

ASX Release: 17 October 2018

# **Quarterly Activities Report - for the Quarter ended 30 September 2018**

**ASX Code: WRM** 

#### **Issued Securities**

Shares: 1,636 million Options: 570 million

## Cash on hand (30 Sept 2018)

\$2.6M

**Market Cap** (as at 16 Oct 2018) \$9.8M at \$0.006 per share

#### **Directors & Management**

Brian Phillips Non-Executive Chairman

Matthew Gill Managing Director & Chief Executive Officer

Ian Smith
Non-Executive Director

Peter Lester Non-Executive Director

Jeremy Gray Non-Executive Director

Rohan Worland Exploration Manager

Shane Turner CFO & Company Secretary

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#### **Red Mountain Zinc VMS Project Highlights**

The Company continued extensive on-ground exploration activities at its 100% owned Red Mountain high-grade zinc – silver – lead – gold volcanogenic massive sulphide ("VMS") Project in Alaska. Field activities included simultaneous diamond drilling, ground CSAMT geophysics, geological reconnaissance mapping and surface geochemical sampling programs. The 2018 field program concluded in September as planned. Exploration program highlights for 2018 include:

- Discovery and successful drill testing of the new Hunter prospect massive sulphide mineralisation with 1.4m @ 17.4% Zn, 3.9% Pb, 90g/t Ag & 1.6% Cu for 25.8% ZnEq¹ (HR18-01)². This discovery remains open east and west and down dip with massive sulphide mapped for over 500 metres along strike on the surface.
- Best drill intersection in the history of this project at the West Tundra deposit with 3.5m @ 15.1% Zn, 6.7% Pb, 518g/t Ag, 2.1g/t Au and 0.2% Cu for 35.2% ZnEq<sup>1</sup> (WT18-28)<sup>3</sup>.
- Best drill intersection in the history of this project into the Discovery Lens at the Dry Creek deposit with 4.7m @ 19.5% Zn, 7.8% Pb, 466g/t Ag, 6.9g/t Au and 1.5% Cu for 49.7% ZnEq<sup>1</sup> (DC18-79)<sup>4</sup>.
- Down dip extension of the Fosters Lens at the Dry Creek deposit achieved with 4.3m @ 4.8% Zn, 2.3% Pb, 1,435g/t Ag, 2.2g/t Au and 0.5% Cu for 43.2% ZnEq¹ (DC18-77)⁴ and remaining open down dip.
- Completion of a detailed regional stream sediment program across the majority of the Company's 143km² strategic tenement package to assist in focusing follow-up work for the 2019 field exploration program.
  - The field crews collected 435 stream samples, 1,835 soil samples and 330 rock chips samples across the company's tenement holding. Stream samples are awaiting assaying.
- Successful application of portable XRF analysis of soil samples to deliver rapid target generation.
- Successful orientation ground geophysics across known mineralisation with the CSAMT geophysics technique accurately identifying massive sulphide mineralisation at Dry Creek and West Tundra enabling the technique to be a rapid reconnaissance tool for identifying drill targets within zones of anomalous geochemistry and favourable stratigraphy.
  - The CSAMT geophysics crew acquired 40 line kms of new data along strike of the Dry Creek and West Tundra VMS deposits. This work assisted to identify follow-up drill targets.
- A total of 24 drill holes for 4,111 metres of diamond core drilling was completed during 2018. The drill rig has been demobilised and stored at the camp site ready for rapid re-mobilisation in 2019.

The successful progress of this exploration program resulted in the signing of a cornerstone investment and strategic relationship agreement with Sandfire Resources NL (ASX:SFR) (Sandfire). The company welcomed Sandfire as a



strategic partner and cornerstone investor that shares White Rock's vision for the exploration and development of the Red Mountain Project. Securing a high-quality partner with world leading expertise in the exploration and development of base metals projects is a strong endorsement to the quality and potential of White Rock's globally significant high-grade zinc VMS Red Mountain Project.

## Red Mountain Zinc-Silver-Lead-Gold VMS Project

The Company continued on ground exploration activities at its 100% owned Red Mountain zinc – silver – lead – gold volcanogenic massive sulphide ("VMS") Project in Alaska. Red Mountain is a globally significant VMS project<sup>5</sup> with two already identified deposits (Dry Creek and West Tundra Flats) providing White Rock with a Resource base of **16.7Mt at 8.9% ZnEq<sup>1</sup>** including a high-grade component of **9.1Mt @ 12.9% ZnEq<sup>1</sup>** (refer ASX announcement 26 April 2017 regarding the maiden Mineral Resource).

The 2018 exploration program included:

- A targeted diamond drilling program aimed at in-fill and expanding the current globally significant high-grade zinc VMS maiden Resource,
- On-ground orientation electromagnetic (EM) geophysics and geochemistry exploration across the two already identified deposits,
- The regional application of the best geophysics and geochemistry exploration tools determined from the on-ground orientation work, and
- A follow-up diamond drilling program on the best of the more than 30 already identified exploration targets.

Field activities included simultaneous diamond drilling, ground CSAMT geophysics, downhole electromagnetics, geological reconnaissance mapping and surface geochemical sampling programs, all supported by a field camp with the capacity for up to 25 personnel. The 2018 field program concluded in September as planned. Details of field activities for the Quarter are provided below.

During the Quarter 15 drill holes were completed for 2,495 metres of diamond drilling. Three drill holes (DC18-82, DC18-84 & DC18-85) were completed at the Dry Creek deposit, testing extensions to the Discovery lens and the Fosters Gap.

A further 12 drill holes were completed on new targets including 3 drill holes at the newly discovered Hunter prospect massive sulphide horizon, with the remainder testing a combination of surface geochemical and CSAMT conductivity anomalies at Redback, South Platypus, Dry Creek West, Dry Creek East, Ram, Megan's North and Megan's South. Drilling progress updates including significant assay results for drill holes completed during the Quarter were provided in the ASX Announcements dated 4 July 2018, 20 August 2018 and 24 September 2018. A summary of significant drilling is provided below. Additional results for drill holes completed during the Quarter received subsequent to these ASX Announcements are also included here for the first time for completeness.

 $^1$  ZnEq = Zinc equivalent grades are estimated using long-term broker consensus estimates compiled by RFC Ambrian as at 20 March 2017 adjusted for recoveries from historical metallurgical test work and calculated with the formula: ZnEq =  $100 \times [(Zn\% \times 2,206.7 \times 0.9) + (Pb\% \times 1,922 \times 0.75) + (Cu\% \times 6,274 \times 0.70) + (Ag g/t \times (19.68/31.1035) \times 0.70) + (Au g/t \times (1,227/31.1035) \times 0.80)] / (2,206.7 \times 0.9). White Rock is of the opinion that all elements included in the metal equivalent calculation have reasonable potential to be recovered and sold.$ 

<sup>&</sup>lt;sup>2</sup> Refer ASX Announcement 20 August 2018 "High Grade Zinc Discovery at the Hunter Prospect, Red Mountain".

<sup>&</sup>lt;sup>3</sup> Refer ASX Announcement 18 June 2018 "Initial Drilling Delivers High Grade Zinc Results at Red Mountain".



<sup>4</sup> Refer ASX Announcement 4 July 2018 "High Grade Zinc-Silver Drill Intersections Extend Mineralisation at Red Mountain".

#### 1. Hunter Prospect

The Hunter prospect (Figure 1) was discovered by the Company through geological ground reconnaissance, where a 60cm wide massive sulphide outcrop rich in sphalerite (zinc) and galena (lead) was found. Subsequent prospecting mapped massive sulphide over 500m of strike within a carbonaceous phyllite that can be traced over 1km of strike. The zone of mineralisation is defined by anomalous soil geochemistry. Rock chip sampling of the massive sulphide from the discovery outcrop, as well as trenching along strike to define the position of the massive sulphide mineralisation, returned assay results up to 18.6% Zn, 5.4% Pb, 2.3% Cu, 147g/t Ag & 0.7g/t Au.

The massive sulphide horizon occurs along a steep south facing slope, strikes east-west and dips at approximately 45° towards the north (Figure 2). The massive sulphide horizon is hosted towards the base of a sequence of carbonaceous phyllites at the contact with underlying maroon-green phyllites. The horizon is locally associated with the development of chert beds within the sequence. A number of faults are interpreted to offset the horizon locally.

The first drill hole (HR18-01) was located above the massive sulphide horizon up slope to the north and drilled vertically so as to intersect the massive sulphide at a shallow position and confirm the dip of the VMS horizon. The second drill hole (HR18-02) targeted the massive sulphide horizon down-dip to the north from the same location. Both drill holes intersected massive sulphide mineralisation with high grade zinc, similar to the discovery outcrop.

HR18-01 intersected **1.4m @ 17.4% Zn, 3.9% Pb, 1.6% Cu, 90g/t Ag & 0.2g/t Au for 25.8% ZnEq<sup>1</sup>** from 48.25m down hole.

HR18-02 intersected **1.8m @ 13.8% Zn, 3.1% Pb, 0.9% Cu, 56g/t Ag & 0.2g/t Au for 19.5% ZnEq<sup>1</sup>** from 60.84m down hole.

Subsequently a third hole (HR18-04) was drilled a further 80m down-dip and 5cm of massive sulphide within a 55cm interval of laminated sulphides was intersected.

HR18-04 intersected **0.6m @ 10.5% Zn, 2.2% Pb, 0.3% Cu, 45g/t Ag & 0.1g/t Au for 14.0% ZnEq**<sup>1</sup> from 257.37m down hole.

The mineralisation at Hunter appears analogous to that at West Tundra located 9 kilometres to the east-northeast. At West Tundra the mineralised horizon is laterally extensive along strike and down-dip with some drill holes occasionally returning narrow intersections where the mineralised body pinches locally. No drilling has yet tested the Hunter mineralised horizon along strike to the east or west or further down-dip.

#### 2. <u>Dry Creek Deposit – Fosters Lens</u>

During the Quarter two drill holes (DC18-84 & DC18-85; Figure 3 & 4) targeted a zone between the Fosters lens and the Discovery lens (the "Fosters Gap") where previous explorers had mapped and interpreted that an intrusive felsic volcanic bound by faults had displaced the position of the massive sulphide horizon. White Rock completed a line of CSAMT geophysics over the "Fosters Gap" to better interpret the 3D geometry of the felsic intrusive and whether the massive sulphide horizon at Fosters or Discovery extended down plunge beneath the felsic volcanic. CSAMT confirmed that a conductivity anomaly consistent with the massive sulphide horizon at Fosters was present in the Fosters Gap area. The Company subsequently completed two diamond drill holes to test the CSAMT conductivity anomaly.

<sup>&</sup>lt;sup>5</sup> Refer ASX Announcement dated 26 September 2017 "White Rock Minerals Independent Research Report".



DC18-84 intersected semi-massive sulphide with visible sphalerite (zinc) seams and blebs confirming the extension of the Fosters lens into the Fosters Gap area. Assay results include <u>5.2m</u> @ 2.5% Zn, 0.9% Pb, 12g/t Ag, 0.1g/t Au and 0.1% Cu for <u>3.7% ZnEq</u><sup>1</sup> from 102.1m. A follow-up drill hole (DC18-85) was drilled down dip with two zones of semi-massive sulphide intersected below a cherty marker bed also observed at the Fosters lens. Assays results include <u>7.0m</u> @ 1.0% Zn, 0.4% Pb, 19g/t Ag and 0.1g/t Au for <u>2.0% ZnEq</u><sup>1</sup> from 108.2m, and <u>5.2m</u> @ 2.0% Zn, 0.9% Pb, 39g/t Ag, 0.2g/t Au and 0.1% Cu for <u>3.9% ZnEq</u><sup>1</sup> from 129.8m.

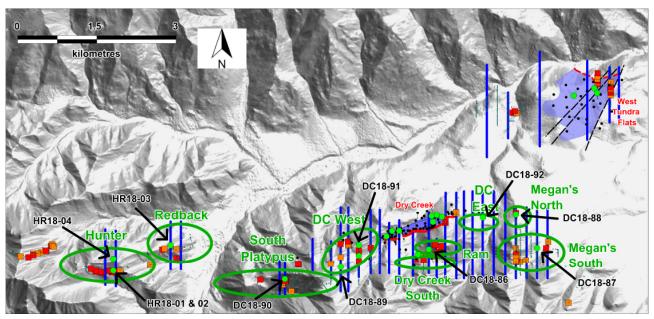
#### 3. <u>Dry Creek Deposit – Discovery Lens</u>

During the Quarter one drill hole (DC18-79) at the Discovery zone targeted the down-dip extension of the Resource below the earlier high grade intercept in DC18-79 (previous Quarter) of **4.7m** @ 19.5% Zn, 7.8% Pb, 466g/t Ag, 6.9g/t Au and 1.5% Cu for **49.7% ZnEq¹** from 231.1m. DC18-82 (Figure 3 & 4) intersected a number of horizons with bedded sulphide laminae and disseminated pyrite in the hangingwall that are likely extensions to the Fosters and Copper Zone in the Resource. Assay results for the Copper Zone include 1.1m @ 2.5% Cu from 223.63m. A zone of semi-massive to massive sulphide within siliceous gangue was intersected in the Discovery zone. Assay results include **4.2m** @ 5.9% Zn, 2.5% Pb, 96g/t Ag, 0.9g/t Au and 0.1% Cu for **11.4% ZnEq¹**.

Each of the Discovery, Copper Zone and the Fosters horizons remains open down dip and in places open along strike.

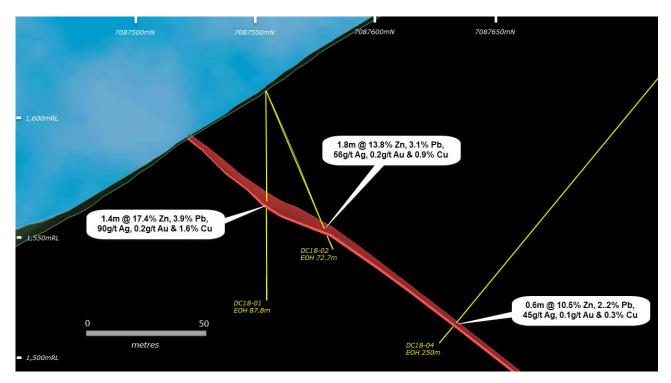
#### 4. New Targets

New targets drill tested during the Quarter included Redback, South Platypus, Dry Creek West, Dry Creek East, Ram, Megan's North and Megan's South (Figure 1). Assay results are provided in Table 1. These first drill holes to test these new targets found evidence of encouraging alteration and low-level mineralisation warranting further follow-up evaluation.

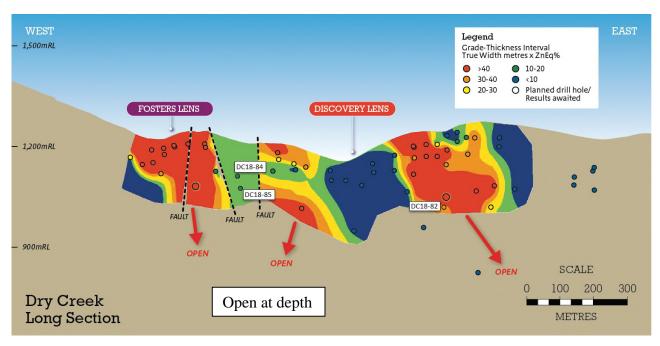


**Figure 1:** Location of new prospects identified from surface reconnaissance, CSAMT coverage (blue lines) and surface geochemical soil samples highlighting anomalous zinc and lead soil geochemistry (red squares >1,000ppm zinc or lead and orange squares >500ppm zinc or lead), including the surface projection of massive sulphide mineralisation at Dry Creek and West Tundra, and all drill hole collars (green – 2018; black dots historic), on topography.





**Figure 2**: Hunter Prospect, cross-section 475,100E looking towards the west showing the geometry of the Hunter mineralised massive sulphide lens and the drill hole trace for HR18-01, HR18-02 & HR18-03 (yellow traces).



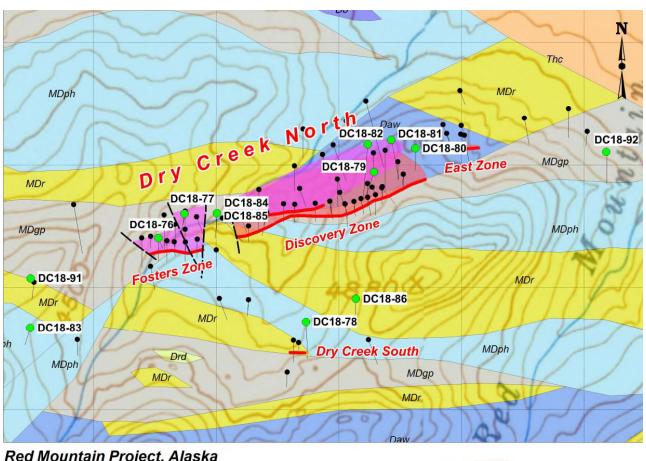
**Figure 3:** Dry Creek long-section looking north showing the Fosters lens (west) and Discovery lens (east) – refer Figure 4 for lens locations

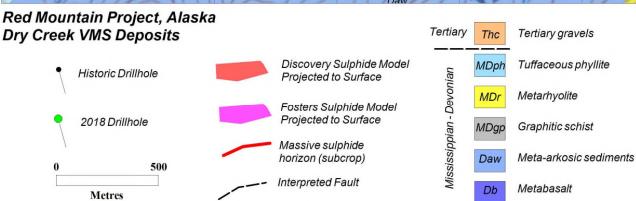


**Table 1:** Assay results for drill holes completed during the September Quarter 2018– downhole intercepts. (Intercept cut-off grade of 0.5% ZnEq<sup>1</sup>; maximum internal dilution of 3m at <0.5% ZnEq<sup>1</sup>).

HoleID	From /m)	To (m)	Interval (m)	Zn %	Pb %	Λα α /±	Δυ σ/+	Cu %	ZnEq <sup>1</sup> %
	From (m)					Ag g/t	Au g/t		
DC18-82	179.04	180.14	1.10	0.5%	0.0%	2	0.0	0.1%	0.7%
	189.77	192.88	3.11	1.4%	0.5%	47	0.5	0.0%	3.6%
incl	189.77	190.90	1.13	3.4%	1.4%	118	1.1	0.1%	8.9%
	205.77	209.98	4.21	0.5%	0.0%	0	-	0.0%	0.5%
	223.63	224.76	1.13	0.3%	0.0%	8	0.0	2.5%	6.0%
incl	223.63	224.06	0.43	0.8%	0.0%	16	0.1	5.3%	12.9%
	231.40	235.64	4.24	5.9%	2.5%	96	0.9	0.1%	11.4%
	239.24	240.37	1.13	0.7%	0.0%	0	-	0.0%	0.7%
						-			
DC18-83	17.07	17.68	0.61	0.4%	0.7%	4	0.0	0.0%	1.1%
	68.15	69.98	1.83	1.7%	0.1%	1	0.0	0.0%	1.9%
2012.01	04.00	05.04	2.24	0.50/	0.00/	_	0.1	0.00/	0.00/
DC18-84	91.20	95.04	3.84	0.5%	0.2%	5	0.1	0.0%	0.9%
	102.14	120.70	18.56	1.0%	0.3%	8	0.1	0.0%	1.6%
incl	102.14	107.29	5.15	2.5%	0.9%	12	0.1	0.1%	3.7%
	124.88	126.64	1.76	0.9%	0.0%	0	0.0	0.0%	0.9%
DC10 0F	60.24	69.80	0.46	0.70/	0.00/	0	0.0	0.00/	0.70/
DC18-85	69.34		0.46	0.7%	0.0%	0 19	0.0	0.0%	0.7% 2.0%
	108.20	115.21	7.01 <b>5.19</b>	1.0%	0.4%		0.1	0.0%	
in al	129.84	135.03		2.0%	0.9%	39	0.2	0.1%	3.9%
incl	129.84	132.28	2.44	3.5%	1.7%	31	0.3	0.1%	5.9%
DC10 06	14.17	20.12	5.95	0.29/	0.5%	3	0.0	0.09/	0.8%
DC18-86	14.17			0.3%		7	0.0	0.0%	_
	49.50	51.36	1.86	2.5%	0.8%	4	0.1	0.2%	3.7%
inal	57.00	64.62	7.62	1.4%	0.4%	7	0.1	0.1%	2.1%
incl	59.44	63.09	3.65	2.5%	0.8%	,	0.1	0.2%	3.7%
DC18-87	85.95	93.57	7.62	0.3%	0.1%	1	0.0	0.0%	0.5%
DC16-67	83.33	93.37	7.02	0.576	0.170		0.0	0.076	0.576
DC18-88	No assays								
DC10 00	ivo assays								
DC18-89	No assays								
DC10 03	ivo assays								
DC18-90	73.15	74.37	1.22	0.3%	0.4%	1	0.0	0.0%	0.6%
2010 30	114.91	119.57	4.66	0.5%	0.0%	0	0.0	0.0%	0.6%
	122.53	124.05	1.52	0.6%	0.2%	1	0.0	0.0%	0.8%
	178.92	186.08	7.16	0.6%	0.2%	1	0.0	0.0%	0.9%
				0.07	91271	_		0.01.0	0.07
DC18-91	166.33	166.76	0.43	0.2%	0.0%	11	0.1	0.0%	0.6%
DC18-92	163.04	164.41	1.37	0.2%	0.0%	12	0.0	0.0%	0.5%
HR18-01	48.25	49.65	1.40	17.4%	3.9%	90	0.2	1.6%	25.8%
HR18-02	60.84	63.67	2.83	9.3%	2.0%	36	0.1	0.6%	13.0%
	60.84	62.64	1.80	13.8%	3.1%	56	0.2	0.9%	19.5%
HR18-03	65.84	67.06	1.22	0.0%	0.0%	4	0.5	0.0%	0.9%
	72.48	73.70	1.22	0.5%	0.1%	4	0.0	0.0%	0.7%
	128.02	129.27	1.25	0.5%	0.0%	0	0.0	0.0%	0.6%
HR18-04	257.37	257.92	0.55	10.5%	2.2%	45	0.1	0.3%	14.0%







**Figure 4:** Dry Creek prospect showing surface projection of massive sulphide mineralisation lenses and the location 2018 drill hole traces with respect to all historic drill hole traces on the DGGS geology map (after Freeman et al., 2016).



## Mt. Carrington Gold – Silver Project Pre-Feasibility Study

The Company reported the key outcomes from the Pre-Feasibility Study (PFS) into the "Gold First" development of its 100% owned Mt Carrington gold and silver project, located in northern New South Wales in late December (refer ASX Announcement "White Rock's Mt Carrington gold - silver Project Pre-Feasibility Study Stage One" dated 27 December 2017). This included the reporting of a maiden JORC Reserve for the Gold First part of the mine plan.

The PFS confirmed the technical and financial viability of the initial project development and provides a very strong rationale to advance the project through a Definitive Feasibility Study (DFS) towards development.

The silver dominant Mineral Resource, containing some 8.3M ounces in the Indicated category (*refer ASX announcements 13 February 2012 & 20 November 2013*) is to be the subject of further mineralogy studies, metallurgical test work and concentrate sales discussions. Mining of these silver resources constitutes Stage Two of the Mt Carrington project.

The Company continued to collect the necessary environmental baseline data during the quarter and conducted its regular environmental management tasks necessary to keep the tenements in good standing and the site's environmental management and security obligations met.

The Company has received several enquiries from parties interested in possible participation in advancing the Mt Carrington project. Site visits and access to our on-line data room have been arranged for interested parties.

#### **CORPORATE**

On 11 July 2018 the Company announced a strategic partnership with Sandfire Resources NL (ASX: SFR) (Sandfire) and issued to Sandfire 208,333,334 fully paid ordinary shares and 104,166,667 unlisted options expiring 10 July 2021 and exercisable at \$0.02, raising \$2.5 million. In addition, the Company will collaborate with Sandfire to advance the Red Mountain project. Sandfire has the right and exclusive option to enter into an earn-in joint venture agreement in relation to the Red Mountain Project, which option may be exercised prior to 31 December 2018. Refer to the 11 July announcement for further details.

On 19 July 2018 the Company announced placement of the remaining shortfall under its 1 for 3 pro-rata non-renounceable entitlement offer and issued 171,386,123 fully paid ordinary shares and 85,693,062 unlisted options expiring 26 March 2021 and exercisable at \$0.02, raising \$1.7 million.

On 22 August 2018 the Company announced it had entered into an unsecured convertible loan agreement with Sandfire providing for two loans of \$500,000 each. Funds from the Convertible Loan are to be used for the exploration and development of the Red Mountain Project. Refer to the 22 August announcement for further details.



#### White Rock Minerals Ltd Tenement schedule for the guarter ended 30 September 2018

Country/State	Project	Tenement ID	Area
Australia/NSW	Mt Carrington	EL6273, MPL24, MPL256, MPL259, SL409, SL471, SL492, ML1147, ML1148, ML1149, ML1150, ML1200, MPL1345, ML5444, GL5477, GL5478, ML5883, ML6004, ML6006, ML6242, ML6291, ML6295, ML6335	183km²
USA/Alaska	Red Mountain	ADL611355, ADL611356, ADL611362, ADL611364, ADL611366, ADL611371, ADL621625-621738 (114), ADL721002-721010 (9), ADL721029-721038 (10), ADL721533-721615(83), ADL721624, ADL721625, ADL623325-623330 (6)	143km²

#### Table 4: Mt Carrington Tenement Schedule

The Mt Carrington Project comprises 22 Mining Leases and one Exploration Licence. All tenements are held 100% by White Rock (MTC) Pty Ltd, a wholly owned subsidiary of White Rock Minerals Ltd. No farm-in or farm-out agreements are applicable.

The Red Mountain Project comprises 230 Mining Claims. All tenements are held 100% by White Rock (RM) Inc., a wholly owned subsidiary of White Rock Minerals Ltd. The Red Mountain Project is subject to an Option for Earn-in and Joint Venture Agreement with Sandfire Resources NL (refer ASX Announcement 10<sup>th</sup> July 2018).

### **Competent Persons Statement**

The information in this report that relates to exploration results is based on information compiled by Mr Rohan Worland who is a Member of the Australian Institute of Geoscientists and is a consultant to White Rock Minerals Ltd. Mr Worland has sufficient experience which is relevant to the style of mineralisation and type of deposit 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 Worland consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

#### No New Information or Data

This announcement contains references to exploration results, Mineral Resource estimates, Ore Reserve estimates, production targets and forecast financial information derived from the production targets, all of which have been cross-referenced to previous market announcements by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements. In the case of Mineral Resource estimates, Ore Reserve estimates, production targets and forecast financial information derived from the production targets, all material assumptions and technical parameters underpinning the estimates, production targets and forecast financial information derived from the production targets contained in the relevant market announcement continue to apply and have not materially changed.

# APPENDIX 1: JORC CODE, 2012 EDITION - TABLE 1

# Section 1 Sampling Techniques and Data

	r sampling recliniques and	
Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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>Include reference to 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>All drilling was diamond core from surface.</li> <li>Sampling is at 0.3 to 1.5m intervals for mineralisation. Sample intervals are determined by geological characteristics.</li> <li>Core is split in half by core saw for external laboratory preparation and analysis.</li> <li>Based on the distribution of mineralisation the core sample size is considered adequate for representative sampling.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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>All drilling was diamond core from surface. The upper portion of the drill hole is drilled with HQ diameter then cased off from solid rock and drilled with NQ2 or NQ3 diameter. DC18-82 to DC18-89, HR18-01 &amp; HR18-02 NQ2 core is standard tube wireline with no core orientation. HR18-04 and DC18-90 to DC18-92 NQ3 core is triple tube wireline with core orientation using a Reflex ACTIII RD tool.</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>Drilling methods are selected to ensure maximum recovery possible. The maximum core length possible in competent ground is 5 feet (1.53m).</li> <li>Core recovery is recorded on paper drill logs then transferred to the digital database.</li> <li>A link between sample recovery and grade is not apparent.</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>All diamond core undergoes geotechnical and geological logging to a level of detail (quantitative and qualitative) sufficient to support use of the data in all categories of Mineral Resource estimation.</li> <li>All core is photographed wet and dry.</li> <li>All drill holes are logged in full.</li> </ul>
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 sub-sampling 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>Core is split in half by core saw and sampled.</li> <li>Core samples are submitted to ALS (Fairbanks) and undergo standard industry procedure sample preparation (crush, pulverise and split) appropriate to the sample type and mineralisation style.</li> <li>Core is cut to achieve non-biased samples.</li> <li>Full QAQC system is in place for core assays to determine accuracy and precision of assays</li> <li>No field duplicate samples are collected.</li> <li>Sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>

Criteria	JORC Code explanation	Commentary
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Core samples are submitted to ALS (Fairbanks) for analysis. Au is assayed by technique Au-AA25 (30g by fire assay and AAS finish). Multi-element suite of 48 elements including Ag is assayed by technique ME-MS61 (1g charge by four acid digest and ICP-MS finish). Over limit samples for Ag, Cu, Pb and Zn are assayed by technique OG62 (0.5g charge by four acid digest and ICP-AES or AAS finish) to provide accurate and precise results for the target element.</li> <li>Fire assay for Au by technique Au-AA25 is considered total. Multi-element assay by technique ME-MS61 and OG62 are considered near-total for all but the most resistive minerals (not of relevance).</li> <li>The nature and quality of the analytical technique is deemed appropriate for the mineralisation style.</li> <li>Full QAQC system is in place for core sample assays including blanks and standards (relevant certified reference material). Acceptable levels of accuracy and precision have been established.</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>All assay results are checked and verified by alternative company personnel or independent consultants. Significant assay results prompt a visual review of relevant reference core for validation purposes.</li> <li>No twin holes are reported.</li> <li>All drill data is logged onto paper logs and subsequently entered into the digital database.</li> <li>All drilling logs are validated by the supervising geologist.</li> <li>All hard copy data is filed and stored. Digital data is filed and stored with routine local and remote backups.</li> <li>No adjustment to assay data is undertaken.</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>All diamond drill holes are surveyed by handheld GPS in the first instance. Drill holes are subsequently surveyed using an RTK-DGPS for surface position (XYZ) of collars (accuracy ±0.1m).</li> <li>Topographic control is provided by a high resolution IFSAR DEM (high resolution radar digital elevation model) acquired in 2015. Accuracy of the DEM is ±2m. Subsequent surveying by RTK-DGPS supersedes the IFSAR DEM.</li> <li>All diamond holes are surveyed downhole via a singleshot camera at approximately 30m intervals to determine accurate drill trace locations.</li> <li>There is no magnetic interference with respect to downhole surveys.</li> <li>All coordinates are quoted in UTM (NAD27 for Alaska Zone 6 datum).</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>	Data spacing is variable and appropriate to the geology and to the purpose of sample survey type.     Sample compositing is not applicable in reporting exploration results
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>No significant orientation based sampling bias is known at this time.</li> <li>Mineralisation is dominantly orientated parallel to bedding.</li> <li>The drill holes may not necessarily be perpendicular to the orientation of the intersected mineralisation.</li> <li>Reported intersections are down-hole intervals and not true widths. Where there is sufficient geological understanding true width estimates are stated.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Core is cut and sampled on site then secured in bags with a security seal that is verified on receipt by ALS using a chain of custody form.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been completed to date.

# Section 2 Reporting of Exploration Results

Criteria	JORC Code 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 Red Mountain Project comprises 206 mining locations and 24 leasehold locations in the State of Alaska ('the Tenements').</li> <li>The Tenements are owned by White Rock (RM) Inc., a 100% owned subsidiary of Atlas Resources Pty Ltd, which in turn is a 100% owned subsidiary of White Rock Minerals Ltd.</li> <li>The Tenements are subject to an agreement with Metallogeny Inc, that requires further cash payments of US\$850,000 over 3 years. The agreement also includes a net smelter return royalty payment to Metallogeny Inc. of 2% NSR with the option to reduce this to 1% NSR for US\$1,000,000.</li> <li>The Tenements are subject to an agreement with Sandfire Resources NL ("Sandfire") whereby Sandfire have an exclusive option to enter an earn-in joint venture agreement, which option may be exercised prior to 31 December 2018. If the option is exercised Sandfire can earn 51% by funding A\$20 million over four years, with a minimum expenditure of A\$6 million during the first year. Sandfire can then earn 70% by electing to fund a further \$A10 million and delivering a prefeasibility study over an additional two years, with an option to extend the time period a further year under certain circumstances. White Rock can elect to contribute at 30% or if not Sandfire can sole fund to earn 80% by completing a definitive feasibility study. White Rock can elect to contribute at 20% or if not Sandfire can earn 90% by sole funding to production with White Rock's retained interest of 10% earnt from project cash flow.</li> <li>All of the Tenements are current and in good standing.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Red Mountain project has seen significant exploration conducted by Resource Associates of Alaska Inc. ("RAA"), Getty Mining Company ("Getty"), Phelps Dodge Corporation ("Phelps Dodge"), Houston Oil and Minerals Exploration Company ("HOMEX"), Grayd Resource Corporation ("Grayd") and Atna Resources Ltd ("Atna").  All historical work has been reviewed, appraised and integrated into a database. A selection of historic core has been resampled for QAQC purposes. Data is of sufficient quality, relevance and applicability.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Volcanogenic massive sulphide ("VMS") mineralisation located in the Bonnifield District, located in the western extension of the Yukon Tanana terrane.</li> <li>The regional geology consists of an east-west trending schist belt of Precambrian and Palaeozoic meta-sedimentary and volcanic rocks. The schist is intruded by Cretaceous granitic rocks along with Tertiary dikes and plugs of intermediate to mafic composition. Tertiary and Quaternary sedimentary rocks with coal bearing horizons cover portions of the older rocks. The VMS mineralisation is most commonly located in the upper portions of the Totatlanika Schist which is of Carboniferous to Devonian age.</li> </ul>
Drill hole Information	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:  easting and northing of the drill hole collar  elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar  dip and azimuth of the hole  down hole length and interception depth  hole length.  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.	A table of all drill hole collar information for exploration results presented here is provided below.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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>	No aggregation methods were used in the reporting of results.
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 (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Mineralisation at Dry Creek is steep towards the north (70° towards 350°).</li> <li>At Hunter the mineralisation dips moderate towards the north (45° towards 360°).</li> <li>At Redback, South Platypus, Dry Creek West, Ram, Dry Creek East, Megan's South and Megan's North the stratigraphy and targeted mineralisation dips steep towards the north.</li> </ul>
Diagrams	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.	Appropriate maps, sections and tables are included in the body of the report.
Balanced reporting	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.	<ul> <li>Maps showing individual sample locations are included in the report.</li> <li>All results considered significant are reported.</li> </ul>
Other substantive exploration data	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.	Other relevant and material information has been reported in this and earlier reports.
Further work	<ul> <li>The nature and scale of planned further work (eg 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>	The 2018 field season has finished. Surface geochemical sampling including stream samples and rock chips are outstanding. Follow-up programs for the 2019 field program will be planned in the coming months.

Prospect	HoleID	East NAD27	North NAD27	RL metres	Azimuth True	Dip	Depth metres	Depth feet
Dry Creek - Discovery	DC18-82	481117	7088584	1173	180	-55	288.34	946
Dry Creek West	DC18-83	479740	7087835	1399	193	-45	99.06	325
Dry Creek - Fosters	DC18-84	480502	7088304	1183	180	-45	149.96	492
Dry Creek - Fosters	DC18-85	480502	7088304	1183	180	-60	155.45	510
Ram	DC18-86	481068	7087954	1320	180	-45	92.35	303
Megan's North	DC18-87	483116	7087979	1179	180	-50	151.49	497
Megan's South	DC18-88	482715	7088610	1098	180	-50	200.00	656
Dry Creek West	DC18-89	479396	7087620	1558	180	-70	135.00	443
South Platypus	DC18-90	478340	7087390	1486	360	-90	200.00	656
Dry Creek West	Dc18-91	479742	7088037	1453	180	-45	225.00	738
Dry Creek East	DC18-92	482090	7088554	1088	180	-45	225.00	738
Hunter	HR18-01	475089	7087554	1612	360	-90	150.00	492
Hunter	HR18-02	475089	7087554	1612	360	-65	100.00	328
Redback	HR18-03	476178	7088035	1312	180	-55	250.00	820
Hunter	HR18-04	475093	7087778	1692	180	-62	275.50	904

# **Appendix 5B**

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

## Name of entity

WHITE ROCK MINERALS LTD	
ABN	Quarter ended ("current quarter")
64 142 809 970	30 September 2018

Cor	solidated statement of cash flows	Current quarter \$A'000	Year to date (3months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers		
1.2	Payments for		
	(a) exploration & evaluation	(3,901)	(3,901)
	(b) development	(12)	(12)
	(c) production		
	(d) staff costs	(148)	(148)
	(e) administration and corporate costs	(332)	(332)
1.3	Dividends received (see note 3)		
1.4	Interest received	11	11
1.5	Interest and other costs of finance paid		
1.6	Income taxes paid		
1.7	Research and development refunds		
1.8	Other (provide details if material)		
1.9	Net cash from / (used in) operating activities	(4,382)	(4,382)

2.	Cash flows from investing activities		
2.1	Payments to acquire:		
	(a) property, plant and equipment	(21)	(21)
	(b) tenements (see item 10)		
	(c) investments/government bonds		
	(d) other non-current assets		

<sup>+</sup> See chapter 19 for defined terms

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Con	solidated statement of cash flows	Current quarter \$A'000	Year to date (3months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment		
	(b) tenements (see item 10)		
	(c) investments		
	(d) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
2.6	Net cash from / (used in) investing activities	(21)	(21)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	4,214	4,214
3.2	Proceeds from issue of convertible notes	1,000	1,000
3.3	Proceeds from exercise of share options		
3.4	Transaction costs related to issues of shares, convertible notes or options	(158)	(158)
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
3.10	Net cash from / (used in) financing activities	5,056	5,056

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	1,980	1,980
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(4,382)	(4,382)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(21)	(21)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	5,056	5,056
4.5	Effect of movement in exchange rates on cash held		
4.6	Cash and cash equivalents at end of period	2,633	2,633

<sup>+</sup> See chapter 19 for defined terms 1 September 2016

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5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	2,633	1,980
5.2	Call deposits		
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,633	1,980

6.	Payments to directors of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to these parties included in item 1.2	134
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	Nil
6.3	Include below any explanation necessary to understand the transaction items 6.1 and 6.2	s included in
Remur	neration to Directors	
	ļ=====	
7.	Payments to related entities of the entity and their associates	Current quarter \$A'000
<b>7.</b> 7.1	· · · · · · · · · · · · · · · · · · ·	-
	associates	\$A'000
7.1	Aggregate amount of payments to these parties included in item 1.2  Aggregate amount of cash flow from loans to these parties included	\$A'000 Nil Nil

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<sup>+</sup> See chapter 19 for defined terms 1 September 2016

8.	Financing facilities available Add notes as necessary for an understanding of the position	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1	Loan facilities	1,000	1,000
8.2	Credit standby arrangements	Nil	Nil
8.3	Other (please specify)	Nil	Nil

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

Unsecured Convertible Loan from Sandfire Resources NL – refer ASX announcement 22 August 2018.

9.	Estimated cash outflows for next quarter	\$A'000
9.1	Exploration and evaluation	700
9.2	Development	20
9.3	Production	
9.4	Staff costs	150
9.5	Administration and corporate costs	300
9.6	Other (provide details if material)	
9.7	Total estimated cash outflows	1,170

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced				
10.2	Interests in mining tenements and petroleum tenements acquired or increased				

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<sup>+</sup> See chapter 19 for defined terms

#### **Compliance statement**

1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.

2 This statement gives a true and fair view of the matters disclosed.

Sign here: Date: 17 OCTOBER 2018

(Company secretary)

Print name: SHANE TURNER

#### **Notes**

- The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
- 2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- 3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

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<sup>+</sup> See chapter 19 for defined terms