ASX and Media Release: 21 November 2018
ASX Code: WRM

WHITE ROCK Minerals Ltd
ACN 142 809 970

White Rock increases its strategic land holding and stakes additional high-grade zinc-silver-lead-gold-copper VMS prospects

ASX Code: WRM

Issued Securities
Shares: 1,636 million
Options: 570 million

Cash on hand (30 Sept 2018)
$2.6M

Market Cap (20 Nov 2018)
$9.8M at $0.006 per share

Directors & Management
Brian Phillips
Non-Executive Chairman

Matthew Gill
Managing Director &
Chief Executive Officer

Peter Lester
Non-Executive Director

Ian Smith
Non-Executive Director

Jeremy Gray
Non-Executive Director

Shane Turner
Company Secretary

Rohan Worland
Exploration Manager

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White Rock Minerals ("White Rock") is pleased to announce that it has more than tripled the area of its highly prospective 100% owned Red Mountain high-grade zinc – silver – lead – gold - copper volcanogenic massive sulphide ("VMS") Project in Alaska through the staking of an additional 524 new State of Alaska Mining Claims and Mineral Locations.

The expansion of its tenement package follows 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 (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.

White Rock moved to secure the additional prospective areas in consultation with its strategic partner, Sandfire Resources NL ("Sandfire"). Earlier in the year, and encouraged by what White Rock was doing, Sandfire signed an agreement providing equity funding to assist White Rock to continue to explore the Red Mountain project during 2018, with an option to enter into an earn-in JV by the end of this year (ASX Announcement dated 11 July 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.

White Rock has also staked claims over a number of additional VMS mineral occurrences including at Anderson Mountain, Virginia Creek, West Fork, Peaches, Keevy Peak, Kenny, Sheep Creek and Surprise Creek. These prospects have been the subject of past exploration with VMS characteristics identified from mapping, rock chip sampling and in some cases drilling. Results by previous explorers are summarised below.

The Red Mountain project now comprises 754 State of Alaska Mining Claims and Mineral Locations, with the total area now controlled totalling 475km².

CEO Matt Gill said "Our successful first year of exploration on the ground at Red Mountain and the subsequent attraction of our strategic partner Sandfire has allowed White Rock to enact a much broader exploration and discovery vision by securing what we believe to be a regionally extensive and highly prospective land package. Field work has confirmed the regional prospectivity through our discovery this year of outcropping massive sulphide mineralisation at the Hunter prospect. Further validation of the regions prospectivity is evidenced by the extensive alteration and multiple VMS time horizons identified through field reconnaissance of targets developed from earlier desktop studies. White Rock envisages that an aggressive systematic multi-pronged exploration program will rapidly yield the discoveries required to advance the Bonnifield district towards a new VMS development project."

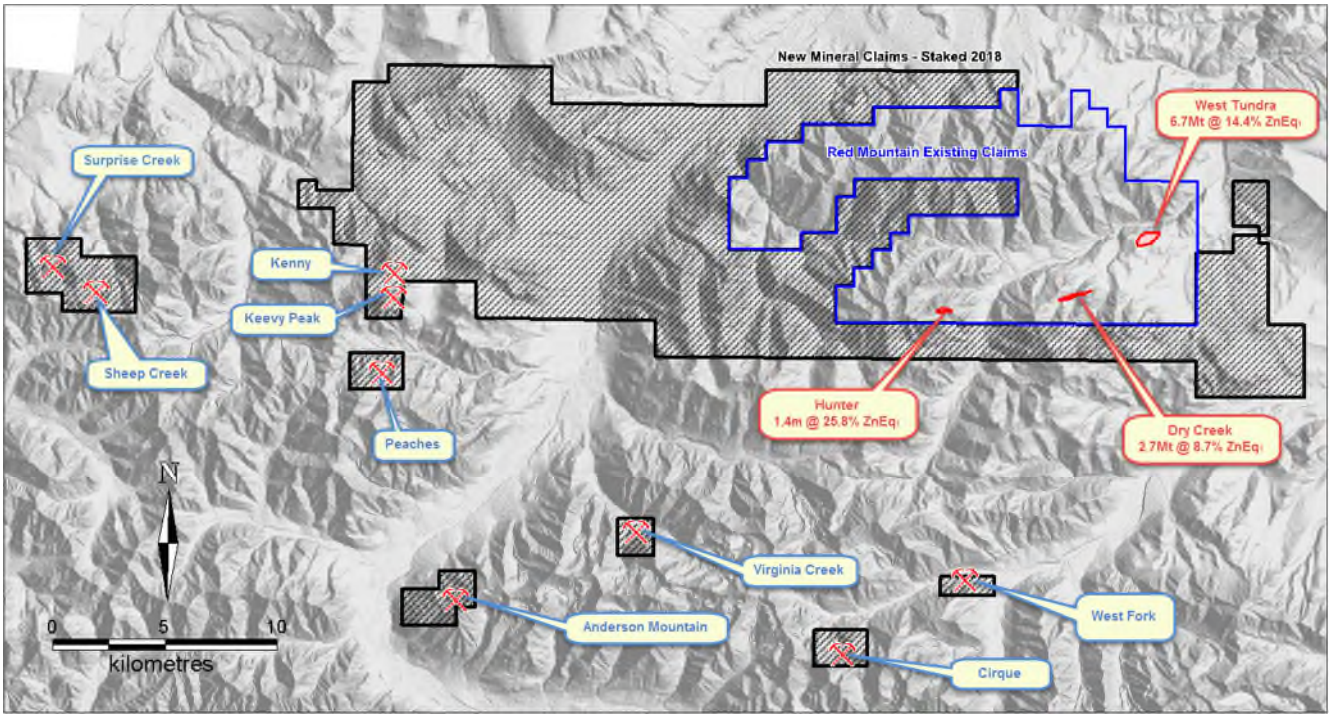

Figure 1: *Red Mountain Project tenement outline on terrain map with locations for the Dry Creek and West Tundra Flats VMS deposit Mineral Resources[2], the new discovery at the Hunter Prospect and outlier VMS prospects.*

[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 x [(Zn% x 2,206.7 x 0.9) + (Pb% x 1,922 x 0.75) + (Cu% x 6,274 x 0.70) + (Ag g/t x (19.68/31.1035) x 0.70) + (Au g/t x (1,227/31.1035) x 0.80)] / (2,206.7 x 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.

[2] Refer ASX Announcement 26 April 2017 "Maiden JORC Mineral Resource at White Rock's Red Mountain zinc-silver Project, Alaska."

Anderson Mountain

The Anderson Mountain prospect was discovered in 1975 by Resource Associates of Alaska Corp ("RAA"), Getty Mining Company ("Getty") and Phelps Dodge Corporation ("Phelps Dodge"). Two of three drillholes intersected significant mineralisation AM-76-2 intersecting **1.7m @ 8.5% Zn, 2.1% Pb, 61g/t Ag and 1.2% Cu** from 60.4m and AM-76-3 intersecting **0.6m @ 22.0% Zn, 4.8% Pb, 161g/t Ag and 0.6% Cu** from 42.0m (Corner et al, 1977). Massive sulphide zones extend for 1,200 metres SW-NE and are hosted by black graphitic argillites within a Devonian sequence of metasedimentary and metavolcanic rocks (Dusel-Bacon et al., 2012). Nokleberg et al. (1994) document massive sulphide layers up to 3m thick with assays up to **22% Zn, 5% Pb, 170g/t Ag and 19% Cu**.

The most recent work known is by Grayd Resources Corp. ("Grayd") in 1998 when they were also active at Red Mountain. Grayd drilled a further 10 drill holes with the highlight from AM-98-6 that intersected **0.9m @ 16% Zn, 5% Pb, 102g/t Ag, 0.8g/t Au & 0.4% Cu** from 42.4m (Dreschler et al., 1998).

Virginia Creek

The Virginia Creek prospect was also discovered by RAA, Getty and Phelps Dodge in 1975. Records indicate that four of 6 drill holes successfully intersected sulphide mineralisation along 300m of strike within 45m of surface, with the highlight from VC-2 intersecting **14.8m @ 3.3% Zn, 0.8% Pb, 78g/t Ag, 0.2g/t Au & 0.5% Cu** (Corner et al, 1977).

Sheep Creek – Surprise Creek

The Sheep Creek prospect (also known as the Last Chance or Gossan Peak prospect) was also discovered in 1975 by RAA, Getty & Phelps Dodge. The discovery exposure at Gossan Peak extends over 200m of strike and is up to 100m wide with anomalous prospect sites defining a 3km long east-west target horizon (Senter, 1979).

Mineralisation at Sheep-Surprise is distinct from the other VMS prospects in the district as it is sediment-hosted with no clear volcanic affinity, and having significant concentrations of tin (Sn) and indium (In) (Gaard, 1982). Nokleberg et al. (1994) document selected samples up to **11% combined Zn & Pb, 10g/t Ag and 1% Sn** from massive sulphide lenses within more broadly disseminated sphalerite-galena-cassiterite (zinc-lead-tin) stratabound mineralisation hosted by siliceous sediments. Records indicate at least 3 drill holes were completed during 1977-79.

Cirque

The Cirque prospect was also discovered in 1976 by RAA, Getty and Phelps Dodge. Massive sulphide float blocks up to 2 metres thick occur within 300m of mineralised calc-schist and carbonate outcrop. Assays for 18 samples averaged **5.6% Zn, 1.7% Pb, 49g/t Ag & 0.5% Cu** (Corner et al., 1978).

West Fork

The West Fork prospect was also discovered in 1976 by RAA, Getty and Phelps Dodge and further explored by Grayd in 1998. Massive sulphide mineralisation at surface returned rock chip assay results up to **12.3% Zn, 5.4% Pb, 93g/t Ag & 1.4% Cu**, with a footwall of gossanous felsic metavolcanics delineated by a 1200m Cu-Pb-Zn-Ag soil geochemical anomaly that trends E-W (Baxter, 1998).

Peaches

The Peaches prospect was also discovered in 1976 by RAA, Getty and Phelps Dodge and further explored by Grayd from 1996-1998. Surface rock chip sampling assayed **6.9% Zn, 6.3% Pb, 88g/t Ag, 1.2g/t Au & 0.1% Cu** (Baxter, 1998).

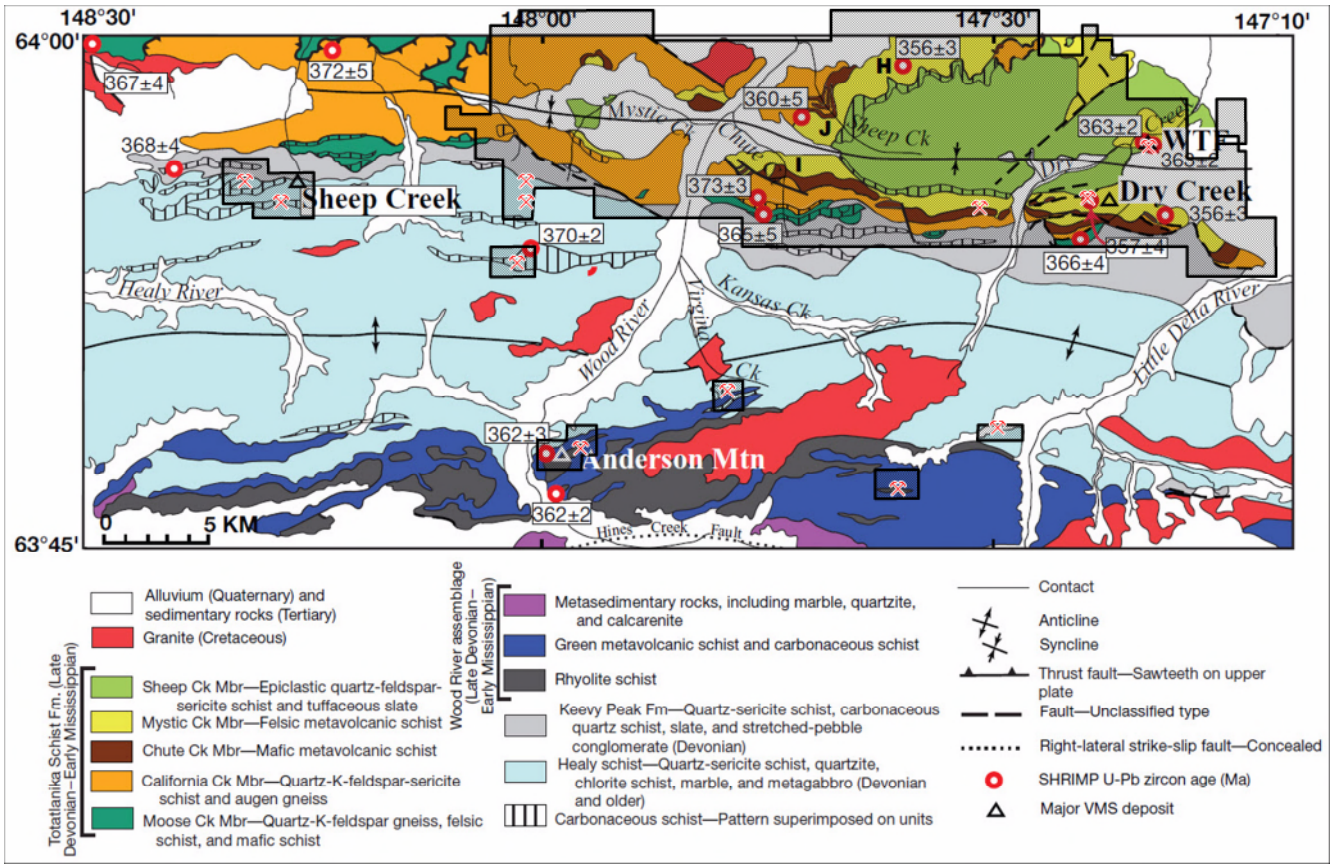

Figure 2: *New expanded tenement outline for the Red Mountain Project on the geological map of the Bonnifield District (from Dusel-Bacon et al. (1998).*

REFERENCES

Baxter, P., 1998. Bonnifield VMS Project, Alaska, Inmet-Grayd Joint Venture, unpublished company report in library of Northern Associates, Inc. Fairbanks, Alaska, 22 pages.

Corner, N., McOnie, A., Chipp, E., Knaebel, J., 1977. Bonnifield Project, Alaska, 1976, Massive Sulfide Exploration, Resource Associates of Alaska, unpublished company report in library of Northern Associates, Inc. Fairbanks, Alaska, 156 pages.

Corner, N., Berry, D., Fox, P., Kelly, J., McOnie, A., 1978. Bonnifield Project, Alaska, 1977, Massive Sulfide Joint Venture of Getty Oil & Phelps Dodge Corp., Resource Associates of Alaska, unpublished company report in library of Northern Associates, Inc. Fairbanks, Alaska, 155 pages.

Dreschler, J., Andersen, G., Hoffman, B., 1998. Bonnifield Project, Alaska 1998 Exploration Progress Report, Grayd Resources Corporation, unpublished company report in library of Northern Associates, Inc. Fairbanks, Alaska, 55 pages.

Dusel-Bacon, C., Foley, N., Slack, J.,Koenig, A., Oscarson, R., 2012. Peralkaline- and Calc-Alkaline-Hosted Volcanogenic Massive Sulfide Deposits of the Bonnifield District, East-Central Alaska, Economic Geology, v.107, pp. 1403-1432.

Gaard, D., Freeman, C., Hill, K., Pellerin, L., Moody, M., Rex, H., Cox, B., 1982. Bonnifield Project Final Report for 1982, Resource Associates of Alaska, unpublished company report in library of Northern Associates, Inc. Fairbanks, Alaska, 85 pages.

Lindberg, P. A., 1998. Anderson Mountain Geologic Mapping Program for Pacific Alaska Resources Company and Grayd Resource Corporation.

Nockleberg et al, 1994. Metallogeny and major mineral deposits of Alaska, Geological Society of America, Volume G-1 of Decade of North American Geology.

Senter, L., 1979. Last Chance Creek Project – 1978, U.S. Borax Company, unpublished company report in library of Northern Associates, Inc. Fairbanks, Alaska, 68 pages.

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.

WHITE ROCK
Minerals Ltd
ACN 142 809 970

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 Bonnifield Mining District. The tenement package comprises 754 mining claims over a total area of 475km².
- 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[1] %	Zn %	Pb %	Ag g/t	Cu %	Au g/t	ZnEq kt	Zn kt	Pb kt	Ag Moz	Cu kt	Au 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
Total		**16.7**	**8.9**	**4.1**	**1.7**	**99**	**0.2**	**0.7**	**1,488**	**678**	**286**	**53.5**	**26**	**352**

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[1] %	Zn %	Pb %	Ag g/t	Cu %	Au g/t	ZnEq Kt	Zn kt	Pb kt	Ag Moz	Cu kt	Au 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
Total		**9.1**	**12.9**	**5.8**	**2.6**	**157**	**0.1**	**0.9**	**1,176**	**531**	**234**	**46.1**	**12**	**260**

* 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.

[1] 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:

ZnEq =100 x [(Zn% x 2,206.7 x 0.9) + (Pb% x 1,922 x 0.75) + (Cu% x 6274 x 0.70) + (Ag g/t x (19.68/31.1035) x 0.70) + (Au g/t x (1,227/31.1035) x 0.80)] / (2,206.7 x 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.

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- 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

- 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 from39.1m

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 from160.9m
- 1.7m @ 11.4% Zn, 372g/t Ag, 6.0% Pb, 1.7g/t Au & 0.2% Cu from 104.3m

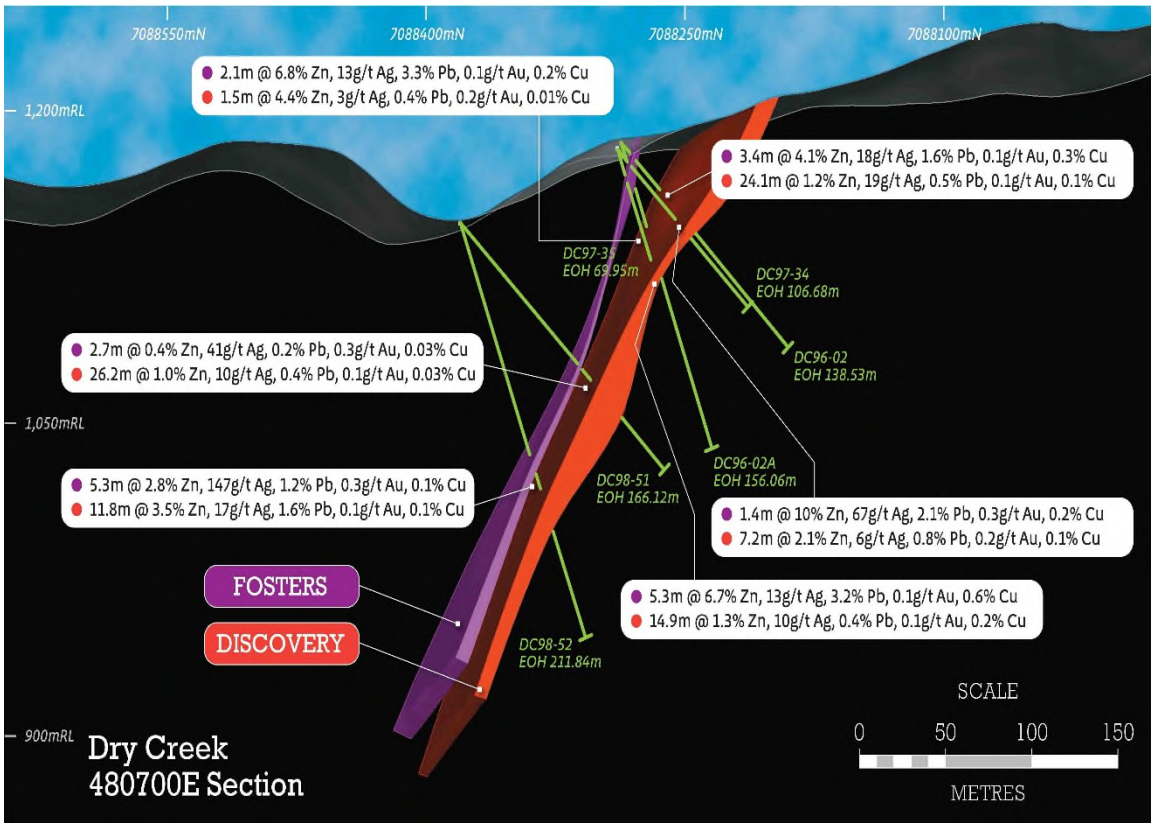

Figure 3: *Cross-section 480,700E looking towards the east through the Dry Creek deposit showing the geometry of the Fosters and Discovery mineralised massive sulphide lenses and drill intercepts.*

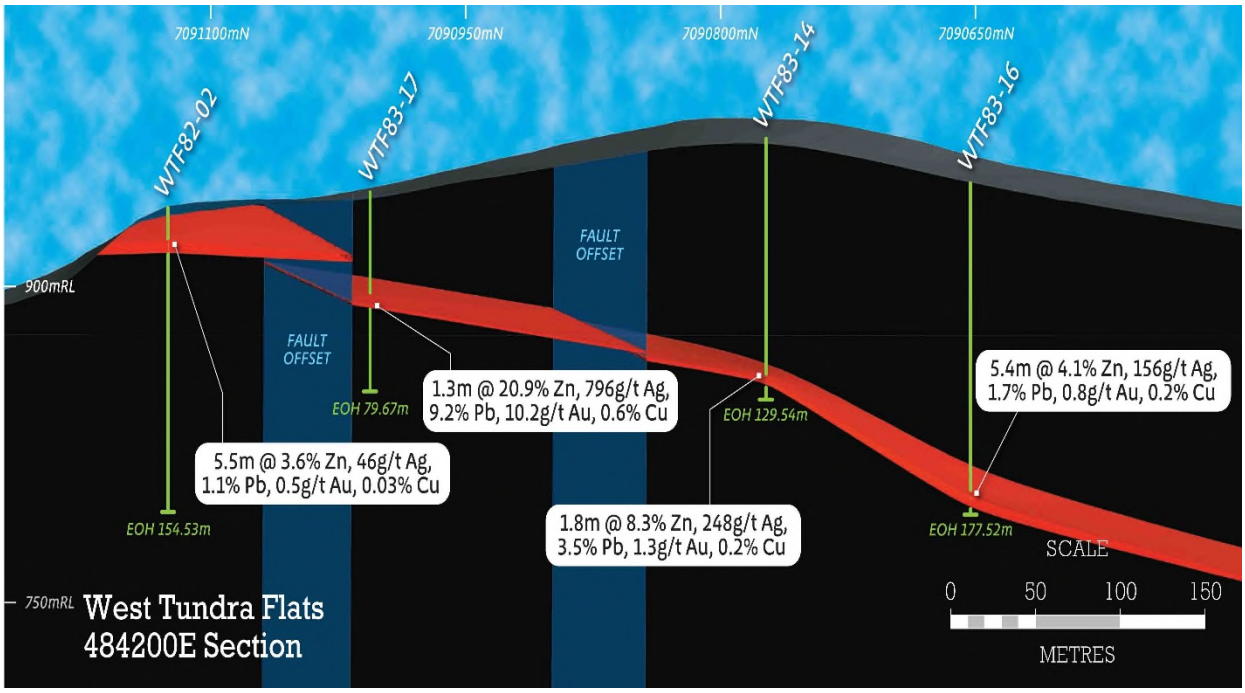

Figure 4: *Cross-section 484,200E looking towards the east through the West Tundra Flats deposit showing the mineralised massive sulphide lens and drill intercepts.*

- 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.

For more information about White Rock and its Projects, please visit our website
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APPENDIX 1: JORC CODE, 2012 EDITION – TABLE 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.* • *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.*	• All sampling has been compiled from historic reports of previous exploration and government surveys. • No information about the quality of sampling or sample accuracy and representativity are documented.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole 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).*	• All drilling was reported as diamond core from surface. No further detail is documented.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• No relevant information has been documented in the historic reports.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• No relevant information has been documented in the historic reports.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• No relevant information has been documented in the historic reports.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	• No relevant information has been documented in the historic reports.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• No relevant information has been documented in the historic reports. • White Rock has not verified the historic sampling.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• No relevant information has been documented in the historic reports. The reporting of location data is general in nature to the related prospect.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• No relevant information has been documented in the historic reports. .
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• No relevant information has been documented in the historic reports.
Sample security	• *The measures taken to ensure sample security.*	• No relevant information has been documented in the historic reports.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• None completed to date.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.* • *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.*	• The Red Mountain Project comprises 754 mining and leasehold locations in the State of Alaska ('the Tenements'). • The Tenements are 100% 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. • 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. • 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

Criteria	JORC Code explanation	Commentary
		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 pre-feasibility 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. • All of the Tenements are current and in good standing.
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"), Inmet Mining Corporation ("Inmet"), Grayd Resource Corporation ("Grayd") and Atna Resources Ltd ("Atna"). The Exploration Results presented here are based on a compilation of the historical surface and drill sampling completed by these explorers and government surveys. • Government surveys of compiled and published geochemical data include U.S. Geological Survey ("USGS") and the Division of Geological & Geophysical Surveys, Alaska ("DGGS")
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Volcanogenic massive sulphide ("VMS") mineralisation located in the Bonnifield District, located in the western extension of the Yukon Tanana terrane. • 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 and the Wood River assemblage which are of Carboniferous to Devonian age.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *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.*	• No relevant information of sufficient accuracy has been documented in the historic reports.
Data aggregation methods	• *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.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No relevant information has been documented in the historic reports.
Relationship	• *These relationships are particularly important in*	• No relevant information has been documented in the

Criteria	JORC Code explanation	Commentary
between mineralisation widths and intercept lengths	*the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	historic reports.
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.*	• Historic reports do not contain sufficient information with which to compile maps or sections.
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.*	• Historic reports do not document comprehensive results.
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.*	• No other data is available.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Field reconnaissance and sampling to verify historic work is planned for the 2019 field season.