

ASX and Media Release: 25 March 2019

ASX Code: WRM



## White Rock signs A\$30M Earn-In and Joint Venture Option Agreement with Sandfire

**ASX Code: WRM**

**Issued Securities**

Shares: 1,636 million

Options: 569 million

**Cash on hand** (31 Dec 2018)

\$1.5M

**Market Cap** (22 March 2019)

\$8.1M at \$0.005 per share

**Directors & Management**

Peter Lester

Non-Executive Chairman

Matthew Gill

Managing Director &  
Chief Executive Officer

Jeremy Gray

Non-Executive Director

Stephen Gorenstein

Non-Executive Director

Shane Turner

Company Secretary

Rohan Worland

Exploration Manager

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White Rock Minerals Limited (ASX:WRM) (**White Rock**) and Sandfire Resources NL (ASX:SFR) (**Sandfire**) have joined forces to fund the exploration and development for new high-grade zinc and precious metals volcanogenic massive sulphide (**VMS**) deposits at Red Mountain in central Alaska (**Red Mountain Project**). There are already two high grade deposits at the project with an Inferred Mineral Resource<sup>1</sup> of **9.1 million tonnes @ 12.9% ZnEq<sup>2</sup>** for 1.1Mt of contained zinc equivalent.

**Highlights**

- **White Rock has signed an Earn-In and Joint Venture Option Agreement to permit Sandfire to farm-in to its interests in the Red Mountain Project including high grade zinc-rich VMS mineralisation at the Dry Creek and West Tundra deposits and the newly discovered Hunter prospect.**
- **Sandfire can earn up to 51% of White Rock's interest in its Red Mountain Zinc-Silver-Lead-Gold-Copper Project by spending A\$20M on exploration over four years (Stage One).**
- **As a part of Stage One, a minimum of A\$6M is required to be spent on the project in Year One (2019).**
- **Sandfire can then elect to increase its interest in the Red Mountain Project to 70% by sole-funding a further A\$10M and by delivering a pre-feasibility study with an Ore Reserve within a further two years.**
- **White Rock can then elect to contribute its percentage share of expenditure to retain its 30% interest.**
- **The Red Mountain Project includes a 475km<sup>2</sup> tenement package covering numerous historic VMS prospects with little modern exploration, providing Sandfire and White Rock with a large strategic footprint over a potential new VMS district<sup>3</sup>.**

**MD & CEO Matt Gill said** "White Rock welcomes Sandfire as a joint venture partner that shares White Rock's vision for the exploration and development of our exciting 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 our globally significant high-grade zinc VMS Red Mountain Project.

It is significant for White Rock shareholders that the terms of the Agreement with Sandfire provide a funding pathway to advance the Red Mountain Project through exploration to the point of advanced development studies and allow White Rock to retain a 30% interest in any project development at the point when the economics of a project are well defined by a Pre-Feasibility Study.

The prospectivity of the Red Mountain Project was well illustrated by last year's field season activities that included drill hole results returning in excess of **17% zinc, 6% lead, 1,000 g/t silver, 6 g/t gold and 1.5% copper** and the discovery of new massive sulphide mineralisation at the Hunter prospect<sup>4, 5, 6</sup>. The 2019 field season promises more exciting results with plans for a modern airborne EM survey, ahead of a 24-man field camp being established with surface crews completing mapping, geochem sampling, CSAMT geophysics and drilling.

We look forward to working with our strategic partner Sandfire and progressing this highly prospective project with the commencement of this program and the subsequent news flow that will result."

### **Earn-In and Joint Venture Option Agreement**

White Rock has entered into an Earn-In and Joint Venture Option Agreement (**Agreement**) with Sandfire. This Agreement relates to the parties' previously announced proposed joint venture (**Joint Venture**)<sup>7</sup> for the exploration and development of the Red Mountain Project.

Sandfire's Joint Venture funding obligations under the Agreement are structured across four stages as previously announced and include an option to spend a minimum of A\$20M over four years to earn 51%, with a minimum contribution of A\$6M in 2019. The key terms of the Joint Venture are set out below.

### **Joint Venture Structure**

The Joint Venture will be incorporated and operated through a USA organised limited liability company ("LLC"). A wholly owned subsidiary of Sandfire will initially hold a 15% membership interest in the LLC in exchange for the commitment to provide the Minimum Contribution (approximately A\$6M - see below) and a wholly owned subsidiary of White Rock will hold the remaining 85% membership interest, in exchange for procuring that the Red Mountain Project assets are transferred into the LLC. The Manager of the LLC will be appointed by White Rock during the first year of the Option period and thereafter by Sandfire. The Manager is entitled to a Management Fee.

### **Key Terms of the Joint Venture**

Sandfire's Joint Venture funding obligations under the Agreement are structured across four stages:-

#### **Stage 1 - Initial Contribution**

Under the terms of the Agreement, Sandfire is granted an option to acquire (through its subsidiary) a 51% interest in the LLC (**Option**), in consideration for providing funding to the LLC totalling US\$14.4 million (approx. **A\$20 million**)<sup>8</sup> over four years (**Initial Contribution**), with a minimum contribution by Sandfire of US\$4.32 million (approx. **A\$6 million**) in Year One (**Minimum Contribution**). The Option expires on the fourth anniversary of the date of the Agreement.

Sandfire may withdraw from the Joint Venture at any time before the expiry of the Option period on four months' notice, provided it has funded the Minimum Contribution and complied with other obligations in the Agreement. If Sandfire gives a notice of withdrawal after 29 February 2020, it must contribute US\$2.16 million (A\$3M) (in addition to the Minimum Contribution) prior to withdrawing from the Joint Venture. If Sandfire does not exercise the Option, it will forfeit its entire interest in the LLC.

After funding the Initial Contribution, Sandfire may elect to exercise its Option to acquire a 51% membership interest in the LLC.

#### **Stage 2 - Pre-Feasibility Study**

In order to complete Stage 2, the Manager is required to deliver **a pre-feasibility study** for the Red Mountain Project and Sandfire must contribute an additional US\$7.2 million (approx. **A\$10 million**) in funds to the LLC over a two-year period. Subject to Sandfire funding and completing Stage 2 it will earn an additional 19% in the LLC, bringing its total membership interest to 70%.

Should Sandfire elect to withdraw from the Agreement during Stage 2, then it shall retain a 51% membership interest, which shall be subject to dilution.

#### **Stage 3 - Definitive Feasibility Study**

Stage 3 commences upon Sandfire completing Stage 2 and continues until the Manager delivers **a definitive feasibility study (DFS)**. During Stage 3, White Rock may elect to contribute its percentage share (i.e. 30%) of expenditure. If White Rock elects not to contribute, Sandfire is required to sole fund Stage 3 expenditure and will earn an additional 10% interest in the LLC (bringing its total interest to 80%).

Should Sandfire elect to withdraw from the Agreement during Stage 3, then it shall retain a 70% membership interest, which shall be subject to dilution.

#### **Stage 4 - Development**

Stage 4 commences upon the approval of the DFS by the Management Committee and continues through **development to commencement of commercial production**. During Stage 4, White Rock may elect to contribute its percentage share of expenditure (based on its percentage interest in the LLC at that time). If White Rock does not elect to contribute, Sandfire will be required to sole fund Stage 4 expenditure for an additional 10% interest in the LLC (bringing its total interest to 90%, assuming White Rock did not contribute during Stage 3) and White Rock must repay 10% of the total development expenditure to Sandfire from 65% of its share of the project cash flow. Alternatively, the parties may cooperate in seeking project financing for the Stage 4 expenditure.

The Agreement includes customary covenants, warranties and indemnities given by both parties, as well as customary provisions relating to (among other things) the management of the LLC, the granting of security over each party's interests, dilution of interests, force majeure, winding up of the LLC and consequences of default by a party.

<sup>1</sup> Refer ASX Announcement 26<sup>th</sup> April 2017 "Maiden JORC Mineral Resource, Red Mountain".

<sup>2</sup>  $ZnEq = 100 \times [(Zn\% \times 2,206.7 \times 0.9) + (Pb\% \times 1,922 \times 0.75) + (Cu\% \times 6,274 \times 0.70) + (Ag \text{ g/t} \times (19.68/31.1035) \times 0.70) + (Au \text{ g/t} \times (1,227/31.1035) \times 0.80)] / (2,206.7 \times 0.9)$ . White Rock is of the opinion that all elements included in the metal equivalent calculation have reasonable potential to be recovered and sold.

<sup>3</sup> Refer ASX Announcement 21<sup>st</sup> November 2018 "Expanded Land Holding with Additional High-Grade VMS Prospects, Red Mountain".

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

<sup>5</sup> Refer ASX Announcement 18<sup>th</sup> June 2018 "Initial Drilling Delivers High Grade Zinc Results at Red Mountain".

<sup>6</sup> Refer ASX Announcement 20<sup>th</sup> August 2018 "High Grade Zinc Discovery at the Hunter Prospect, Red Mountain".

<sup>7</sup> Refer ASX Announcement 27<sup>th</sup> December 2018 "Sandfire Exercises Option to Enter Joint Venture on Red Mountain".

<sup>8</sup> All references to US dollars in this release are based on an exchange rate of A\$1.00/US\$0.72

**About Sandfire Resources NL:-** Sandfire is a leading Australian copper producer which operates the high-grade DeGrussa Copper-Gold Mine, located 900km north of Perth in Western Australia. Sandfire has a growing portfolio of exploration interests and joint ventures in highly prospective mineral provinces around Australia and overseas. Further details can be found on Sandfire's website [www.sandfire.com.au](http://www.sandfire.com.au).

For more information about White Rock and its Projects, please visit our website [www.whiterockminerals.com.au](http://www.whiterockminerals.com.au)

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**About Red Mountain** (as more fully set out in the ASX Announcement dated 15 February 2016)

- The Red Mountain Project is located in central Alaska, 100km south of Fairbanks, in the Bonfield Mining District. The tenement package comprises 760 mining claims over a total area of 475km<sup>2</sup>.
- The Red Mountain Project contains polymetallic VMS mineralisation rich in zinc, silver and lead, with potential for significant gold and copper.
- Mineralisation occurs from surface and is open along strike and down-dip.
- White Rock used historical drilling to determine a maiden JORC 2012 Mineral Resource estimate for the Dry Creek and West Tundra Flats deposits (ASX Announcement 26 April 2017). The Inferred Mineral Resource contains an impressive base metal and precious metal content with **678,000t zinc, 286,000t lead, 53.5 million ounces silver and 352,000 ounces gold.**



**Table 1 - Red Mountain April 2017 Inferred Mineral Resource Estimate\***

Prospect	Cut-off	Tonnage Mt	ZnEq <sup>1</sup>	Zn	Pb	Ag	Cu	Au	ZnEq	Zn	Pb	Ag	Cu	Au
			%	%	%	g/t	%	g/t	kt	kt	kt	Moz	kt	koz
Dry Creek Main	1% Zn	9.7	5.3	2.7	1.0	41	0.2	0.4	514	262	98	12.7	15	123
West Tundra Flats	3% Zn	6.7	14.4	6.2	2.8	189	0.1	1.1	964	416	188	40.8	7	229
Dry Creek Cu Zone	0.5% Cu	0.3	3.5	0.2	0.04	4.4	1.4	0.1	10	0.5	0.1	0.04	4	1
<b>Total</b>		<b>16.7</b>	<b>8.9</b>	<b>4.1</b>	<b>1.7</b>	<b>99</b>	<b>0.2</b>	<b>0.7</b>	<b>1,488</b>	<b>678</b>	<b>286</b>	<b>53.5</b>	<b>26</b>	<b>352</b>

**Table 2 - Red Mountain April 2017 Inferred Mineral Resource Estimate\* at a 3% Zn Cut-off (contained within Table 1, not additional)**

Prospect	Cut-off	Tonnage Mt	ZnEq <sup>1</sup>	Zn	Pb	Ag	Cu	Au	ZnEq	Zn	Pb	Ag	Cu	Au
			%	%	%	g/t	%	g/t	Kt	kt	kt	Moz	kt	koz
Dry Creek Main	3% Zn	2.4	8.7	4.7	1.9	69	0.2	0.4	211	115	46	5.3	5	32
West Tundra Flats	3% Zn	6.7	14.4	6.2	2.8	189	0.1	1.1	964	416	188	40.8	7	229
<b>Total</b>		<b>9.1</b>	<b>12.9</b>	<b>5.8</b>	<b>2.6</b>	<b>157</b>	<b>0.1</b>	<b>0.9</b>	<b>1,176</b>	<b>531</b>	<b>234</b>	<b>46.1</b>	<b>12</b>	<b>260</b>

\* The Red Mountain Mineral Resource information was prepared and first disclosed under the JORC Code 2012 as per the ASX Announcement by White Rock Minerals Ltd on 26 April 2017.

<sup>1</sup> Zinc equivalent grades are estimated using long-term broker consensus estimates compiled by RFC Ambrian as at 20 March 2017 adjusted for recoveries derived from historical metallurgical testing work and calculated with the formula:

$$\text{ZnEq} = 100 \times \left[ \frac{(\text{Zn}\% \times 2,206.7 \times 0.9) + (\text{Pb}\% \times 1,922 \times 0.75) + (\text{Cu}\% \times 6,274 \times 0.70) + (\text{Ag g/t} \times (19.68/31.1035) \times 0.70) + (\text{Au g/t} \times (1,227/31.1035) \times 0.80)}{(2,206.7 \times 0.9)} \right]$$

White Rock is of the opinion that all elements included in the metal equivalent calculation have reasonable potential to be recovered and sold.

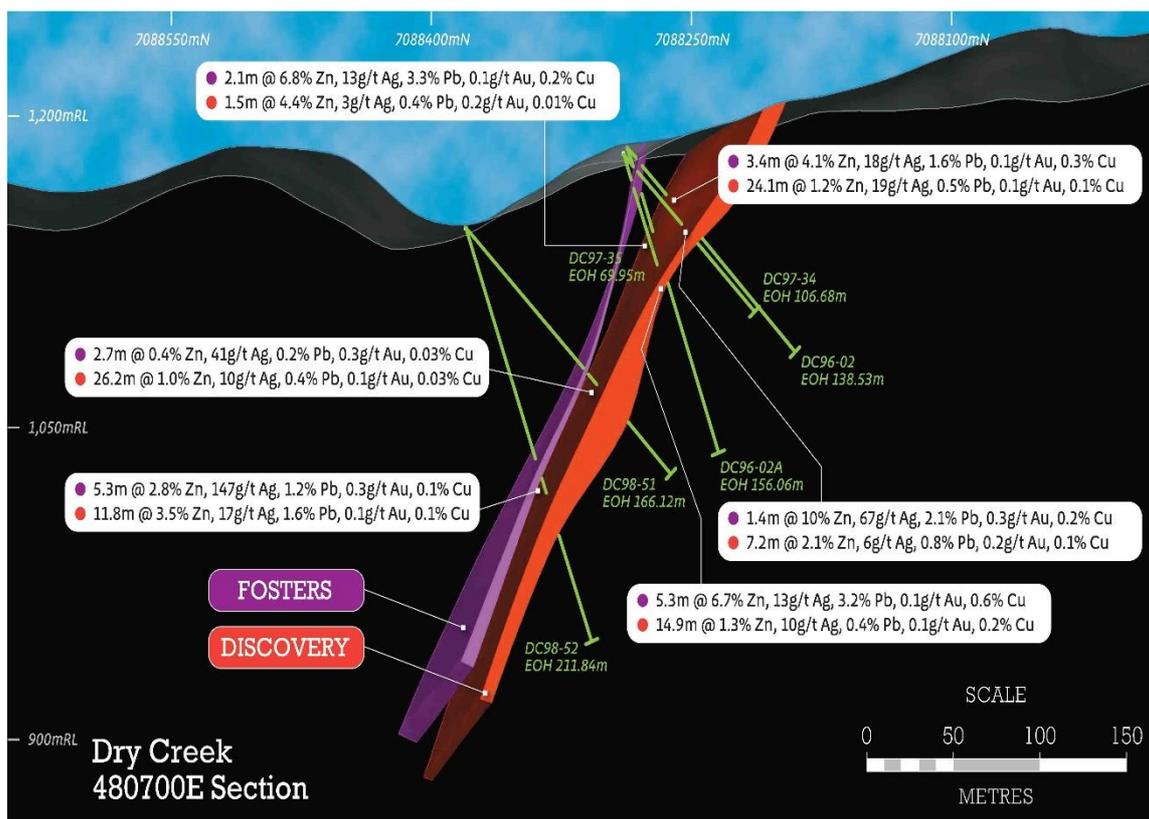
- Good preliminary metallurgical recoveries of >90% zinc, >75% lead, >80% gold, >70% silver and >70% copper.
- Previous drilling highlights (ASX Announcement 15 February 2016) include:

#### Dry Creek

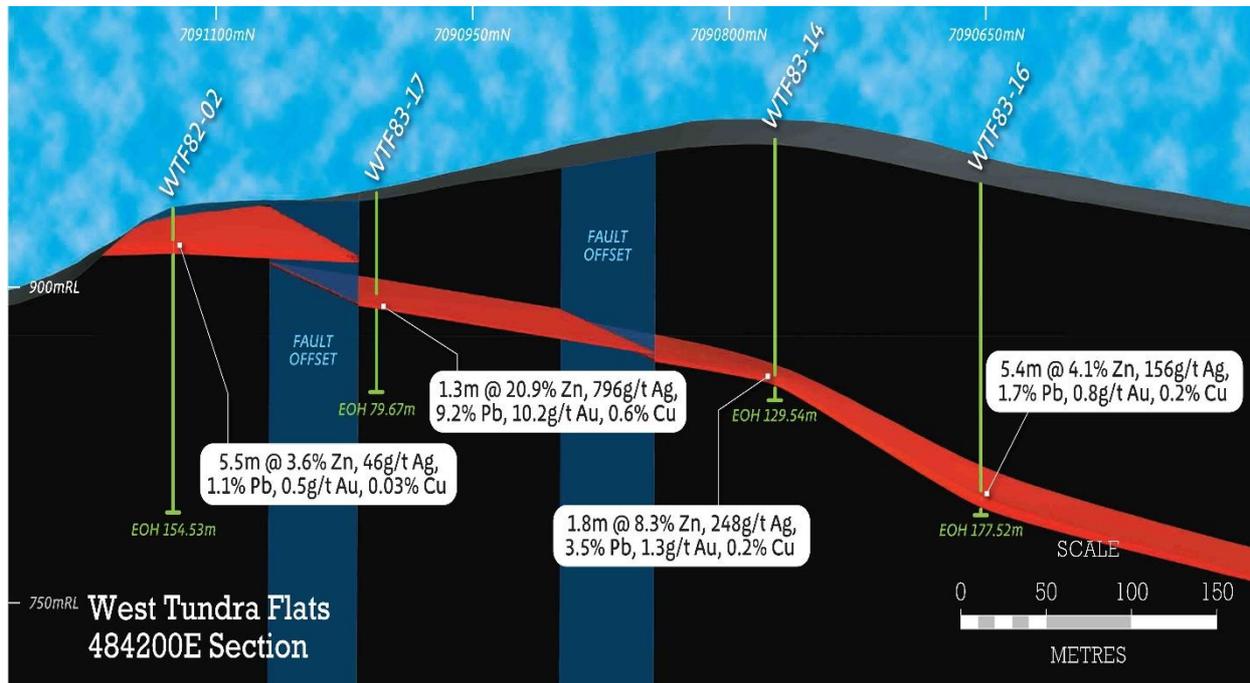
- 21.2m @ 6.9% Zn, 57 g/t Ag, 3.2% Pb, 0.4 g/t Au & 0.2% Cu from 77.6m
- 36.1m @ 6.2% Zn, 183 g/t Ag, 2.5% Pb, 1 g/t Au & 0.2% Cu from 6.1m
  - Including 4.6m @ 23.5% Zn, 531g/t Ag, 8.5% Pb, 1.5g/t Au & 1.0% Cu from 6.1m
- 5.5m @ 25.9% Zn, 346g/t Ag, 11.7% Pb, 2.5g/t Au & 0.9% Cu from 69.5m
- 7.1m @ 15.1% Zn, 334g/t Ag, 6.8% Pb, 0.9g/t Au & 0.3% Cu from 39.1m

#### West Tundra Flats

- 1.3m @ 21.0% Zn, 796g/t Ag, 9.2% Pb, 10.2g/t Au & 0.6% Cu from 58.6m
- 3.0m @ 7.3% Zn, 796g/t Ag, 4.3% Pb, 1.1g/t Au & 0.2% Cu from 160.9m
- 1.7m @ 11.4% Zn, 372g/t Ag, 6.0% Pb, 1.7g/t Au & 0.2% Cu from 104.3m



**Figure 1:** Cross-section 480,700E looking towards the east through the Dry Creek deposit showing the geometry of the Fosters and Discovery mineralised massive sulphide lenses and drill intercepts.



**Figure 2:** Cross-section 484,200E looking towards the east through the West Tundra Flats deposit showing the mineralised massive sulphide lens and drill intercepts.

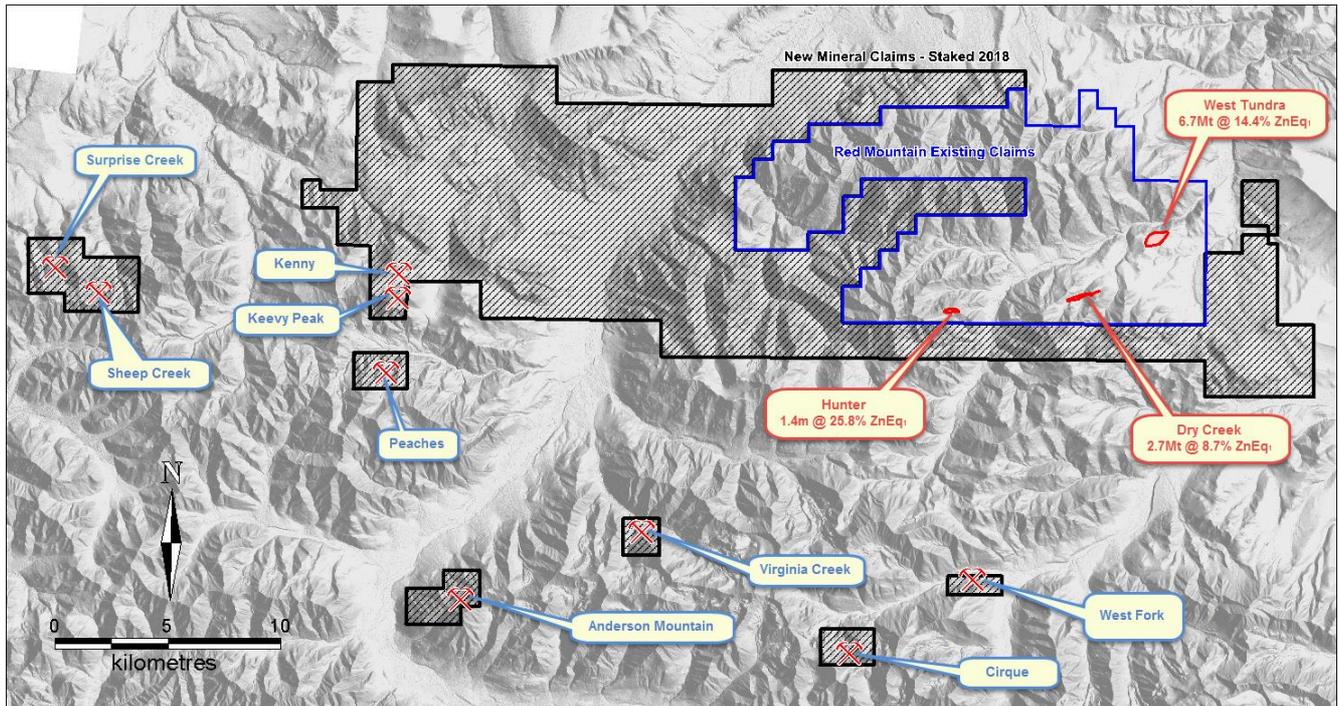
- VMS deposits typically occur in clusters (“VMS camps”). Deposit sizes within camps typically follow a log normal distribution, and deposits within camps typically occur at regular spacing. The known deposits at Dry Creek and West Tundra Flats provide valuable information with which to vector and target additional new deposits within the Red Mountain camp.
- Interpretation of the geologic setting indicates conditions that enhance the prospectivity for gold-rich mineralisation within the VMS system at Red Mountain. Gold mineralisation is usually found at the top of VMS base metal deposits or adjacent in the overlying sediments. Gold bearing host rocks are commonly not enriched in base metals and consequently often missed during early exploration sampling. This provides an exciting opportunity for potential further discoveries at Red Mountain.

White Rock sees significant discovery potential, given the lack of modern day exploration at Red Mountain. This is further enhanced by the very nature of VMS clustering in camps and the potentially large areas over which these can occur.

#### **Expanded tenement package.**

The expansion of White Rock’s tenement package followed a successful first year of field activities for White Rock where drilling intersected multiple high-grade intervals of zinc-silver-lead-gold-copper mineralisation at Dry Creek, West Tundra and the newly discovered Hunter prospect (*refer ASX Announcements dated 18 June 2018, 4 July 2018 and 20 August 2018*). With some drill hole results returning in excess of **17% zinc, 6% lead, 1,000 g/t silver, 6 g/t gold and 1.5% copper**, the 2018 field season also saw three reconnaissance crews out in the field mapping and sampling. The culmination of this work has encouraged White Rock to expand its strategic tenement holding to take in more of what has been identified as a highly prospective geological setting (*refer ASX Announcement dated 21 November 2018*).

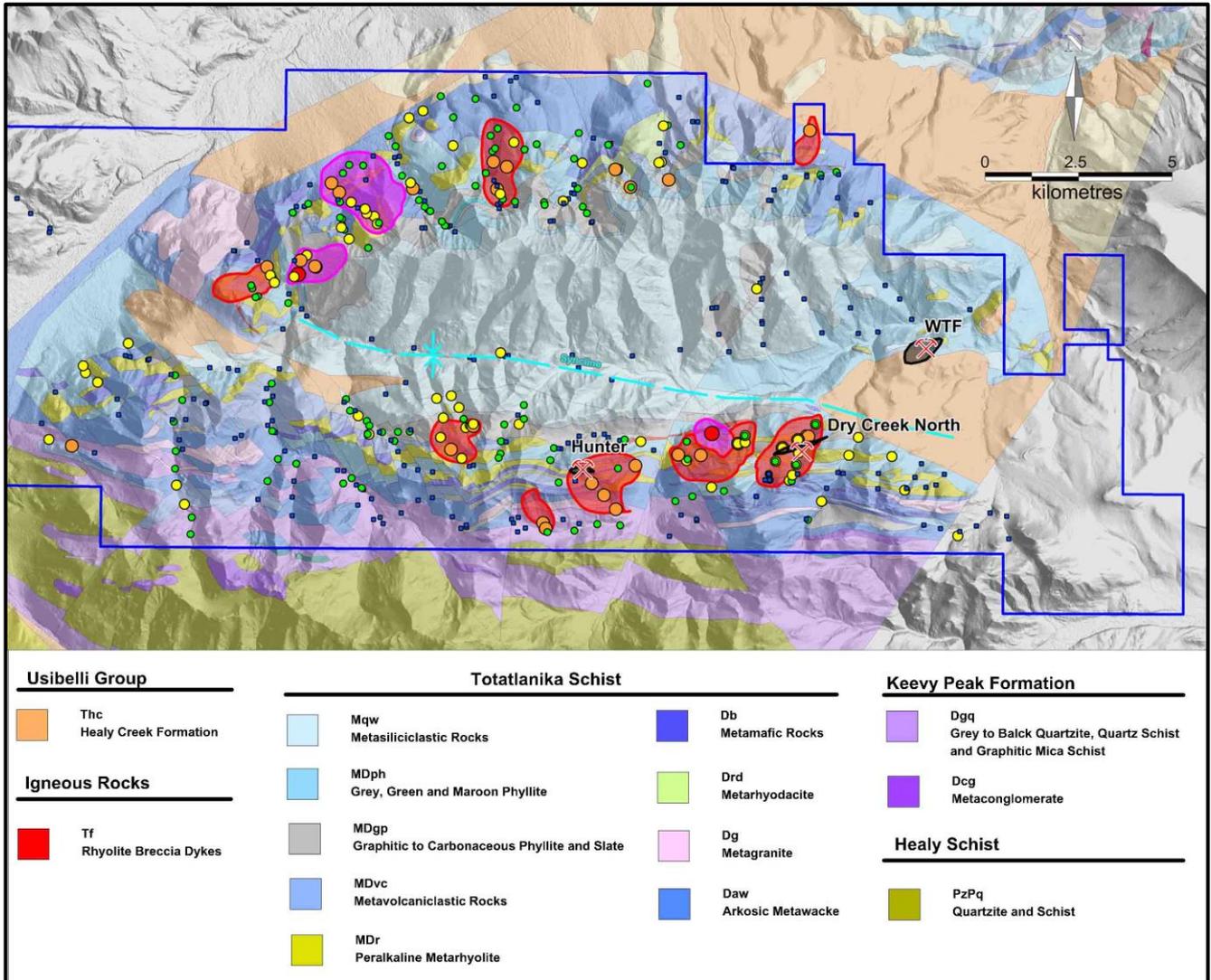
The majority of the expanded tenement area forms a contiguous block of mining claims that now extend the Red Mountain project over a larger area of the Bonnifield Mining district, to the west along strike and south into the prospective footwall stratigraphy identified as containing multiple VMS prospective time horizons. The new claim areas will allow White Rock to systematically explore what is now held to be a highly prospective regional stratigraphic setting capable of hosting multiple high-grade zinc-rich polymetallic VMS deposits.



**Figure 3:** Red Mountain Project tenement outline on terrain map with locations for the Dry Creek and West Tundra Flats VMS deposit Mineral Resources\*, the new discovery at the Hunter Prospect and outlier VMS prospects.

During the 2018 field season, White Rock also completed a detailed regional stream sediment program over prospective stratigraphy within the Red Mountain project area. This part of the comprehensive 2018 exploration program was optimised based on the geochem orientation survey completed across known mineralisation at Dry Creek. This “calibration” provided a geochemical signature of base metal and precious metal elements together with other pathfinders to use for future exploration of the VMS prospective stratigraphy on both the northern and southern limbs of the regional Bonnifield syncline.

This 2018 reconnaissance program identified a number of extensive alteration features for future exploration. Some of these extend on surface for several kilometres of strike. The results from the regional stream sampling program have successfully highlighted 8 priority anomalies within the area of alteration (Figure 4), providing areas for immediate focus through follow-up ground reconnaissance, surface sampling and the application of electrical geophysics prior to drill targeting (*refer ASX Announcement dated 4 December 2018*).



**Figure 4:** Location of high priority stream sediment geochemical anomalies on the DGGS geology map (after Freeman et al., 2016) and terrain surface with locations for the Dry Creek and West Tundra Flats VMS deposits, and the recent Hunter VMS discovery.

#### 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.