

ASX:HWK

## HAWKSTONE MINING LIMITED QUARTERLY ACTIVITIES REPORT DECEMBER 2018

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### HIGHLIGHTS

- **Receipt of outstanding results from the maiden drill program at Big Sandy Project**
  - Confirmation of significant mineralisation in the northern zone
  - Further target area to the south
  - Key results from the program include:
    - **43.8 m @ 2,089 ppm Li** in DDH6 including:
      - 11 m @ 2,537 ppm Li from 12 metres
      - 5.28 m @ 2,260 ppm Li from 38 metres
      - 2.67 m @ 2,761 ppm Li from 46.3 metres
    - **22.0 m @ 2,020 ppm Li** in DDH7 including:
      - 3.0 m @ 2,416 ppm Li from 11 metres
      - 10.0 m @ 2,486 ppm Li from 18 metres
  - Application for drilling to BLM to test the extent and grade of the northern mineralised zone
- **Completion of the initial metallurgical test work producing positive results**
  - Confirms leachability of lithium using sulphuric acid
  - Metallurgical recoveries of up to 95% Li achieved within a 7 hour period
  - Recovery of lithium using sulphuric acid is commonly used by other claystone hosted lithium projects
  - Optimisation of metallurgical test work has commenced

### BIG SANDY LITHIUM PROJECT – DRILLING & RESULTS

Hawkstone's maiden program on the Big Sandy Project, Arizona, initially sought approval from the Bureau of Land Management (**BLM**) for 16 holes, however, during drilling and with further geological mapping providing a refinement of the initial geological interpretation, it was determined to defer the final 4 holes.

During the quarter, results of the drill program successfully identified a clay hosted lithium mineralised zone measuring approximately 3,000m x 1,000m in the northern portion of the project area (Figure 1). This zone is bounded by the basin (graben) margin to the east as defined by basalt flows intersected in DDHs 5 and 8 and in outcrop in river cuts. The western margin is defined by surface geological mapping with the alteration associated with the lithium mineralisation appearing to decrease to the west. Further drilling is required to confirm this observation.

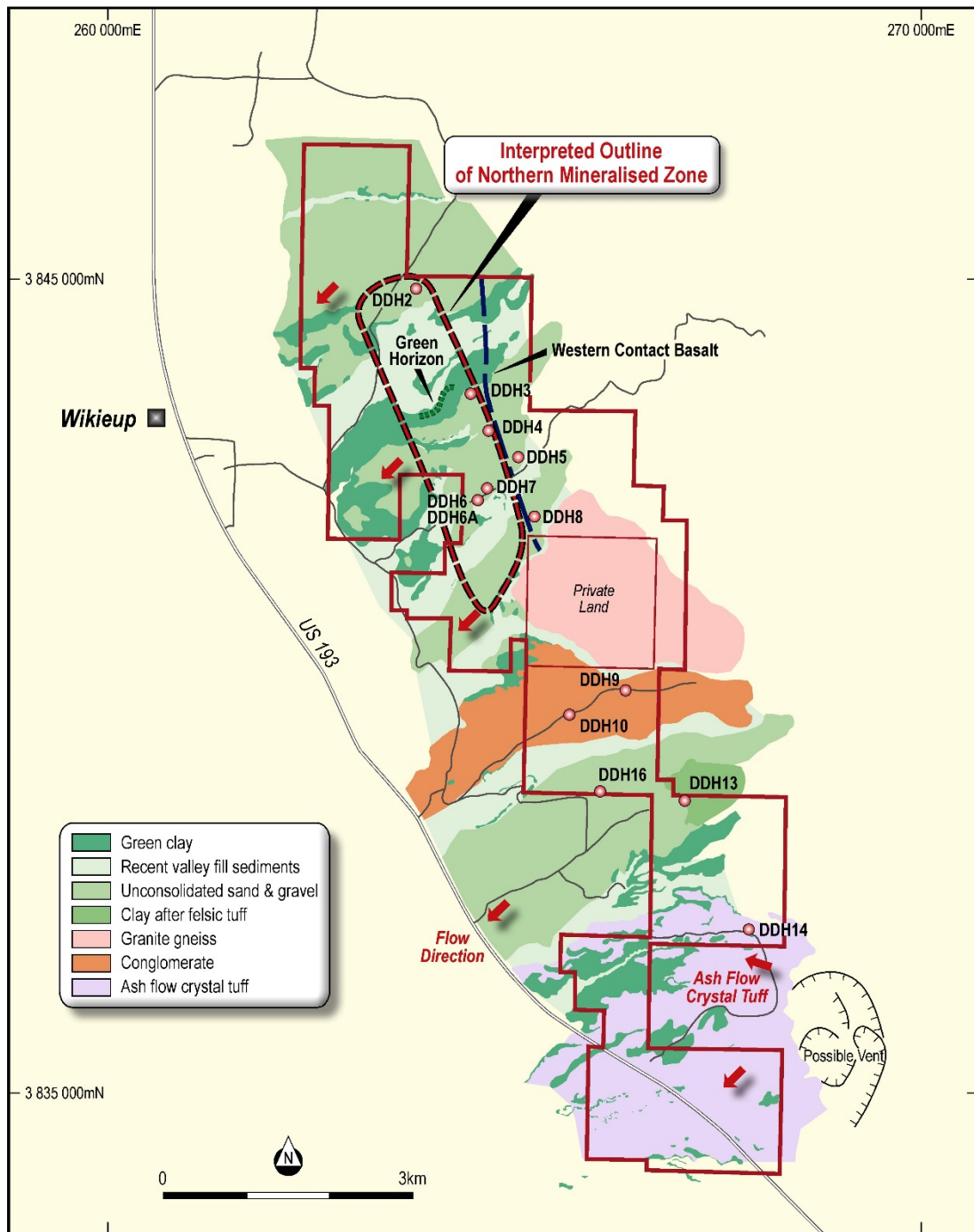


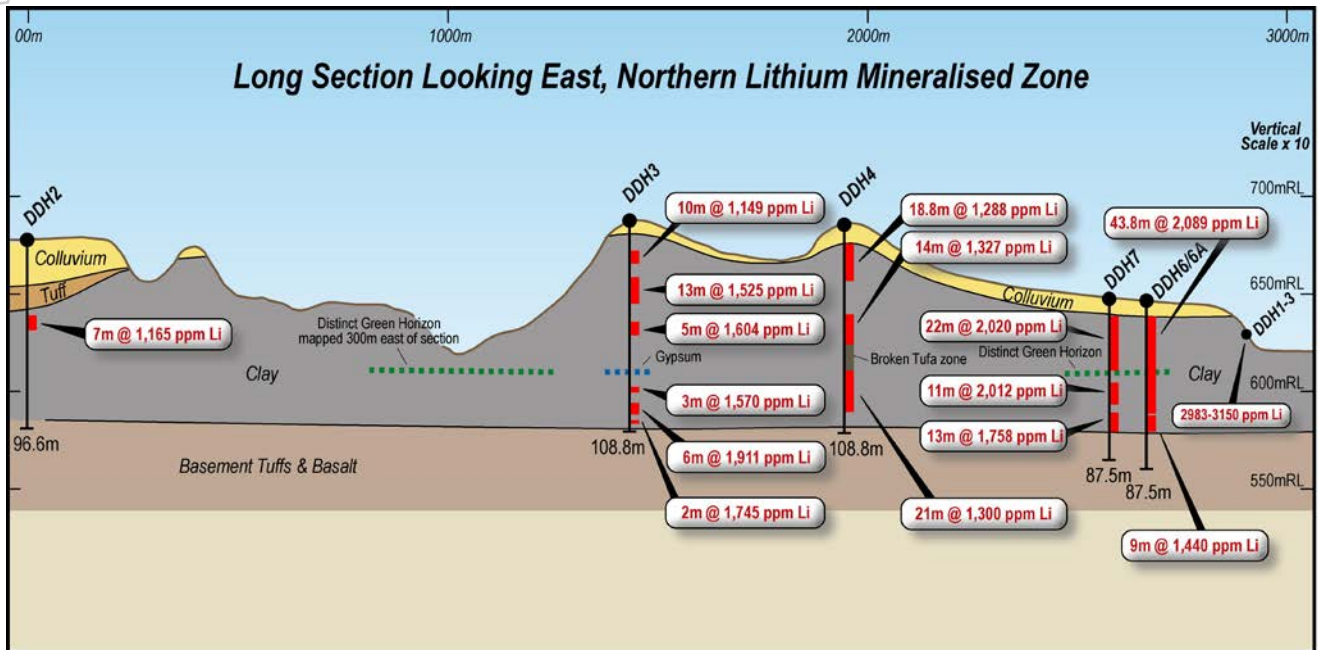
Figure 1 – Geology Big Sandy Project

### NORTHERN MINERALISED ZONE

Holes drilled in the Northern Mineralised Zone include DDHs 2, 3, 4, 6/6A and 7. Holes DDH6/6A and 7 lie in the south-central part of the mineralised zone (Figure 2). As previously reported, they intersected shallow lithium mineralised intercepts from just over 8m downhole.

- **DDH6/6A returned 43.8 metres @ 2,089 ppm Li from 8.2 metres, including:**
  - 11 m @ 2,537 ppm Li from 12 metres;
  - 5.28 m @ 2,260 ppm Li from 38 metres; and
  - 2.67 m @ 2,761 ppm Li from 46.3 metres.
- **DDH7, 190m to the northeast contained 22 metres @ 2,020 ppm Li and 11.0 metres @ 2,013 ppm Li from 36.0 metres, including:**
  - 3.0 m @ 2,416 ppm Li from 11 metres; and

- 10.0 m @ 2,486 ppm Li from 18 metres.
- DDH4, collared at an elevation 47 metres above DDH7 and drilled 700 metres north of DDH7, returned 3 mineralised zones:
  - 18.8 m @ 1,288 ppm Li from 8.2 metres;
  - 14.0 m @ 1,677 ppm Li from 46.0 metres; and
  - 13.0 m @ 1,672 from 76.0 metres.



**Figure 2 – Long Section – Northern Lithium Mineralised Zone**

DDH3, located 500m northeast of DDH4 and at a similar elevation, intersected 6 mineralised zones as defined by a 1,000ppm Li bottom cut. They ranged from 2 metres to 10 metres in thickness and averaged from 1,149ppm to 1,912ppm Li (Table 1). Although DDH3 contains 6 intercepts using a bottom cut of 1,000ppm, it averages 1,005ppm Li over 99 metres from 9.75 metres, the base of colluvium.

DDH2, located 1,200 metres northwest of DDH3 and interpreted to define the northern margin of the zone, intersected altered clays that returned 7 metres grading 1,165ppm Li from 35 metres.

### SOUTHERN CLAIM AREA – DRILLING AND GEOLOGY

Drill holes in the southern part of the claim group (DDHs 9, 10, 13, 14 and 16) did not intersect significant lithium bearing clays as intersected in the Northern Mineralisation Zone.

These clays were previously interpreted to represent a continuous horizon extending under the transported sand and gravel as in the northern part of the claim group. This drill program has shown the clays not to be continuous and has provided a further understanding of the geology allowing the Company's future programs to focus on the exploration of areas where the palaeo river systems have not eroded the clays. Previous surface sampling on these clays has returned results of up to 1,410ppm Li and the Company will target this southern region with mapping and sampling where significant clay outcrops have been identified along river cuts.

### NEXT PHASE OF EXPLORATION

The Phase 2 drill program has now been designed to define the extent of the lithium mineralised clays in the Northern Mineralised Zone and has been submitted to the BLM. This program will commence upon the granting of necessary approvals.

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## BIG SANDY LITHIUM PROJECT – METALLURGICAL TEST WORK RESULTS

The results from the preliminary leach tests demonstrate high lithium extractions using a sulphuric acid leach. These preliminary results represent the first metallurgical work undertaken on Big Sandy fresh material and ongoing test work is aimed to optimise these results.

**Table 1 – Leach Test Results, Ambient Temperature Minus 1.7 millimetre Material**

Sample No.	Head Assay mg/L Li	ACID LEACH PARAMETERS				LEACH RESULTS			
		% Solids	Acid Consumption kg/MT FEED	Temp. °C	Time Hours	Final pH	Calc. Head mg Li/kgFEED	Total Ext. mg Li/kgFEED	Lithium Extracted
Ambient Temperature Acid Leach Testing Minus 1.7 millimetre Material									
1	2,145	17%	529	25	1	0.8	2,086	1,765	85%
2	2,145	17%	566	25	7	0.7	2,154	2,043	95%
3	2,145	17%	585	25	24	0.8	2,161	2,100	97%

Acid leach tests were conducted on minus 1.7 millimetre crushed material and minus 0.150 millimetre pulverized material at both ambient and elevated temperatures. The lithium extractions and acid consumptions were similar for both sets of tests. In these tests, no significant benefit was observed from pulverizing the crushed material.

Ongoing metallurgical testing has commenced to optimise acid consumption. The new test work will include the following:

- Screen analyses – wet screen analysis with a dilute acid solution and assays by size fraction. This should indicate the potential for scalping acid consumers and will serve as the basis for the target crush sizes in subsequent tests.
- Acid scrub leach – scalp coarse particles at a target size (3 different target sizes) and leach the undersize. This testing is to confirm the potential benefits determined in the screen analysis stage.
- Coarse crush leach – whole ore leach at a crush size larger than 1.7 mm (target size based on results from screen analysis). This testing is to determine the leach kinetics and acid consumptions at a coarser crush size than previously tested.

These tests should indicate the potential for reducing reagent consumption while maintaining high lithium extraction in the leach processing.

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## LORDBURG LITHIUM BRINE PROJECT

Lordsburg comprises 355 BLM claims covering 28.7km<sup>2</sup> in the southwest corner of the state of New Mexico. It is easily accessed along the I10 Interstate between Tucson (Arizona) and La Cruces (New Mexico) close to the New Mexico, Arizona border (Figure 1). Rail lines pass to the north of the Claim Block and through the lake system to the south.

Work has yet to commence on the Lordsburg Project.

## KANGWANE SOUTH PROJECT

No work was completed on the Company's Kangwane South tenement, South Africa, during the quarter.

### **For further information, please contact:**

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## COMPETENT PERSONS STATEMENT

The information in this report that relates to exploration results is based on and fairly represents information compiled by Mr Greg Smith, a Competent Person whom is a Member of the Australasian Institute of Mining and Metallurgy. Mr Smith is the Company's Chief Technical Officer and holds securities in the Company. Mr Smith has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Smith consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the exploration results originally reported by the Company on 20 September 2018, 13 November 2018 and 29 November 2018 and that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

## Appendix 1

The following information is provided pursuant to Listing Rule 5.3.3 for the quarter ended 31 December 2018.

Project	Claim Number	Location	Number of Claims	Interest
Big Sandy	WIK-001 to WIK-112	Arizona, USA	112	100%
Big Sandy	BSL-001 to BSL-146	Arizona, USA	146	100%
Lordsburg	LLP-001 to LLP-208	New Mexico, USA	208	100%
Lordsburg	LLP-209 to LLP-354	New Mexico, USA	147	100%
Kangwane South	N/A	Mpumulanga Province, South Africa	N/A	70%

No tenements were acquired or disposed of during the quarter.

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