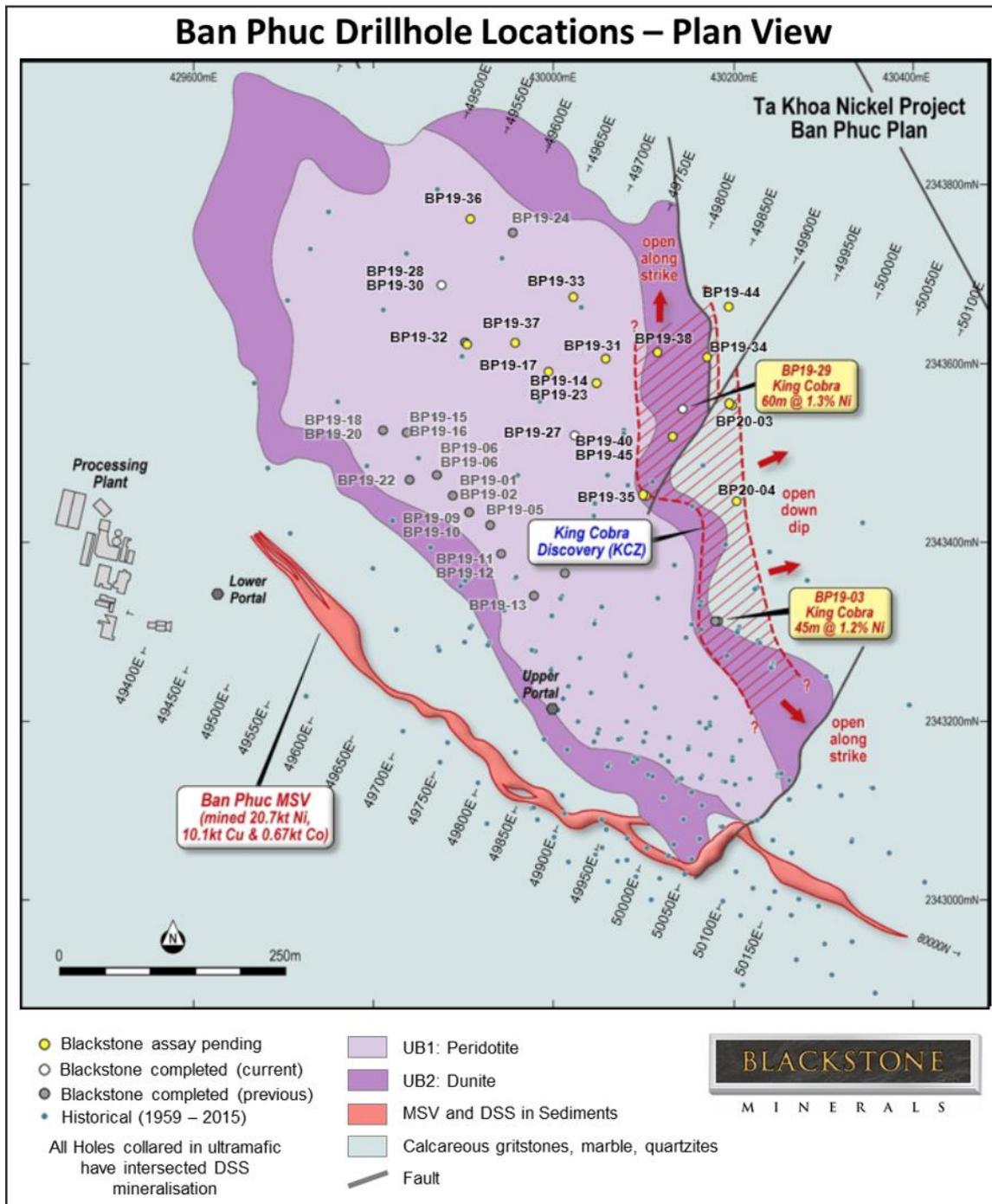


Figure 1: Plan View showing Ban Phuc DSS drill hole collar locations and King Cobra discovery zone (KCZ)

Blackstone's drilling of the Ban Phuc DSS to date includes the following significant results (see ASX announcements dated 17<sup>th</sup> September 2019, 16<sup>th</sup> October 2019, 18<sup>th</sup> December 2019 and 20<sup>th</sup> January 2020 for full details):

Drillhole	From (m)	To (m)	Interval (m)	Ni (%)	Pt+Pd+Au (g/t)
BP19-02	106.6	124.4	17.8	1.00	0.74
incl.	106.6	114	<b>7.4</b>	<b>1.36</b>	<b>1.10</b>
BP19-03	56.5	102	45.5	1.20	0.35
BP19-06	101	128.7	27.7	0.88	0.74
incl.	108.5	122	<b>13.5</b>	<b>1.12</b>	<b>0.91</b>
BP19-08	140.6	170	29.4	1.00	0.60
incl.	140.6	146.9	<b>6.3</b>	<b>1.22</b>	<b>1.03</b>
BP19-09	107	118.95	12.0	1.46	1.09
incl.	108.2	117	<b>8.8</b>	<b>1.70</b>	<b>1.28</b>
BP19-10	136.9	170.2	33.3	0.80	0.37
incl.	137.5	152	<b>14.5</b>	<b>1.31</b>	<b>0.65</b>
BP19-07	310.9	375	64.4	0.52	0.20
incl.	310.9	327	<b>15.6</b>	<b>1.08</b>	<b>0.58</b>
BP19-11	109.4	161	51.5	0.50	0.22
incl.	116	124	<b>8.0</b>	<b>1.09</b>	<b>0.66</b>
BP19-14	215	321	106.0	0.45	0.20
BP19-22	79	108	29.0	0.60	0.39
incl.	81	94.4	<b>13.4</b>	<b>0.82</b>	<b>0.72</b>
BP19-23	173	224	51.0	0.71	0.43
incl.	187	203	<b>15.7</b>	<b>1.48</b>	<b>1.14</b>
BP19-29	32	91.8	59.8	1.29	0.29
incl.	49.1	63	<b>13.9</b>	<b>2.25</b>	<b>0.54</b>

Since announcing the option agreement in May 2019, Blackstone has made significant progress at the Ta Khoa Nickel-PGE Project, drilling over 9,000m of diamond core in more than 47 holes into the Ban Phuc DSS deposit and King Cobra discovery zone. Blackstone is well advanced with an initial scoping study evaluating mining and processing options, including potential in-country downstream processing to deliver high value nickel sulfate into Asia's rapidly expanding electric vehicle (EV) industry. The recently announced MOU (see ASX announcement dated 2<sup>nd</sup> December 2019) with Asia's largest and the world's second largest, EV battery cathode manufacturer, Ecopro BM Co Limited represents a significant step toward making this a reality.

Initial geological modelling of Blackstone's drilling, combined with over 60,000m in 381 holes drilled by the previous owners of the project, is starting to reveal the potential extents of the Ban Phuc DSS Nickel - PGE deposit (see Figure 1). Currently the disseminated mineralisation has been encountered in drill holes over 1,000m by 500m in area and remains open along strike to the north-west and south-east and down dip to the north-east.

The ultimate geometry of the disseminated Nickel – PGE layers in the deposit are yet to be fully defined by drilling, however the following preliminary observations and interpretations are being used to guide further exploration of the deposit.

- The previously reported Blackstone drillhole BP19-03 is now interpreted as an earlier intersection of King Cobra mineralisation which assayed 45m @ 1.2% Nickel from 56m (*see ASX announcement dated 6th August 2019 and 17th September 2019 for full details*);
- The combination of the assay results from holes BP19-03 and BP19-29 and geological observations from recent holes BP20-03 and BP20-04, where assays are pending, suggest that KCZ can now be traced in drilling over 200m and is open along strike to the north-west and south east (*see Figure 1*). The KCZ is also open down dip to the north east (*see Figure 3*), however it maybe locally closed off near surface in the area of hole BP19-44 by a post mineral fault;
- Drilling to date at Ban Phuc has identified two thick, overlying sheet-like zones of disseminated Nickel - PGE (Cu - Co) mineralisation, the KCZ and the underlying Zone here named the Ban Duoi Zone (**BDZ**), are hosted within the Ban Phuc ultramafic intrusive. The KCZ and BDZ converge and dip to the north-east;
- The KCZ and BDZ appear to have different nickel and PGE contents. KCZ is hosted by a textually distinct phase of the Ban Phuc intrusive with the margins of the KCZ locally marked by a ‘tremolite’ contact zone (*see Figure 2*) that may define the contact of a distinct phase of the Ban Phuc intrusive body;
- Previous interpretations proposed that Ban Phuc mineralisation is a folded sheet-like body that is closed off to the north east. However, an alternate interpretation arising from the recent Blackstone drilling is that the KCZ and BDZ are distinct phases of mineralisation related to different intrusive pulses and that together they vector down dip to the north east toward a potentially higher grade ‘feeder zone’.
- The ‘feeder zone’ target is currently being tested with two rigs that are drilling a series of new holes to test this concept.

Preliminary interpretations and drill results are also revealing several encouraging characteristics (*see Figures 2 and 3*) that suggest the potential for a large tonnage disseminated sulfide deposit at Ban Phuc. These factors may make the deposit amenable to bulk mining techniques employed at large scale nickel mines in Australia and elsewhere in the world. The Ban Phuc DSS deposit’s characteristics supporting this concept include:

- Thick accumulations of nickel sulfide mineralisation across a significant area of the Ban Phuc ultramafic body (*see table above of Blackstone’s drill intersections to date*);
- Multiple stacked layers of disseminated mineralisation hosting higher grade intervals;
- King Cobra zone, hosting thick accumulations of nickel sulfide, near the surface;
- Significant concentrations of precious metals – palladium, platinum and gold - in all drilling to date from the deposit.

Blackstone’s Ta Khoa Nickel–PGE project has a combination of large DSS nickel targets and 25 other prospects (*see Figure 4*), including multiple high-grade massive sulfide vein (MSV) targets of the style that were mined adjacent to the current Ban Phuc DSS drilling. The Ban Phuc Nickel mine operated for 3.5 years between 2013 and 2016, producing 20.7kt Ni, 10.1kt Cu and 0.67kt Co, before closing when the defined mineable reserves were depleted. The high-grade Ban Phuc MSV is located less than 50m to the south of the Ban Phuc DSS deposit and remains underexplored at depths below the base of previous mining. Many other MSV targets are within potential trucking distance of the existing 450ktpa Ban Phuc processing facility that was built to

international standards, commissioned in 2013, and has been on care and maintenance since 2016.

Blackstone is evaluating near mine MSV and other potential DSS targets for drill testing during the 2020 season, with the concept of identifying high grade and further disseminated mineralisation for either an early restart of the Ban Phuc mining operation, or the potential to blend higher grade MSV mineralisation with the larger tonnage DSS mineralisation for processing.

Blackstone believes that the Ta Khoa project represents a true district scale Nickel-PGE sulfide opportunity of a calibre rarely controlled by a junior company. The project also has significant infrastructure advantages that include the existing 450ktpa processing facility, abundant low cost hydroelectric power, a skilled low-cost labour force, and is located in a country that has become an Asian hub for electronics and battery manufacturing with a growing demand for Nickel Sulfate for EV battery manufacture.

Blackstone looks forward to reporting further results from the King Cobra discovery and the ongoing drill out at Ban Phuc over the coming weeks, as the company advances the exploration and evaluation of this high calibre asset for its shareholders.

### **Ta Khoa Nickel Project – Next Steps**

Blackstone aims to deliver a maiden resource on the DSS at Ban Phuc over the coming months and investigate the potential to restart the existing Ban Phuc concentrator through focused exploration on both MSV and DSS deposits. Blackstone has commenced a scoping study on the downstream processing facility at Ta Khoa. The scoping study will provide detail for potential joint venture partners to formalise a binding agreement. Blackstone has commenced metallurgical testing on the Ban Phuc DSS deposit with an aim to develop a flow sheet for a product suitable for the lithium ion battery industry. In addition, Blackstone will investigate the potential to develop downstream processing infrastructure in Vietnam to produce a downstream nickel and cobalt product to supply Asia's growing lithium ion battery industry.

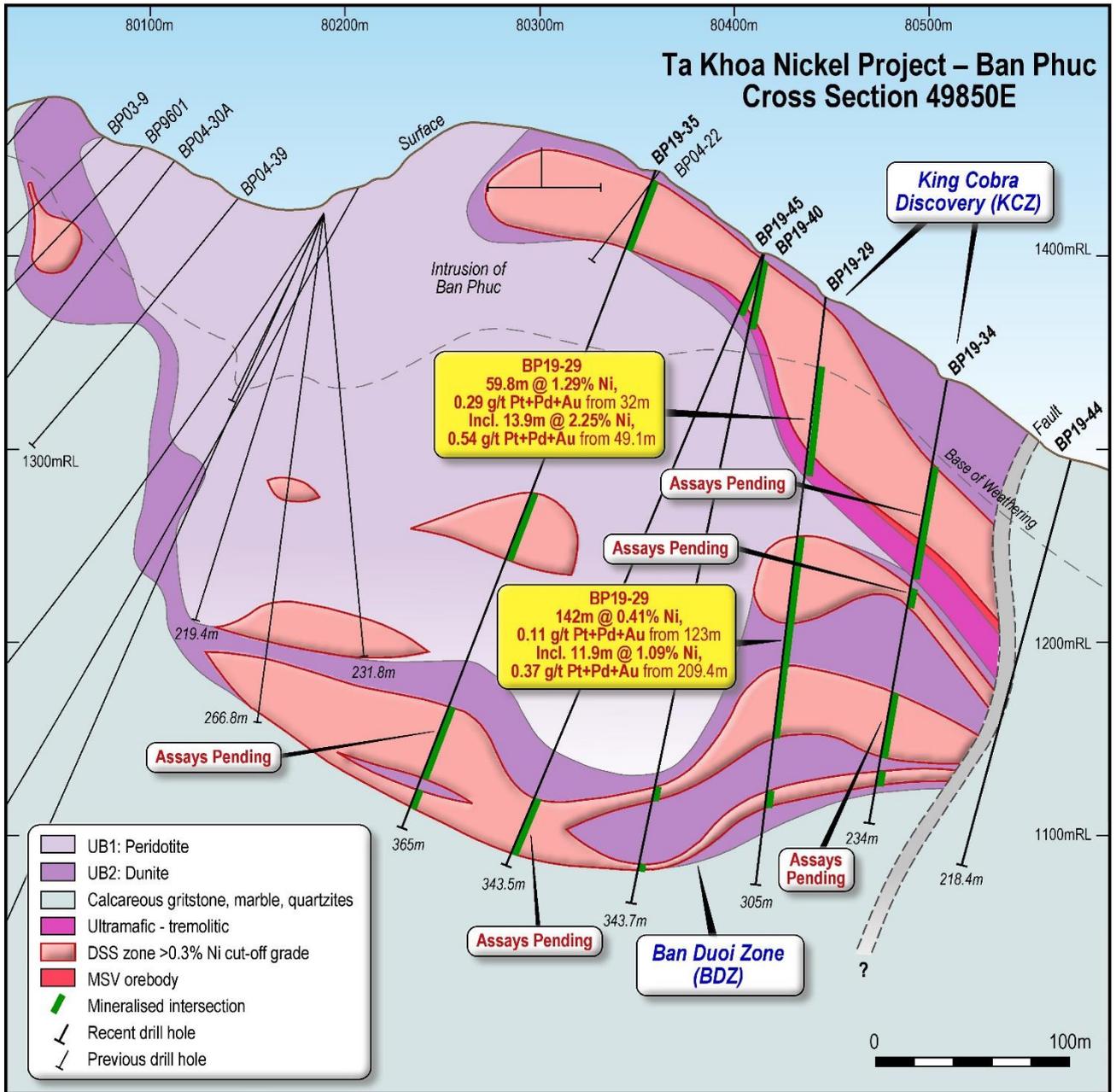


Figure 2: Cross Section 49850E showing the King Cobra discovery hole BP19-23 and BP19-34 (See ASX announcement dated 20<sup>th</sup> January 2020 for full details)

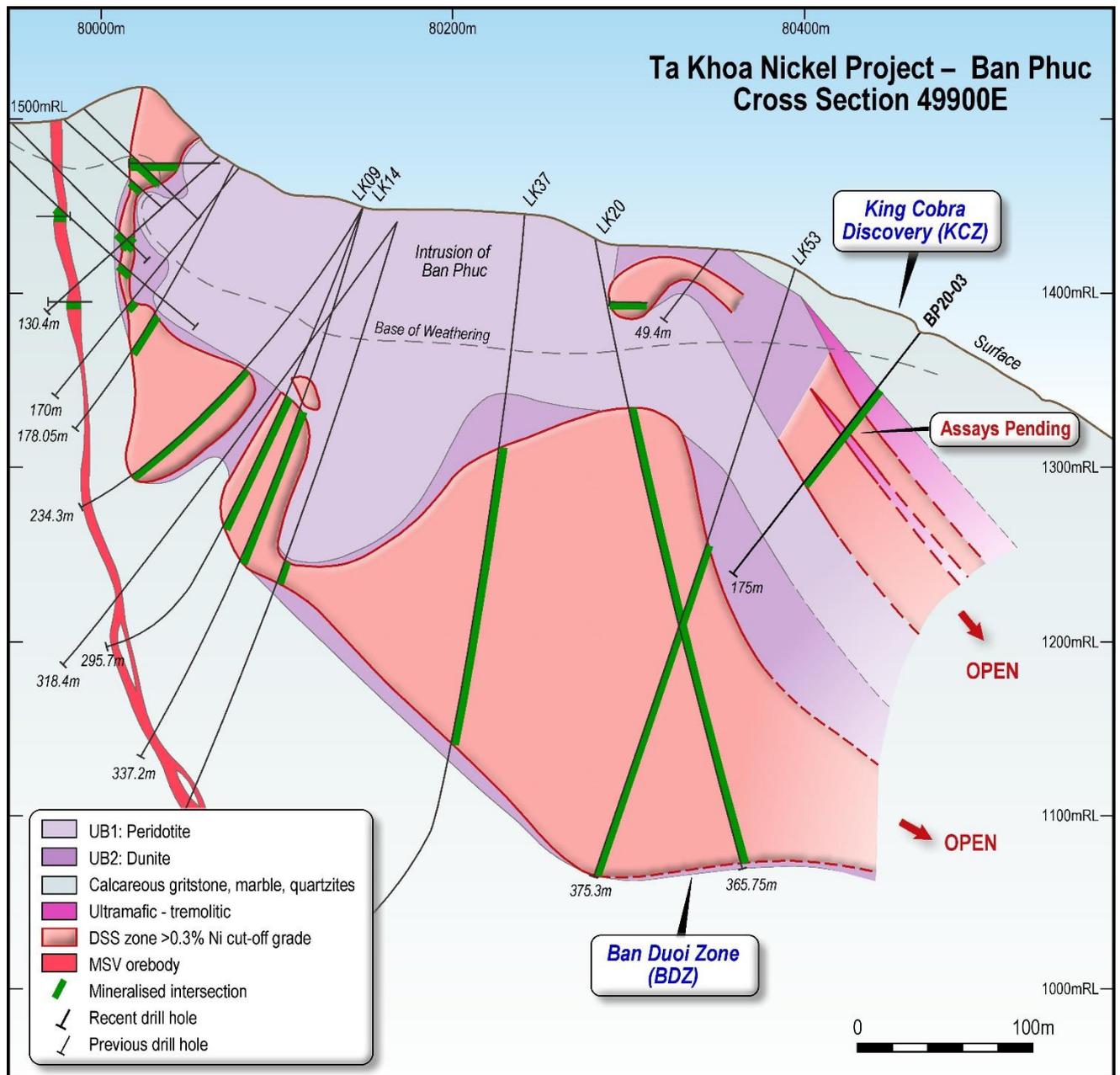


Figure 3: Cross Section 49900E showing Ban Phuc DSS drillhole BP20-03 intersection of the King Cobra discovery

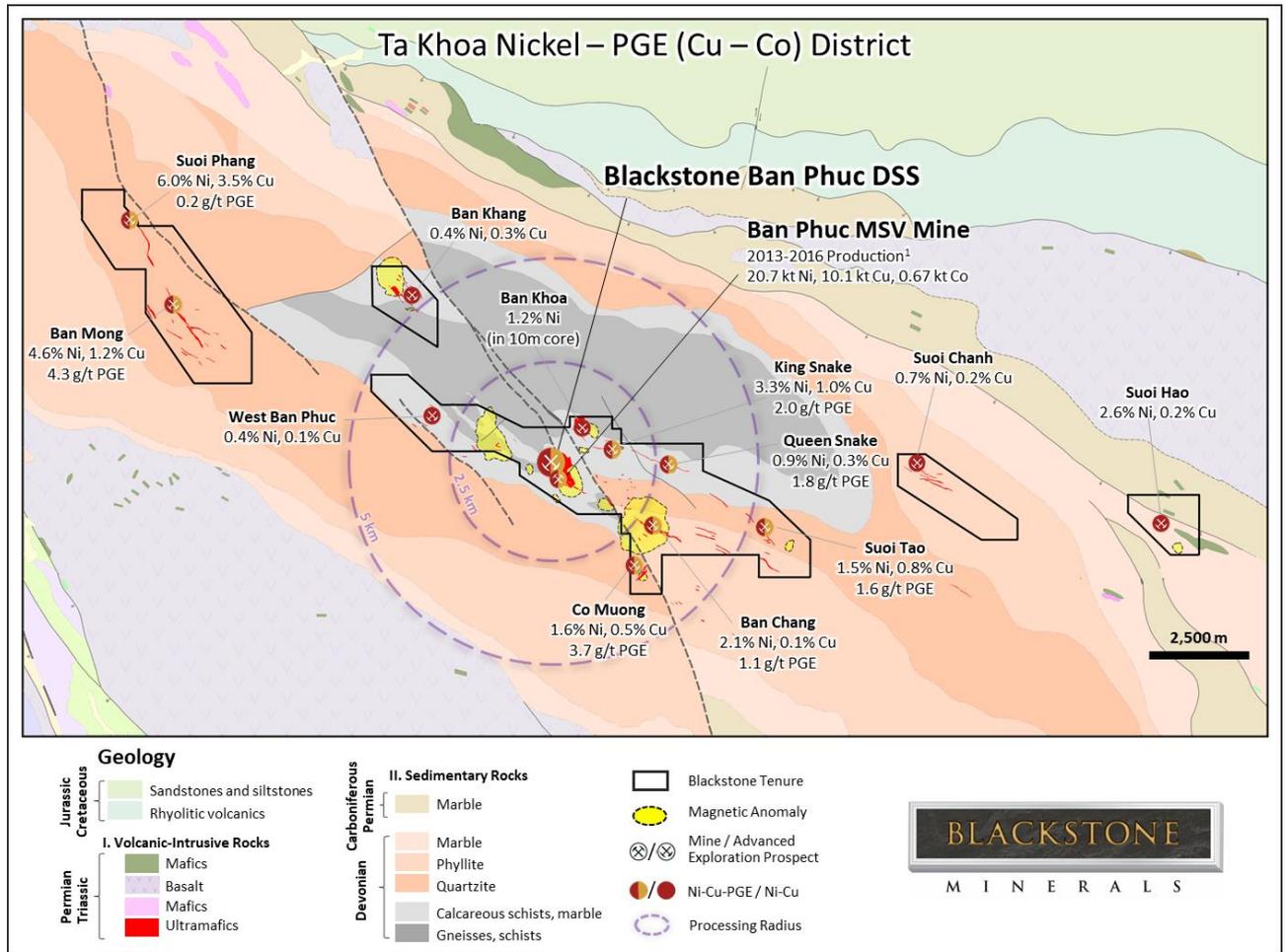


Figure 4: Ta Khoa dome geology prospective for multiple magmatic nickel sulfide deposits  
(1. Refer to ASX announcement 18 December 2019 Blackstone Discovers King Cobra Nickel Sulfide Zone at Ta Khoa Nickel Project)



Figure 5: Ta Khoa Project Location (see approximate location of LG Chem & Vinfast joint venture battery factory in Northern Vietnam port city of Hai Phong <http://ht.ly/lfZn30p4Etv>)

## Canadian Projects

### BC Project (100% interest)

The BC Project (367 km<sup>2</sup> of tenure), formerly the Little Gem Project, is located 180 km north of Vancouver in British Columbia, Canada. The Project was discovered in the 1930s 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. Blackstone acquired the BC Cobalt Project in October 2017 and has since completed an extensive maiden exploration program including drilling, geochemical and geophysical surveys, with the initial results indicating potential for the project to host a world class Cobalt Belt in British Columbia.

During the December Quarter, Blackstone completed the 2019 field season with an extensive stream sediment, soil sampling and mapping program. During the 2018 field season Blackstone identified a number of major Copper-Gold-Cobalt targets centred on the Jewel Prospect, located 1.1 km north-northeast of the Little Gem Prospect. The soil anomalies are greater than 1.5 kilometres long and coincide with several significant IP targets, which are indicating a large sulfide bearing body at depth. The Copper, Gold and Cobalt soil anomalies are favourably located within a significant structural setting near the contact between the granodiorite and serpentinite (*see Figures 6 and 7*).

Blackstone's geological model for the Jewel Prospect suggests the Copper-Gold-Cobalt Prospect is favourably located within a similar geological setting to the underground mines of the world class Bou-Azzer primary Cobalt district in Morocco. The majority of the high grade underground primary Cobalt mines at Bou-Azzer are located near the contact of the serpentinised ultramafic and the quartz diorite. The historical Jewel Mine is likewise located within close proximity to the contact of the serpentinite and granodiorite bodies.

With the discovery of Cobalt-Gold mineralisation at Erebor during the 2018 field season returning grades up to 2.3% cobalt, 32 g/t gold, 1.6% copper and 1.1% nickel combined with the multiple large-scale IP anomalies indicating the potential source of the high grade mineralisation at Little Gem, Erebor, Jewel and Roxey, the Company continues to unlock the potential for multiple deposits in a region with geology analogous to the Bou-Azzer primary Cobalt district in Morocco (>50 deposits and over 75 years of Cobalt production). Regional targets continue to be generated from the data collected through prospecting and stream sediment sampling across the entire 48 strike km of untested geology prospective for further primary Cobalt and Gold mineralisation. Blackstone is actively seeking joint venture partners for the BC Project.

### Cartier Project (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 (1990s) on the project for Voisey's Bay Style Nickel and Copper has identified Cobalt within two prospects named Lac St Pierre Zones 1 & 2. During the December Quarter the Company continued to progress the project to understand the full potential of the Cartier Project.

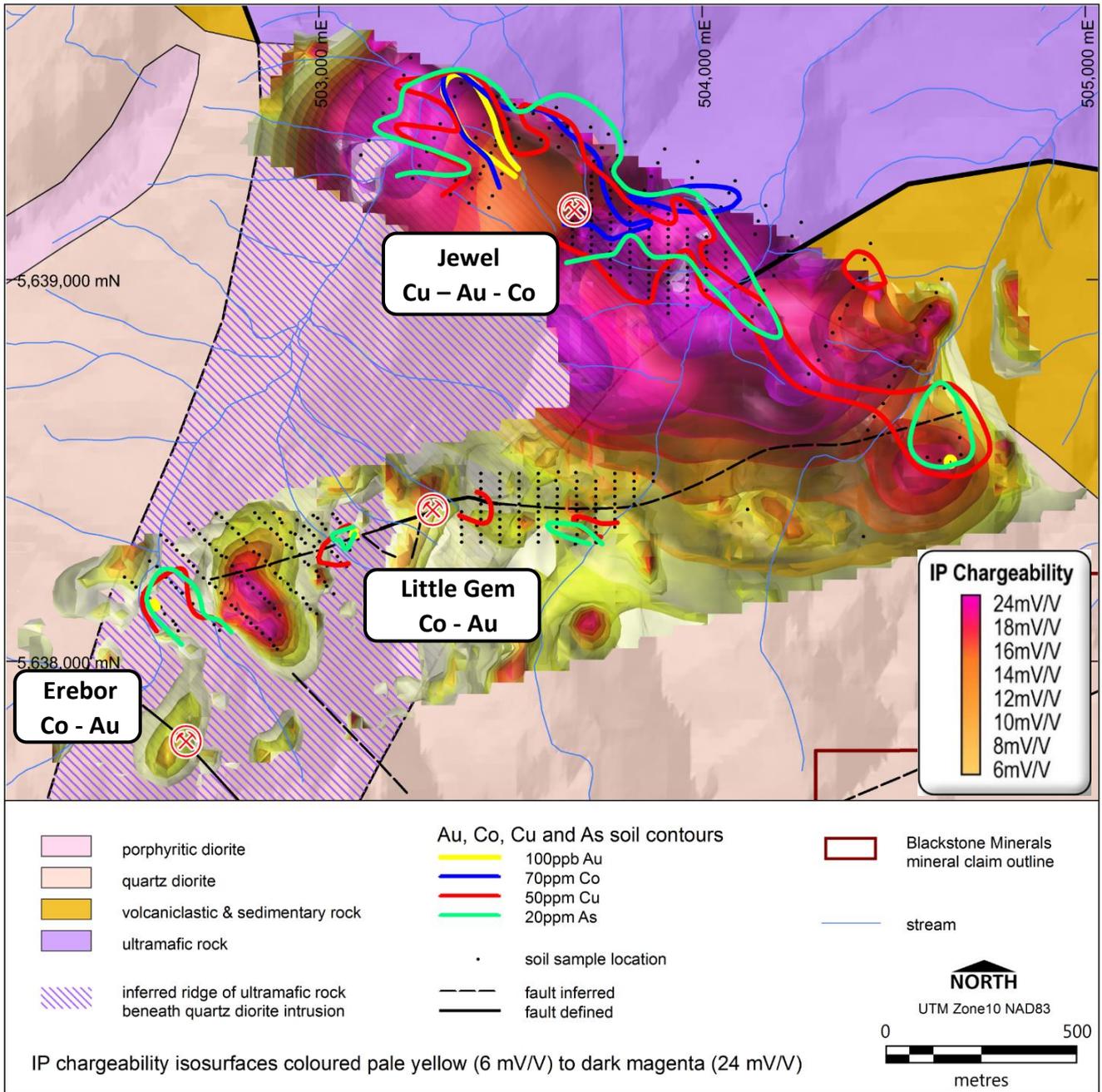


Figure 6: BC Project plan showing Copper, Gold and Cobalt soil contours and IP chargeability isosurfaces

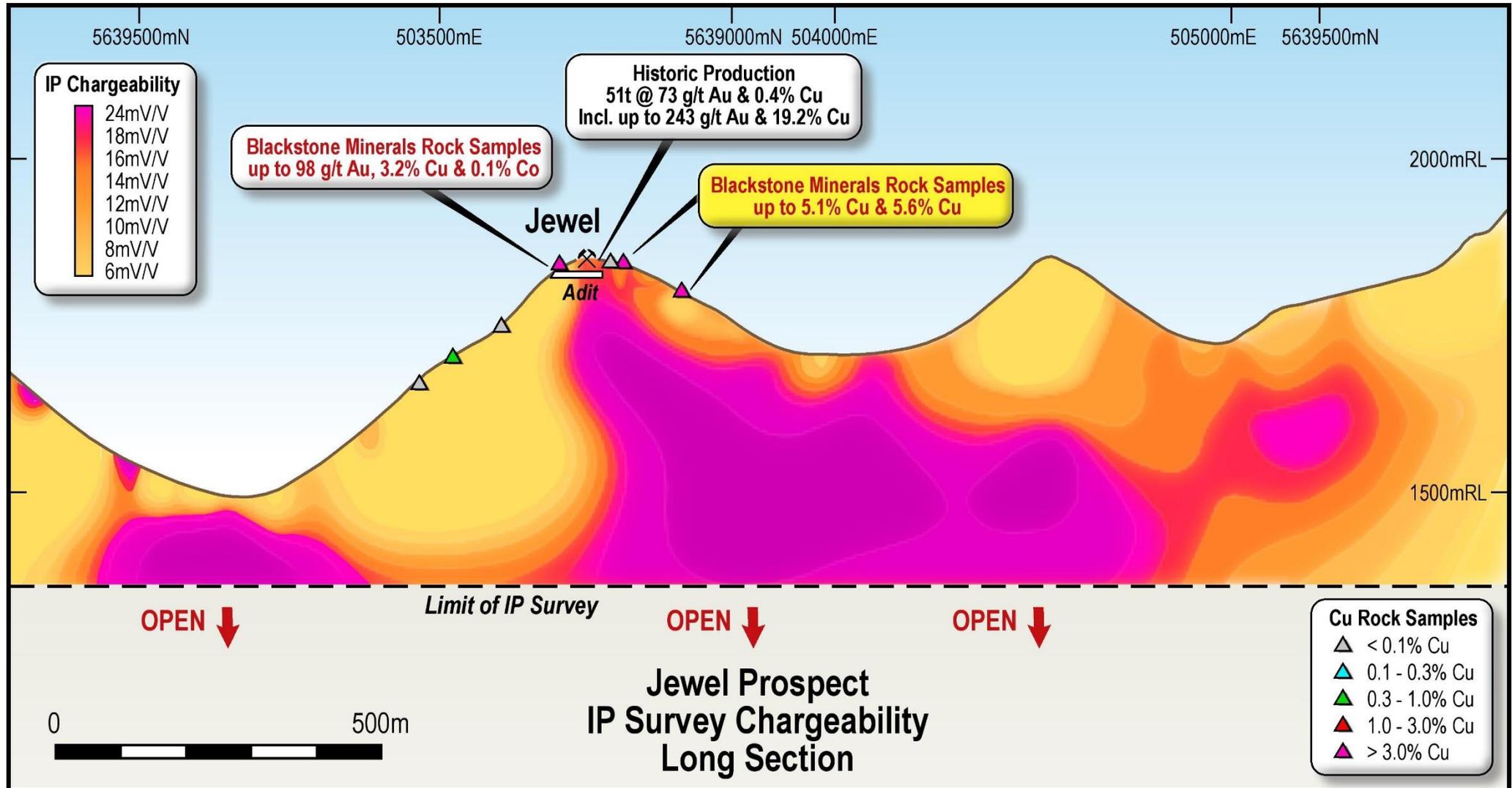


Figure 7: Long Section schematic of chargeability isosurfaces and surface rock samples at the Jewel Copper-Gold-Cobalt Prospect

Refer ASX Announcement dated 16 October 2018 and 6 September 2017.

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## Australian Projects

### Silver Swan South Project (100% interest)

The Silver Swan South Project comprises one granted exploration licence E27/545 and six granted prospecting licences, P27/2191 – 2196 covering an area of 38.5 km<sup>2</sup>. The Project is along trend of the massive nickel sulfide 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).

During the December Quarter, Blackstone continued to work on finalising priority targets for drill testing.

Highlights of the Project include:

- Blackstone's second phase aircore drilling program at Silver Swan South intersected gold mineralisation and extensive basement geochemical anomalism at the **Black Eagle** prospect with the following result:
  - **10 m @ 3.2 g/t Au from 68 m** within;  
**15 m @ 2.2 g/t Au from 64 m to EOH** (*see Figures 8 and 9*).
- The above results have significantly upgraded the Black Eagle prospect and, when combined with previous reconnaissance results of **3m @ 3.5g/t Au from 60m** sees Black Eagle **elevated to a priority drill target**.
- The Silver Swan South project is located 8 km along strike and encompasses the interpreted extension of the Fitzroy Shear Zone which hosts the Kanowna Belle Gold Mine (+5 Moz gold endowment);
- Aircore drilling will also target the **Black Hawk** prospect following up on an initial **3 m @ 2.6 g/t Au from 52 m** intersected in the first phase of drilling at Silver Swan South.

Blackstone's initial drilling at Silver Swan South was targeting both gold, hosted by structural targets along strike from the Kanowna Belle Gold Mine (+5Moz gold endowment), and nickel sulfide mineralisation associated with ultramafic units along strike from the Silver Swan and Black Swan Nickel Mines (combined endowment 166kt Ni metal). The initial programs were 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.

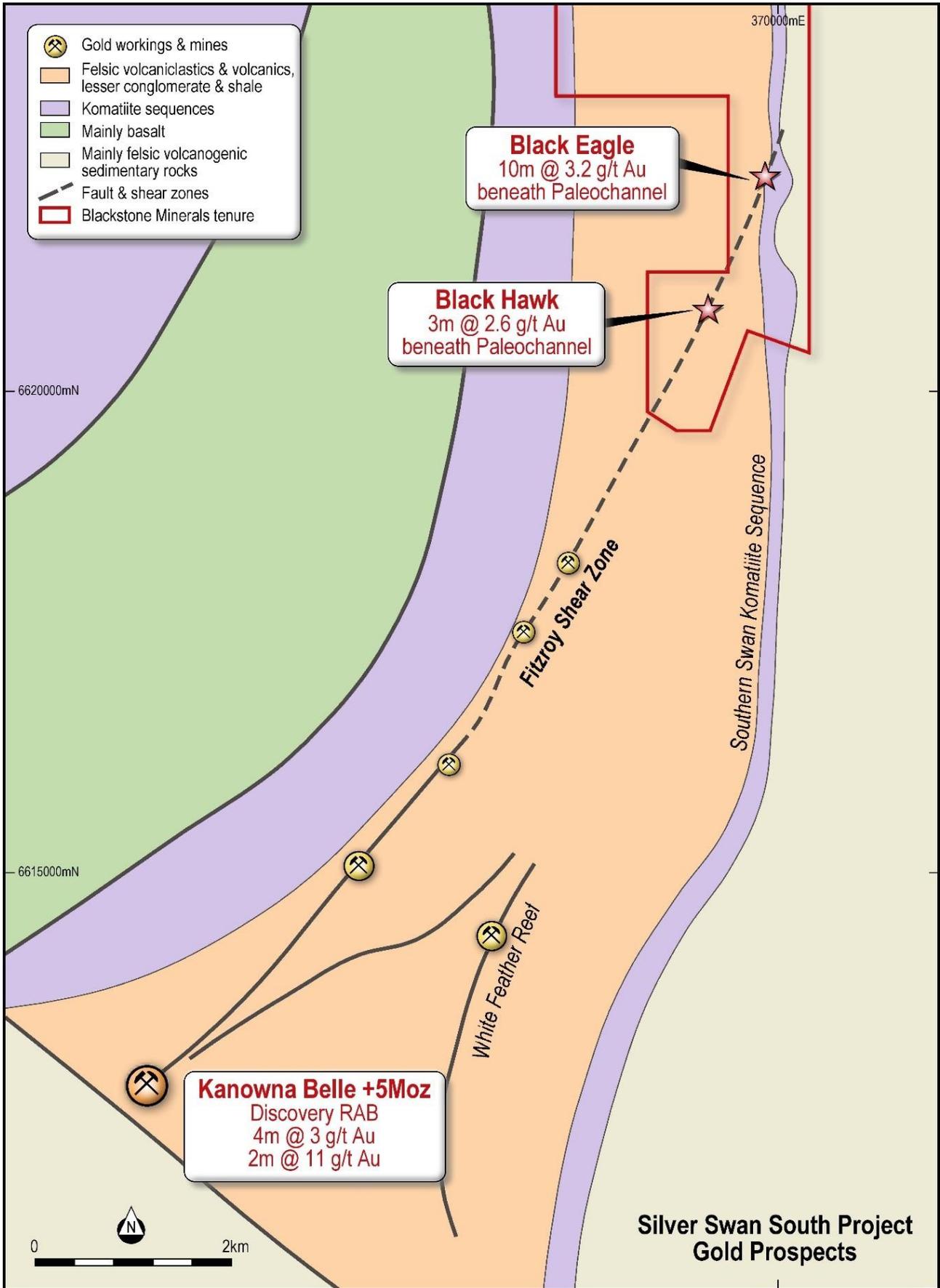


Figure 8: Silver Swan South Gold Prospects

Refer ASX Announcement dated 1 March 2018

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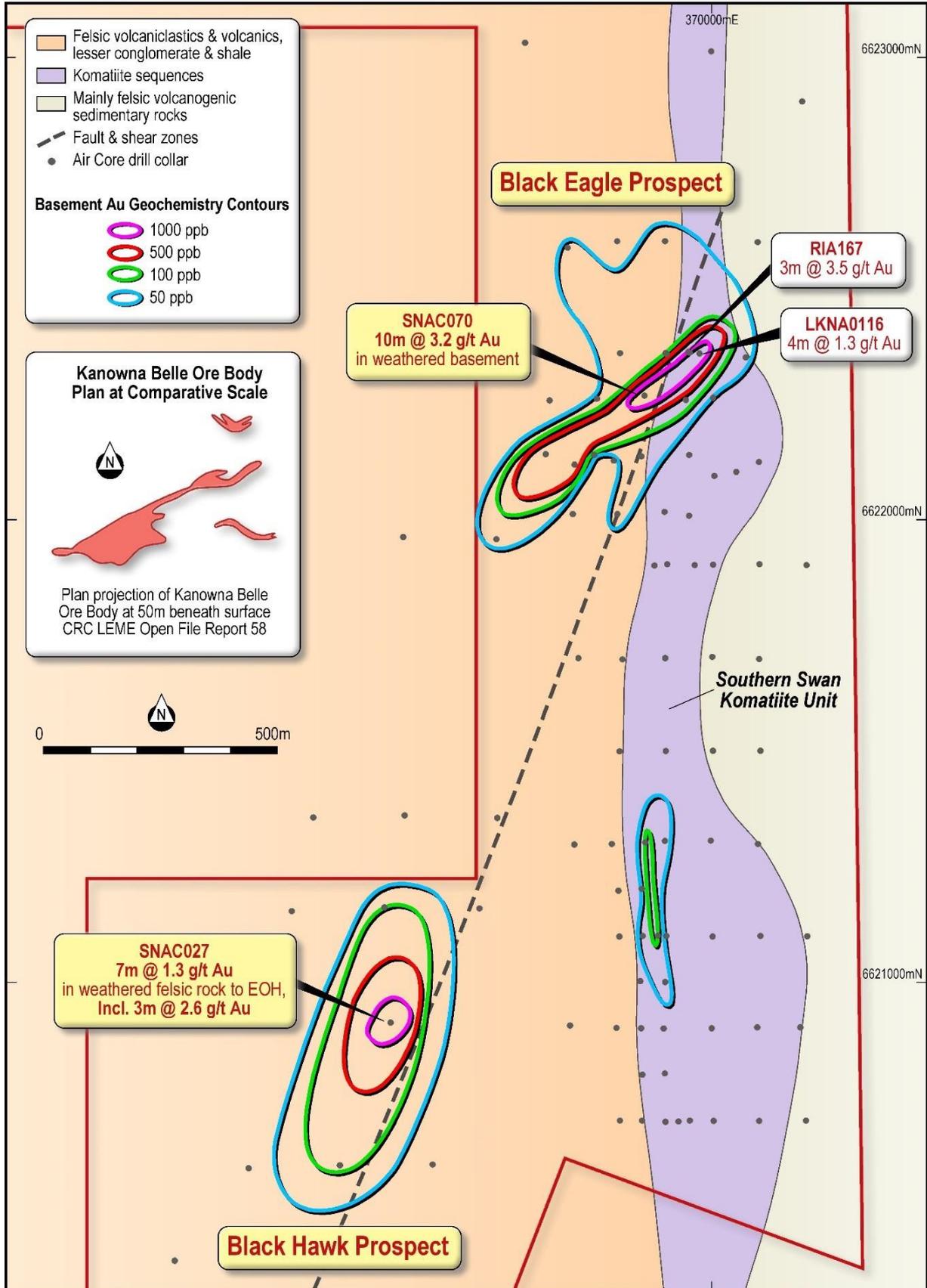


Figure 9: Silver Swan South Gold Prospects with Basement Gold Geochemistry Contours

Refer ASX Announcement dated 1 March 2018

## Red Gate Project (100% interest)

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), 140 km northeast of Kalgoorlie. Historical exploration work has mostly targeted the Porphyry North Prospect where shallow, outcropping mineralisation has been defined. There is the potential to discover further mineralisation at Porphyry North and several other prospects nearby.

During the December Quarter, Blackstone continued to work on finalising priority targets for drill testing.

## Middle Creek Project (95% to 100% interest)

The Middle Creek Project is adjacent to Millennium Minerals Limited's Nullagine Gold Project (where the Golden Eagle operations have produced >400 koz gold since 2012 and, as at 31<sup>st</sup> July 2018, had a 1.1Moz resource inventory), in the Pilbara region of Western Australia and consists of 21 prospecting licence applications covering 37.7 km<sup>2</sup> within the Mosquito Creek belt.

During the December Quarter, Blackstone continued to work on finalising priority targets for drill testing.

Yours sincerely



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**Managing Director**  
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## About Blackstone

Blackstone Minerals Limited (**ASX code: BSX**) is actively exploring the Ta Khoa Nickel-PGE Project in Northern Vietnam. The Ta Khoa Project includes the Ban Phuc nickel mine which operated as a mechanised underground mine from 2013 to 2016. The Ta Khoa Nickel-PGE Project has existing modern infrastructure built to Australian Standards including a 450ktpa processing plant located within a premier nickel sulfide district. Blackstone owns a large land holding within the BC Project 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 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.

## Competent Person Statement

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by Mr Andrew Radonjic, an 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.

## No New Information or Data

For full details of the Exploration results, refer to the said Announcement or Release on the said date. Blackstone Minerals is not aware of any new information or data that materially affects the information included in the said announcement.

## Appendix One| Tenements

### Mining tenements held at the end of December 2019 Quarter

Project	Location	Tenement	Interest at December 2019
BC Cobalt	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, 1052630	100%
	British Columbia, Canada	1052893, 1065892	100%
	British Columbia, Canada	1066580, 1066581	100%
	Bull Run (Record Mine)	Oregon, United States	152073, 152074,
152076, 152077,			0% <sup>1</sup>
152078, 152627,			0% <sup>1</sup>
17242 – 17246			0% <sup>1</sup>
Ta Khoa	Vietnam	ML 1211/GPKT-BTNMT and 522 G/P	0% <sup>2</sup>
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	P27/2191 – P27/2196	100%
Red Gate	Eastern Goldfields	E31/1096	100%
Middle Creek	Western Australia	P46/1900 – P46/1920,	95%
	Western Australia	P46/1924	100%

1. Held via option agreement to acquire up to 100% of the project.

2. Held via option agreement to acquire up to 90% of the project.

**Mining tenements acquired and disposed during the December 2019 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	-	-	-	-

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

Project	Location	Tenement	Interest at end of Quarter
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				