



Breakaway Research

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Company Information

ASX Code	WRM
Share Price	A\$0.012
Ord Shares	310m
Options	7.00m
Market Cap (undiluted)	A\$3.73m
Cash (as at 29 Feb 2016)	A\$0.78m
Total Debt	A\$0m
Enterprise Value	A\$2.73m

Board and Management

Non-Exec Chairman	Brian Phillips
Non-Exec. Director	Geoff Lowe
Non-Exec. Director	Peter Lester
Chief Executive Officer	Matthew Gill
Exploration Manager	Rohan Worland
Company Secretary/CFO	Shane Turner

Substantial Share Holders (as at 29 Feb 2016)

Avalon Ventures Corp	25.7%
Greenstone Property	10.1%
Suetone	6.8%
Capri Trading	5.6%
Lion Capital Advisory	4.8%
Top 20	71%
Board and Management	2.3%

Company Details

Address	24 Skipton Street Ballarat Victoria VIC 3350 Australia
Phone	+613 5331 4644
Web	www.whiterockminerals.com.au

1 Year Price Chart



White Rock Minerals (WRM)

Low Cost Gold/Silver Start-up Opportunity

Recommendation: Speculative **BUY**

Key Points

- **Scoping Study update points towards a robust gold-silver operation at the 100% held Mt Carrington Gold-Silver Project in northern New South Wales**
- **Planned seven year mine life, producing ~28,900ozpa AuEq**
- **Estimated LOM cash operating costs of A\$770/oz AuEq**
- **Opportunity for a low capital cost start up, by virtue of existing infrastructure**
- **Current JORC compliant Indicated and Inferred Resources of 23.5Moz Ag and 338koz Au**
- **Significant potential for resource expansions and new discoveries**
- **The Project is on a granted Mining Lease**
- **Planned acquisition of Alaskan Red Mountain VMS project**

White Rock Minerals Limited (ASX: WRM) is looking to proceed to a Definitive Feasibility Study ("DFS") on its Mt Carrington Gold-Silver Project. In view of recently improved Australian denominated gold prices and falling costs, the Company has updated its 2012 Scoping Study, with the revised document indicating a robust, seven year operation.

Existing infrastructure, including that remaining from previous mining operations, points towards a relatively low capex start-up, which will significantly benefit project economics, and also possibly lessen the effort required to attract project funding.

There is also excellent potential to expand the resource base through the discovery of additional low-sulphidation epithermal gold-silver resources with a large number of untested targets within the volcanic complex. This is augmented by the porphyry Cu-Au potential, highlighted by recent exploration results.

Given the above, and the pending acquisition of Red Mountain, we rate White Rock as a SPECULATIVE BUY, with a risked NAV valuation of \$0.061/share. Price movers will include, following funding, material progress on the DFS and permitting at Mt Carrington.

Company Overview

White Rock Minerals is a northern NSW focused precious and base metals emerging developer/producer, with 100% ownership of the highly prospective Mt Carrington area. The tenements cover the Permian Drake Volcanics, including the interpreted Drake Volcanic Caldera, a 20km diameter feature that hosts the majority of the gold-silver mineralisation and contains appreciable alteration.

The Company has also signed an agreement to acquire the Red Mountain VMS Project in the Bonfield Mining District, located 100km south of Fairbanks in central Alaska.



Investment Thesis

Potential low cost gold/silver production

Potential Low Cost Gold/Silver Producer

In the flagship Mt Carrington Project (“Mt Carrington” or “the Project”), White Rock Minerals (“White Rock” or “the Company”) has the potential to develop a low cost open cut gold-silver operation with significant upside potential in addition to the planned seven year, ~28,900ozpa AuEq operation, based on gold-rich resources of 6.64Mt @ 1.3g/t Au (275koz Au, 639koz Ag in four deposits) and silver-rich resources of 12.5Mt @ 57g/t Ag (22.8Moz Ag, 64koz Au in four deposits).

Plans to progress to a DFS

Positive Scoping Study Completed, With Plans for a DFS

An update to the 2012 Scoping Study has recently been completed, with this pointing towards a robust project at current metals prices. As such, the Company, subject to funding, plans to progress to a DFS, with permitting activities, including preparation of an environmental impact study (“EIS”), being run in parallel.

Short Time to Production

Dependent largely on any permitting issues and delays, it is expected that the DFS and permitting will take around 12-18 months to complete, followed by a 12 month financing and construction period.

Existing infrastructure lessens capital requirements

Infrastructure in Place

A key to the anticipated economics of the Project is the low capex of \$24.2 million as estimated in the recent update to the Scoping Study. This is by virtue of significant mine site infrastructure being in place from previous mining operations, including a tailings dam for which capacity can be increased, a fresh water dam and ready access to grid power and public highways. Additionally, the two planned gold starter pits have already been pre-stripped again decreasing expected capex.

Low strip ratio, open pit mineralisation

Shallow, Low Strip Ratio Mineralisation

Planned mining is by open pits, with broad, shallow zones of mineralisation resulting in a low, 2.0:1 life of mine (“LoM”) strip ratio. This, in conjunction with relatively soft rock, should result in low cost mining and comminution. Recent falls in Australian operating costs and oil prices have also helped project economics since the original 2012 study.

Strong Australian Denominated Gold Price

The strong and relatively stable Australian denominated gold price is an important consideration in project economics – we have seen this averaging around \$1560/ounce over the last 15 months, a 10% improvement on the average price of \$1420/ounce through 2013 and 2014.

Silver at the Bottom?

Given that it provides approximately 43% of the forecast revenue, the Australian denominated silver price is also an important consideration. Like gold we have seen it remain reasonably stable over the last 15 months, averaging ~\$21/ounce with low price volatility following big falls from 2011 – the US price appears to have flattened out as well.

Excellent Exploration Prospectivity Provides....

Tenement package is highly prospective for additional discoveries

There is excellent potential to grow the existing gold-silver resource through delineation of extensions to the known mineralisation, as well as via new discoveries, in this under-explored region – work by White Rock has, through an integrated and targeted exploration programme defined a number of quality prospects that require follow up.

The tenements are also prospective for porphyry Cu-Au mineralisation, as supported by



the most recent geophysical surveying and drilling which has defined broad sulphide alteration zones, indicating a large hydrothermal system.

...Production Upside Potential

It is planned to fund exploration through operational cash flow, and any success will potentially increase resources, and thus increase the scope, including throughput and mine life of the proposed operation.

Exciting Alaskan VMS Potential

In addition to Mt Carrington, White Rock is acquiring the Red Mountain Project, located in central Alaska. This includes a historic resource estimate of 5.71Mt of high grade (~12.3% ZnEq) volcanogenic massive sulphide (“VMS”) poly-metallic mineralisation in two deposits, along with the potential for additional VMS discoveries.

Experienced Board and Management

An important strength of White Rock is the combined experience of key personnel. This includes experience in all technical phases of the resources industry from exploration to operations.

Valuation

We have a risked valuation of \$0.061/share for White Rock, with upside. We have not included any value for Red Mountain given that the acquisition is yet to be finalised.

White Rock valuation summary

	Total	Per Share	Notes
Mt Carrington Risked	\$16 m	\$0.051	35% of project NPV, 8% real DR, risk factor based on resource mix
Exploration Potential	\$2 m	\$0.007	5% of project NPV
Cash	\$0.78 m	\$0.003	Estimated
Total	\$19 m	\$0.061	Based on current shares on issue

Source: Breakaway analysis

Risks

As with any resources stock there are a number of risks. Those pertinent to White Rock, and particularly Mt Carrington are listed below – we consider funding to be the key risk.

- **Funding** – This is the key risk for White Rock now, with funds required for the Mt Carrington DFS and associated activities, which is expected to require in the vicinity of \$4 million, as well as funding for Alaska once the asset is secured. White Rock will need to look at different options with respect to funding, with these including attracting JV partners or a major investor.
- **Permitting** – This is a risk at Mt Carrington, with the Project now entering the permitting phase. Although the Project is located on granted Mining Leases, the Company will need to go through the EIS and development approvals process. One of the considerations here is the timeframe for permits and approvals to be issued – there is always the chance of blowouts. This is somewhat mitigated by the relationships that the Company has locally, as well as the work that has been completed in cleaning up legacy issues from previous operators and in having two years’ worth of baseline EIS data.
- **Resource** – We consider this only a minor risk at Mt Carrington, however it is a risk at Red Mountain with the need to convert the historical estimates to a JORC-compliant exploration target.
- **Exploration** – This is a risk for any exploration activities, and will apply to both

Exciting potential in Alaska

Experienced Board and Management

Risked NAV valuation of \$0.061/share

Funding is the key risk, followed by permitting at Mt Carrington



Mt Carrington and Red Mountain. This is somewhat mitigated however at both projects (and particularly Mt Carrington), given the brownfields nature of the projects, and results of past exploration work.

- **Development and Operation** – This is a potential future risk at Mt Carrington should development proceed - there are always execution risks when taking a project through to development and operation, with things commonly not going as planned.



Project Review

Introduction

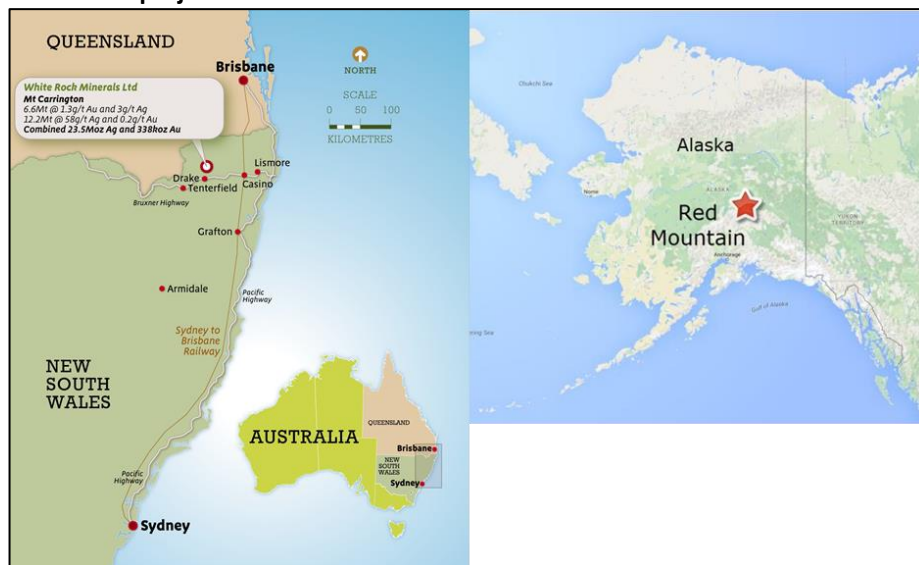
WRM's key project is Mt Carrington in northern NSW

White Rock's primary focus is on developing its 100% held Mt Carrington Project in northern New South Wales, where it plans to proceed to a DFS following on from the recent positive Scoping Study update.

The Company has also been investigating other opportunities, including the recently announced agreement to obtain 100% of the Red Mountain VMS Project in Alaska, and the subsequent acquisition of a number of other surrounding leases covering prospective stratigraphy.

White Rock project locations

Other opportunities are also being investigated, including Red Mountain VMS in Alaska



Source: White Rock Minerals

Mt Carrington Project (WRM 100%)

White Rock Minerals, through its subsidiary White Rock (MTC) Pty. Ltd. has a 100% interest in the Mt Carrington Project, which includes 22 granted Mining Leases and two granted Exploration Licences covering an area of ~229km². The area is located in the New England Fold Belt in northern New South Wales, immediately north of the town of Drake on the Bruxner Highway.

The tenement package was acquired by Rex Minerals (ASX: RXM) in 2009, with White Rock being floated in 2010 as a special purpose vehicle for the Project.

The Mt Carrington area has seen significant precious metals mining since the late 1800's, with the most recent being by Mt Carrington Mines ("MCM") from mid-1988 to 1990. Overall MCM produced 22,951oz of Au and 434,870oz of Ag from 485,516 tonnes of oxide ore. Significant infrastructure from this time, including a camp, tailings dam and fresh water dam remain on site.

Strategy

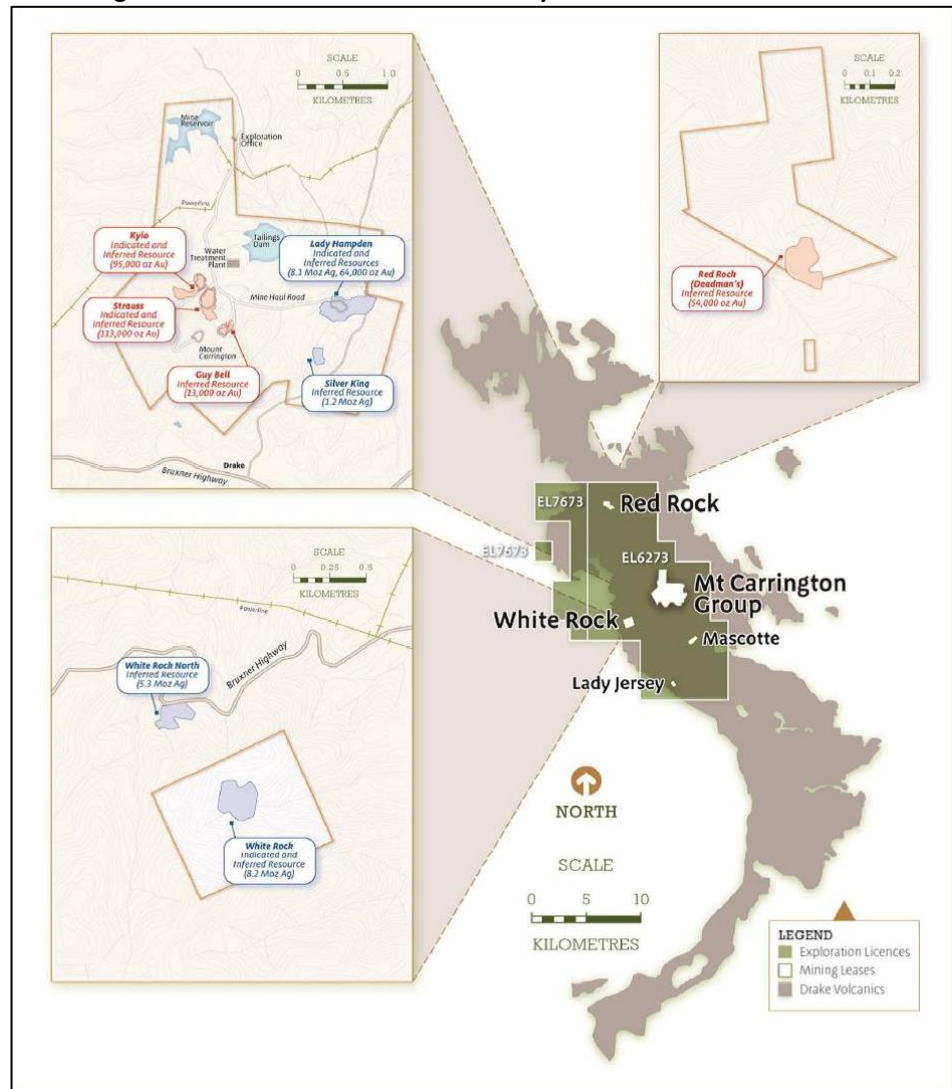
Company strategy is to fast track production and fund growth from operational cash flow

White Rock's strategy at Mt Carrington is to commence work on the DFS for a proposed initial 7 year ~28,900ozpa AuEq operation as defined in the Scoping Study. It is expected that the study will take around 12-18 months to complete, with environmental studies and permitting activities being run in parallel. A following ~12 months financing and construction period could conceivably lead to first production in the second half of 2018 or early 2019 providing work commences by mid-2016.

Cash flow from the planned operation will be directed at ongoing exploration. Dependent upon positive exploration results, the operation could then grow, with potential for a longer mine life and or higher throughput.



Mt Carrington tenements and resource summary



Source: White Rock Minerals

Geology and Mineralisation

Located over the Permian Drake Volcanics

The Project is located over the Permian Drake Volcanics, a sequence of intermediate to acid submarine to emergent volcanics and intrusives, 60km x 20km in size and elongate NW-SE.

Centred on a collapsed volcanic caldera

A conspicuous feature of the package is the 250km² Drake Quiet Zone (“DQZ”), a roughly circular area of low magnetic response with a diameter of approximately 20km. Detailed mapping and structural interpretation by White Rock has led to the interpretation that this zone represents a collapsed volcanic caldera, examples of which host significant gold and silver mineralisation worldwide. Examples include the Emperor Gold Mine in the Tavua Caldera (Fiji, +10Moz Au), Creede (Colorado, 80Moz Ag) and Round Mountain (Nevada, 10Moz Au).

Similar structures host major gold and silver deposits

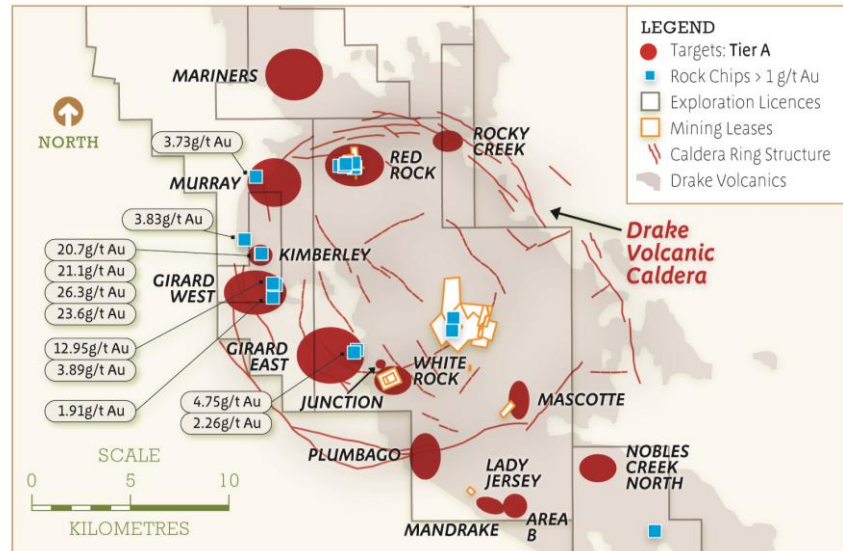
Units within the caldera range from basaltic lavas (the oldest units) through to rhyolitic and dacitic volcanoclastics. These have been intruded by syn-eruptive intermediate to felsic intrusions, which are understood to be the source of the mineralising fluids. Work by the Company has resulted in a detailed facies interpretation of the caldera units.

The mineralisation is intrusive related low-sulphidation gold/silver

The gold-silver mineralisation is intrusive related low-sulphidation epithermal in style, with the mineralisation grading from quartz-sulphide Au-Cu to carbonate base metal Au and Ag. The mineralised zones exhibit a broad mineral zonation, with Au-Cu at the hottest central part, grading through Au dominant mineralisation and then to Ag dominant at the cooler periphery.



Drake volcanic caldera, showing leases and key exploration targets



Source: White Rock Minerals

It is interpreted that the collapse structures control mineralisation

Mineralisation is amenable to open-cut mining

The work by White Rock suggests that at Mt Carrington the caldera collapse structures control the post-collapse intrusives, mineralisation and the extensive alteration within the interpreted caldera. Alteration intensity decreases away from the major collapse structures. These structures include flat to moderately dipping bedding planes which have acted as major fluid feeder structures, with movement forming tension gash veins in adjacent competent host rocks. A brief geological summary of the defined deposits is given below.

The majority of the mineralisation is shallow and continuous over broad intervals, making it suitable for low strip open-cut mining.

Summary of Mineralisation Styles With Intersections Examples

	Deposit	Geology	WRM and RXM Intersection examples
Gold Dominant	Strauss	Steeply dipping NNE trending fissure veins Underlying zone of lithologically controlled stockwork, dipping gently to the SE	79m @ 2.0g/t Au from surface 55m @ 2.2g/t Au from 8m Inc. 18m @ 3.9g/t Au from 13m 74m @ 0.94g/t Au from 6m Inc. 17m @ 1.62g/t Au from 63m
	Kylo/Kylo North	Network and sheeted fissure veins, localised at lithological contacts and at the margins of rhyolite sills and dykes	118m @ 1.71g/t Au from 2m Inc. 38m @ 2.74g/t Au from 60m 54.3m @ 1.40g/t Au
	Guy Bell/Guy Bell North	Steeply NW dipping fissure controlled quartz veins and lodes within the Mt Carrington Andesite	4m @ 10.8g/t Au, 48g/t Ag from 19m Inc. 1m @ 31.3g/t Au, 115g/t Ag from 21m
	Red Rock	Generally NNE trending quartz vein stockwork within a sequence of volcanoclastics intruded by rhyolite and andesite bodies.	121.6m @ 0.7g/t Au from surface 62m @ 0.6g/t Au from 6m And 49m @ 2.3g/t Au from 81m
Silver Dominant	Lady Hampden	Stratabound disseminated and matrix replacement mineralisation in the permeable gently east dipping Lady Hampden Pumice adjacent to the Cheviot Hills Fault	61m @ 1.30g/t Au, 15.8g/t Ag from surface 12m @ 0.76g/t Au, 222g/t Ag from 96m
	Silver King	Similar features to Lady Hampden	
	White Rock	200m x 100m quartz stockwork and breccia within an intrusive rhyolite sill intruding a flat-lying sequence of andesitic to dacitic flows	86m @ 81g/t Ag from surface Inc. 32m @ 177g/t Ag from 51m 61m @ 115g/t Ag from 49m Inc. 7m @ 355g/t Ag from 50m
	White Rock North	Quartz-sulphide stockwork veining at the margins of a rhyolite porphyry intrusion	84m @ 58g/t Ag from 70m

Source: White Rock Minerals



Resources

The resources at the Project include two main groups – gold rich and silver rich - in eight deposits as shown in the table below.

Resources occur in eight deposits, split between gold-rich and silver-rich

Initial resources were calculated in 2008/09 for Rex Minerals during their option to purchase the property. These utilised 1,331 historic holes, totalling 71,664m. These resources totalled 7.8Mt at 0.75g/t Au and 42g/t Ag.

White Rock has continued to grow the global resource base to 19.1Mt at 0.55g/t Au and 38g/t Ag. An upgraded resource estimate was published in November 2013, which included an upgrade to White Rock. The most recent new deposit to be added was Red Rock, with a maiden resource estimated in July 2013.

Mt Carrington Resources

Silver-rich resources total 12.5Mt grading 57g/t Ag

Gold-rich resources total 6.64Mt grading 1.3g/t Au

MT CARRINGTON JORC (2012) MINERAL RESOURCES - JULY 2013						
Silver Dominant Resources						
	Deposit	Tonnes	Gold Grade (g/t)	Gold Ounces	Silver Grade (g/t)	Silver Ounces
Ind	Lady_Hampden	1,840,000	0.6	37,000	69	4,056,000
	White_Rock	1,710,000	-	-	77	4,214,000
	Sub-Total	3,550,000	0.3	37,000	72	8,270,000
Inferred	Lady_Hampden	2,470,000	0.3	27,000	51	4,023,000
	White_Rock	2,660,000	-	-	47	3,978,000
	White_Rock_North	3,180,000	-	-	52	5,314,000
	Silver_King	640,000	-	-	59	1,218,000
	Sub-Total	8,950,000	0.1	27,000	51	14,533,000
Total	Lady_Hampden	4,310,000	0.5	64,000	58	8,079,000
	White_Rock	4,370,000	-	-	58	8,192,000
	White_Rock_North	3,180,000	-	-	52	5,314,000
	Silver_King	640,000	-	-	59	1,218,000
	Total	12,500,000	0.2	64,000	57	22,803,000
Gold Dominant Resources						
Ind	Strauss	1,240,000	1.4	57,000	3.8	153,000
	Kylo	1,590,000	1.2	59,000	2.6	133,000
	Sub-Total	2,830,000	1.3	116,000	3.1	286,000
Inferred	Strauss	1,260,000	1.4	56,000	2.6	104,000
	Kylo	760,000	1.5	35,000	1.8	43,000
	Red_Rock	1,630,000	1.0	54,000	3.5	182,000
	Guy_Bell	160,000	2.5	13,000	4.9	24,000
	Sub-Total	3,810,000	1.3	158,000	2.9	353,000
Total	Strauss	2,500,000	1.4	113,000	3.2	257,000
	Kylo	2,350,000	1.3	95,000	2.3	176,000
	Red_Rock	1,630,000	1.0	54,000	3.5	182,000
	Guy_Bell	160,000	2.5	13,000	4.9	24,000
	Total	6,640,000	1.3	275,000	3	639,000
Total Resources						
	Category	Tonnes	Gold Grade (g/t)	Gold Ounces	Silver Grade (g/t)	Silver Ounces
Total	Indicated	6,380,000	0.74	153,000	41.7	8,556,000
	Inferred	12,760,000	0.45	185,000	36.3	14,886,000
	Total	19,140,000	0.55	338,000	38.1	23,442,000

Source: White Rock Minerals



Proposed Development and Scoping Study

White Rock completed a positive Scoping Study in July 2012, with this most recently being updated in March 2016

In July 2012 the Company released the results of a Scoping Study, with this being subject to updates in 2014, 2015 and March 2016. These considered various mining and processing options and were undertaken in response to changing metal prices and markets.

Production parameters for the latest update, which proposes a seven year, 800ktpa operation are presented in the following table:

Mt Carrington 2016 Scoping Study update production parameters

Parameter	Notes
Mining inventory (diluted)	Gold – 2.73Mt @ 1.39 g/t Au, 3 g/t Ag, 1.43 g/t AuEq Silver - 0.35 g/t Au, 86 g/t Ag, 1.54 g/t AuEq Calculated from pit optimisations, and comprised of approximately 80% Indicated and 20% Inferred Resources
Construction and production profile	8-9 months construction and commissioning period 800ktpa, 7 year open cut (five pits) – contractor mining LOM strip ratio of 2.0:1 3.4 years production (2.73Mt) from gold rich pits (Strauss and Kylo), and 3.6 years production (2.86Mt) from silver rich pits (Lady Hampden, White Rock and Silver King)
Processing	Gold pits – crushing, grinding, flotation, regrinding and cyanide leaching of concentrate Silver pits – crushing, grinding, flotation, sale of concentrate Concentration ratio – 12x
ROM Grade	Gold pits – 1.39 g/t Au, 3 g/t Ag, 1.43 g/t AuEq Silver pits – 0.35 g/t Au, 86 g/t Ag, 1.54 g/t AuEq
LOM Metallurgical recoveries	Au – 71.8%, Ag – 82.5%
LOM metal production	111koz Au, 6.76Moz Ag, 28,900oz AuEq annual production
Concentrate for sale	242kt, averaging 860g/t Ag and 3 g/t Au
Metal payability	Au in bullion – 99.9%, Ag in bullion – 99.5% Metal in concentrate – 90%
C1 unit operating costs	Mining - \$4.25/tonne moved, Processing – LOM average of \$9.22/tonne milled (doesn't include labour), G & A – \$2.11/tonne milled, Labour - \$3.61/tonne milled, Total LOM average \$27.70/tonne milled These have been largely calculated from first principles
Other costs	Concentrate transport of \$90/tonne, NSW state royalty of 4% on revenue ex mine gate

Source: White Rock Minerals, Breakaway analysis

LOM production includes 111koz Au and 6.76Moz Ag from a seven year, 800ktpa operation

The Scoping Study foresees a two stage operation – initially focussing on gold and then silver

As can be seen this includes a two stage operation – initial mining of the gold rich resources to produce metal on site followed by the production of a silver rich concentrate for sale from mining the silver rich resources. Metallurgical recoveries have been determined from sighter metallurgical testwork – further work is planned as part of the DFS, particularly comminution and flow sheet optimisation, including work to improve the silver concentrate grade.

Mining the gold pits first will allow time for silver prices to hopefully improve whilst taking advantage of historically elevated Australian denominated gold prices, and will also allow time for White Rock to find a suitable buyer for the silver concentrate. Capex payback should also be achieved in the first phase.

Financial outcomes for the most recent study update are presented in the table below – these are compared with those from previous updates.

Recent years have seen 15-20% falls in operating costs, significantly improving project economics

One key improvement is in the estimated operating costs. Recent years have seen falls in operating costs in Australia in the order of 10-20%, with the latest update incorporating refined costs. This has led to a reduction in operating costs of ~15% when compared with previous updates, and thus significantly improving the bottom line.

Our view is that the operating costs are reasonable given the current environment. Also, operating costs have been calculated from first principles, and thus the confidence level could be expected to be higher than the +-40% generally associated with Scoping Studies.

The two gold pits have been pre stripped (as a result of mining the oxide mineralisation in 1988-1990), and with grade control drilling being completed for the upper 10-15m of Strauss.

Existing mining infrastructure minimises capex requirements

Following the end of the mining boom there have been significant falls in capital costs, including the possibility of acquiring second hand equipment at attractive prices. Our initial view was that the revised capex seems low, however will be confirmed in the DFS. Given the low sensitivity of the project to capex any increases will only have limited effects on the project value.

The low capital cost is also due to major items of infrastructure remaining on site from the MCM operations. These items include:

- 1.5Mt tailings dam, with only 400kt of this having been used
- There is the potential for expansions through both lifts to the existing dam as well as construction of a new dam
- 750ML freshwater dam
- Administration and exploration offices
- Installed RO plant
- Plans to use the old plant footprint, including cleared ROM pad, and foundations for grinding mills and CIL tanks
- Connection to the power grid, which also helps operating costs with relatively cheap grid power when compared with onsite generation
- Sealed highway access

Mt Carrington Scoping Study update comparison

Parameter	2014 Study Summary	2015 Study Summary	2016 Study Summary	Comment (from 2015)
A\$ Gold price	A\$1400 / oz	A\$1600 / oz	A\$1600 / oz	Improved Australian gold price in 2016 not assumed here
A\$ Silver price	A\$22 / oz	A\$22 / oz	A\$22 / oz	
Proposed development	Two gold dominant pits	Two gold dominant pits, and three silver dominant pits	Two gold dominant pits, and three silver dominant pits	Uses the Project's gold & silver JORC resources
Production – Gold Ounces	93,000	111,000	111,000	0%
Production – Silver Ounces	87,000	6,700,000	6,700,000	0%
Life of Mine (years)	3.4	7	7	0%
Net Present Value (NPV ₁₀)	A\$15.5M	A\$43.9M	A\$60.6M	+38%
Internal Rate of Return (IRR)	51%	80%	103%	+29%
C1 Cash Cost (A\$/Oz Au Eq)	A\$883/oz	A\$881/oz	A\$754/oz	-14%
C1 Cash Cost (A\$/Oz Ag Eq)	N/A	A\$12/oz	A\$10.40/oz	-14%
Capital Cost	A\$20.6M	A\$25.4M	A\$24.2M	-5%
Free Cash Generated (A\$)	A\$25.3M	A\$74.3M	A\$100.2M	+36%
Initial Capital payback	17 months	14 months	10 months	-4 months

Source: White Rock Minerals

Environment and Permitting

Development of Mt Carrington will require the completion of an EIS and permitting, even though the proposed operation is on granted Mining Licences, and has been subject to previous mining operations. The activities will be run in parallel with the planned DFS, which the Company plans to commence once funding is in place. Permitting will most likely only involve local and state authorities – given the scope of the project it is highly unlikely that there will be any Federal input.

It is expected that permitting will take up to 18 months

The Company expects that this activity, including the DFS will take 12-18 months to complete (including time for dealing with submissions on the EIS). White Rock already has two years' worth of base line environmental data, and had previously installed a reverse osmosis ("RO") water purification plant as part of cleaning up environmental legacies from previous operators.



Exploration Potential

The tenement package has excellent exploration potential

One of the highlights of Mt Carrington is the excellent exploration potential, with only limited modern exploration away from the main zones. Work to date by White Rock has identified around 40 additional gold-silver targets within 20km of the central ML's.

There is also good potential for copper discoveries, enhanced by the results of recent MIMDAS IP geophysical surveying and subsequent drilling of chargeability anomalies to the west of the main caldera structure.

The Company plans to carry out further exploration utilising cash flow from the proposed operation, and any success raises the potential to increase the mine life and/or treatment rate.

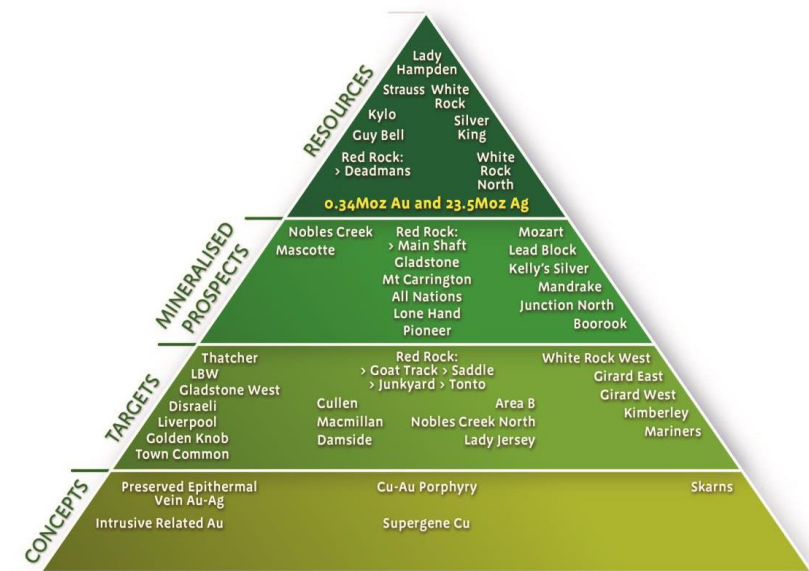
Potential includes extensions to known deposits, new discoveries and untested porphyry targets

The exploration potential encompasses three main areas:

- Extensions to the known deposits
- Further gold-silver discoveries
- Copper potential

Mt Carrington exploration pipeline

White Rock has identified some 40 prospects requiring follow up



Source: White Rock Minerals

Extensions to known deposits

Much of the work around the deposits (including the mined pits) has been shallow, with the majority of the drilling <100m deep. Continuing drilling by the Company has expanded the resources, with this and previous drilling showing that in some cases mineralisation remains open in a number of directions. This expansion has included the maiden resource on the Red Rock deposit, as announced in July 2013.

Higher grade zones exist in the resources

In addition there may be the potential to define coherent zones of higher grade mineralisation. A number of historic and White Rock drillholes have intersected significantly higher grade mineralisation, which require further consideration.

Further gold-silver discoveries

New gold/silver prospects defined

As mentioned earlier there has only been limited exploration work away from the known mineralisation centres. The targeted regional exploration work by White Rock has defined a number of new priority epithermal targets, with these having the potential to add significantly to the resource base. In addition the Company believes that there is the potential for intrusion related and skarn gold mineralisation.

Porphyry copper-gold potential

The area is considered prospective for porphyry Cu +/- Au mineralisation. This style of mineralisation is associated with volcanic edifices, and spatially and temporally associated with epithermal precious metals mineralisation.



Quartz-sulphide vein and supergene copper mineralisation has been intersected in the Central Carrington leases, reinforcing the copper prospectivity. The existing copper targets have returned interesting intersections, including:

Known copper occurrences support porphyry copper model

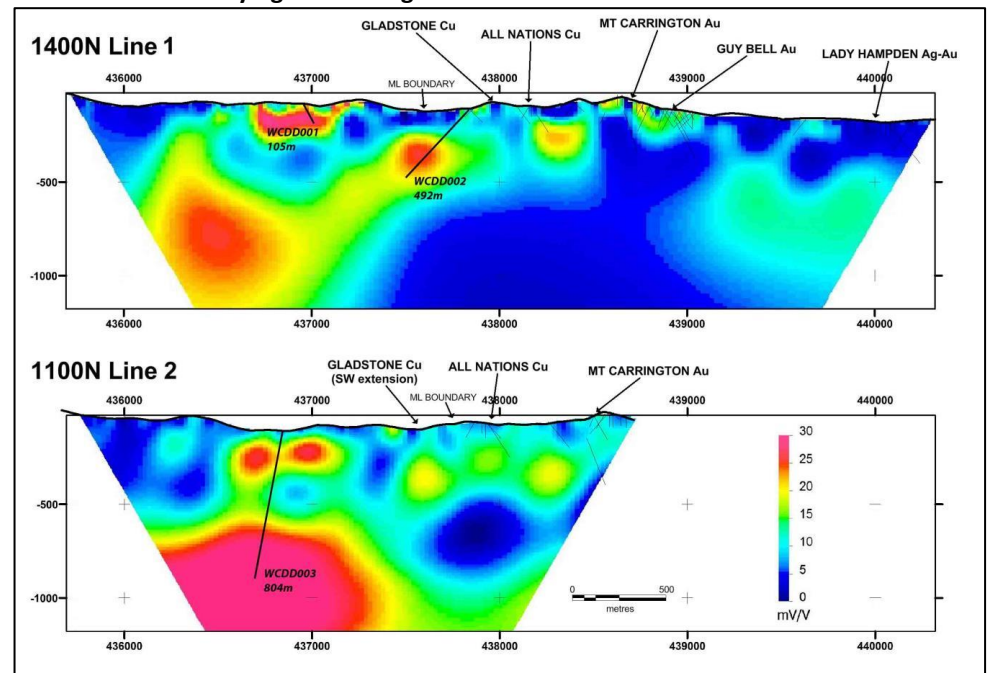
- 45m @ 0.88% Cu from 40m (supergene, Gladstone)
- 10.1m @ 6.3% Cu from 88.0m (primary vein, All Nations)

The metals zonation and change in mineralisation styles seen through the area can provide a vector for targeting deeper porphyry-style mineralisation.

Recent work has confirmed the copper potential

More recent work has included the MIMDAS geophysical surveying and drilling to the west of the central leases, with this work returning encouraging results. Although no ore grade copper was intersected, all three holes intersected extensive sulphide alteration and anomalous copper and pathfinder elements associated with the chargeability anomalies indicating a large mineralising system.

2015 MIMDAS surveying and drilling



Source: White Rock Minerals

Red Mountain Project, Alaska (WRM acquiring 100%)

Background and Acquisition Terms

White Rock is acquiring the Red Mountain VMS Project in central Alaska

White Rock has entered into a share sale agreement with a private entity, Atlas Resources Pty. Ltd. ("Atlas") to acquire all of the issued shares in Atlas. Atlas holds an option to acquire the Red Mountain Project from Metallogeny Inc., a Fairbanks based private exploration company.

Red Mountain, within the Bonfield Mining District 100km south of Fairbanks, is located over known VMS mineralisation and comprises 16 State of Alaska mining claims and 9 leasehold locations for 16km². In addition, as announced on March 24, White Rock has acquired an extra 85 claims taking the holding to ~70km².

Key terms of the Atlas share sale agreement include:

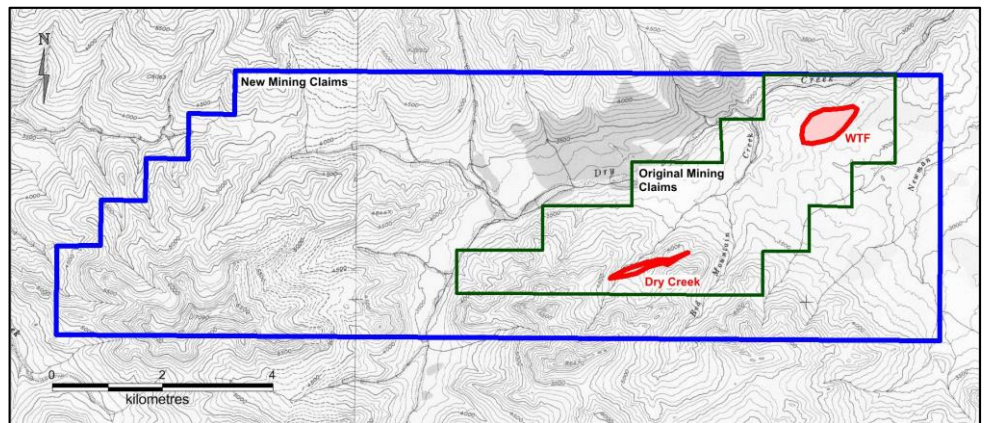
- Issue of 1.147 WRM shares for each Atlas share for 63,843,587 shares.
- Issue of 1.147 3.5c WRM options for each Atlas option, for 6,384,359 options.
- Completion of a capital raising by White Rock to raise a minimum of \$600,000 net of Atlas commitments (this is largely completed, and due to be finalised in April)
- Other due diligence and regulatory terms.



Terms of the Atlas/Metallogeny option agreement include:

- The Option is subject to a condition precedent requiring all necessary approvals to the sale and purchase of the Red Mountain Project tenements being obtained prior to 31 March 2016.
- US\$40,000 to exercise the option by 31st March 2016 in exchange for the transfer of tenements to a subsidiary of Atlas. This is currently being extended to early May 2016.
- Ongoing cash payments totalling US\$950,000 over 5 years:
 - US\$50,000 in each of 2016 and 2017
 - US\$100,000 in 2018
 - US\$200,000 in 2019
 - US\$550,000 in 2020
- Exploration expenditure commitments totalling US\$1,200,000 over 4 years:
 - US\$100,000 in 2016
 - US\$200,000 in 2017
 - US\$300,000 in 2018
 - US\$600,000 in 2019
- A net smelter return royalty payment to Metallogeny of 2% NSR with the option to reduce this to a 1% NSR for US2,000,000.

Red Mountain Claims



Source: White Rock Minerals

Geology and Mineralisation

Red Mountain is located over an east-west trending schist belt of Precambrian and Palaeozoic metasedimentary and volcanic rocks that have been intruded by Cretaceous granitic rocks and Tertiary dykes and mafic plugs.

Red Mountain includes historic zinc and silver-rich VMS resources, with very good exploration potential

Mineralisation is VMS in style, and is generally located in the upper portions of the Carboniferous to Devonian Totatlanika Schist. More than a dozen VMS prospects have been found, including the Dry Creek and West Tundra Flats (“WTF”) deposits within the claims being acquired. Dry Creek and WTF are two of the largest deposits in the region, with historical resource estimates presented in the table below. These were prepared by a previous owner of the project, and are neither JORC nor NI43-101 compliant.

Historical resource estimates, Red Mountain

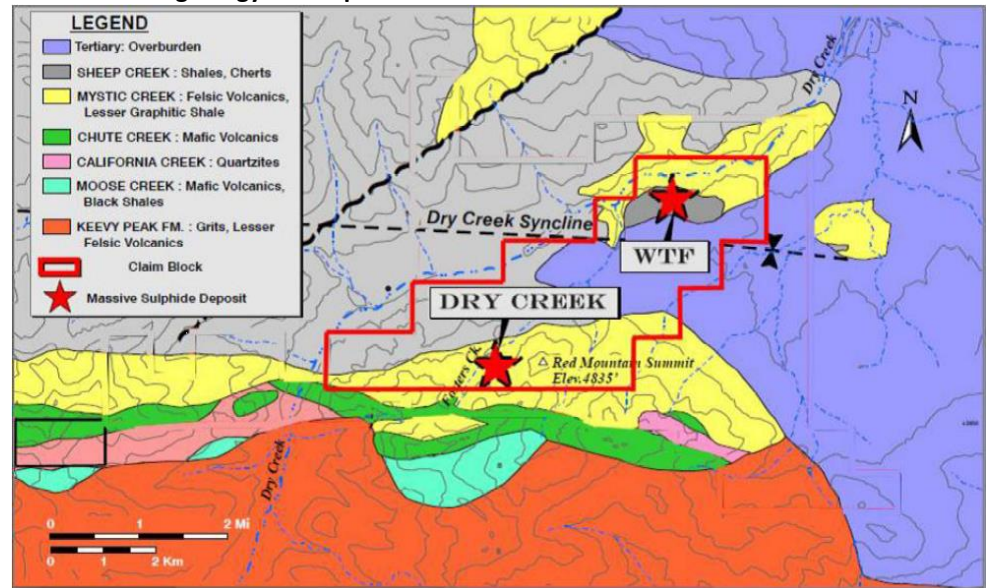
Deposit	Tonnes (m)	Zn %	Ag g/t	Pb %	Au g/t	Cu %
Dry Creek	2.87	4.43	84.9	1.89	0.53	0.24
West Tundra Flats	2.84	5.59	155.7	2.30	0.93	0.16
Total	5.71	5.01	120.1	2.09	0.73	0.16

Source: White Rock Minerals

Dry Creek, located on the southern limb of the Dry Creek Syncline, occurs as two steeply north dipping horizons containing massive sulphide mineralisation. The DC North horizon has been traced for some 4,500m, with the central 1,400m of strike hosting the Fosters

and Discovery deposits, with true widths of up to 40m being intersected at Fosters. WTF, which is located on the northern limb of the Dry Creek Syncline dips at around 15° to the south, with a 0.3-4.4m thick lens of mineralisation being intersected over an area of some 850m x 850m.

Red Mountain geology and deposits – note this does not show the recent claims



Source: White Rock Minerals

Preliminary metallurgical work at Dry Creek has indicated the potential to produce two products – a high grade zinc concentrate and a bulk lead concentrate to which silver, copper and gold also reported. Recoveries were >90% zinc, >70% lead, >80% gold and >70% silver, which is considered very good for VMS mineralisation.

The project is also considered prospective for gold mineralisation associated with the base metal systems

A key aspect is that the VMS systems are interpreted as being associated with a very shallow water boiling hydrothermal system. This has positive implications for gold mineralisation, enhancing the potential for gold rich mineralisation at the tops of the sulphide systems. There has been no systematic exploration for VMS related gold mineralisation in the region; this is one aspect that White Rock intends to follow up.

Another key exploration aspect is that VMS deposits generally occur in camps – there is a very good chance for additional discoveries in the region. White Rock will be targeting new discoveries, particularly in the northern limb of the Dry Creek Syncline where there is the chance for shallowly dipping lenses that do not daylight, but are under only relatively shallow younger units.

The region is also host to a number of gold vein deposits, associated with metamorphic rocks and felsic dykes within the contact zone of a Cretaceous intrusive complex.

Proposed Work

Initial activities at Red Mountain will include a compilation and desktop review of historic exploration data, and an assessment of the overall potential of the Project area. The results of this work will lead into the publishing of a JORC-compliant Exploration Target, as well as drill targeting. The Company has engaged Dr Jim Franklin, a global VMS authority, to help with the work on Red Mountain.

The key exploration targets include:

- Gold-rich deposits previously not sampled for or targeted
- A large (+10Mt) VMS deposit
- Additional smaller deposits
- Extensions to the known mineralisation



Other Activities

E2 Heads of Agreement

White Rock is actively exploring additional opportunities

White Rock is actively exploring other acquisition/merger opportunities, including a proposed merger with E2 Metals Limited (“E2”), for which a Heads of Agreement (“HoA”) was signed and announced to the market on December 18, 2015.

Terms of the HoA include:

- A placement of 17,500,000 shares to raise \$350,000 for working capital to a nominee of E2 (completed, with the shares placed with Capri Trading)
- A merger by way of scheme of arrangement, with White Rock acquiring all the shares in E2 through the issue of 3.25 White Rock shares for every E2 share, with White Rock issuing 182,373,552 shares to E2 shareholders.

E2’s assets include the Neavesville Project located in the Hauraki Goldfield of New Zealand, and Mount Hope, comprising three exploration licences for 150km² south of Cobar in New South Wales.

Share Placement

As part of the conditions of the Red Mountain acquisition, White Rock is undertaking a placement of 65,909,088 shares at \$0.011/share to raise \$725,000. Tranche 1, comprising 37,418,179 shares (\$411,600) has been issued, with Tranche 2, comprising 28,490,909 shares (\$313,400) to be issued subject to a meeting of shareholders in April.

Funds are to be used for costs of the Red Mountain acquisition and for working capital.

Valuation

We have completed a base case risked valuation for White Rock, with this summarised in the table below. To reflect the level of accuracy inherent in the valuation, we have rounded figures to the nearest million dollars, and thus some rounding errors may occur.

We have a risked NAV valuation of White Rock of \$0.061/share

White Rock valuation summary

	Total	Per Share	Notes
Mt Carrington Risked	\$16 m	\$0.051	35% of project NPV, 8% real DR, risk factor based on resource mix
Exploration Potential	\$2 m	\$0.007	5% of project NPV
Cash	\$0.78 m	\$0.003	Estimated
Total	\$19 m	\$0.061	Based on current shares on issue

Source: Breakaway analysis

Note that we have not ascribed any value for the Alaskan acquisition as this is yet to be completed. Once the acquisition is finalised, our view is that the base case expected value for Red Mountain would be the market transaction value of ~A\$3 million, being the total value of the option payments and work programme of US\$2.2 million at an exchange rate of 0.75. We would expect to initially see this value increase with confirmation of the historic resources, and calculation of an exploration target.

We have used a real discount rate of 8% for our valuation – there is an argument that a 5% (or even 0%) rate is appropriate for gold projects – sensitivity is shown below.

Company value - discount rate sensitivity

Discount Rate	0%	5%	8%	10%
Mt Carrington Unrisked	\$82 m	\$59 m	\$45 m	\$36 m
Mt Carrington Risked	\$29 m	\$21 m	\$16 m	\$12 m
Company per Share	\$0.108	\$0.079	\$0.061	\$0.049
NPV: Capex, Mt Carrington	2.9 x	2.1 x	1.6 x	1.3 x

Source: Breakaway analysis

The risk factor for Mt Carrington of 35% has been calculated from an estimated mix of 80% indicated and 20% inferred resources, using a risk multiplier of 40% for the indicated



and 15% for the inferred resources. The exploration potential has been calculated by applying a 5% risk multiplier to the NPV of the planned operation.

Our modelling has largely used inputs as used in the Scoping Study update as discussed earlier and using lower longer-term prices for gold and silver.

We have used a gold price of A\$1560/ounce and a silver price of A\$21/ounce – these are average values since January 2015, a period when prices have remained fairly stable. We have also included a cost of \$4 million for the DFS and permitting activities in Year 0, with construction in Year 1 and production in Year 2.

Mt Carrington DCF results

Financial Results	Total	Per Tonne Milled
NPV	\$45 m	\$8
IRR	50%	
Revenue LoM	\$298 m	\$53
C1 Operating Costs LoM	\$155 m	\$28
C2 Operating Costs LoM	\$188 m	\$34
Total Capex	\$28 m	\$5
Free Cash Flow LoM	\$82 m	\$15
Peak EBITDA	\$20 m	\$25
NPV to Capex Multiplier	1.6 x	

Production	Total	Per Year
Tonnes Milled	5,598 kt	800 kt
Gold Produced	111 koz	16 koz
Silver Produced	6,757 koz	965 koz
Payable Gold	109 koz	16 koz
Payable Silver	6,091 koz	870 koz

Source: Breakaway analysis

As part of the modelling we have completed a sensitivity analysis on the proposed mining operation. Results of this are presented in the table below.

As expected, the Project is quite sensitive to costs and metals prices given the grade, however retains a positive NPV even with 20% adverse movements in any of these inputs indicating a robust project. It is least sensitive to capex – in our view this is important, as it is in the estimated capex that we see the most scope for cost increases.

Mt Carrington NPV sensitivity analysis

	Opex	Capex	Gold Price	Silver Price	
Change in parameter	-20%	\$63 m	\$50 m	\$22 m	\$34 m
	-15%	\$59 m	\$49 m	\$28 m	\$36 m
	-10%	\$54 m	\$47 m	\$33 m	\$39 m
	-5%	\$49 m	\$46 m	\$39 m	\$42 m
	0%	\$45 m	\$45 m	\$45 m	\$45 m
	5%	\$40 m	\$44 m	\$51 m	\$48 m
	10%	\$36 m	\$42 m	\$56 m	\$51 m
	15%	\$31 m	\$41 m	\$62 m	\$53 m
	20%	\$26 m	\$40 m	\$68 m	\$56 m

Source: Breakaway analysis

Although not included above, the project is also sensitive to metallurgical recoveries, with sensitivities similar to those for metal prices. Our calculations from the Scoping Study results indicate a gold recovery of 72.6% for the Phase 1 operation (which we used in our modelling) – results of testwork indicate that this is closer to 76.2%, a 5% increase on the modelling. Given that the bulk of the gold is produced in the first phase, this broadly equates to a gold price increase of 5%.



Our view is that there is upside potential in the recoveries – inputs used are from sighter metallurgical testwork, and we would expect planned optimisation testwork to improve recoveries.

Another factor to be considered is the payability of metals in concentrate from the second silver-rich phase. Given the expected high grade and low contaminant content of the concentrate, the Company is confident that it will be able to achieve the 90% payability as used in the Scoping Study.

NPV Sensitivity to Concentrate payability

		Gold in Con Payability		
		70%	80%	90%
Silver in Con Payability	\$44.89			
	70%	\$29 m	\$31 m	\$33 m
	80%	\$35 m	\$37 m	\$39 m
	90%	\$41 m	\$43 m	\$45 m

Source: Breakaway analysis

Breakaway's View

In Mt Carrington, White Rock has a potentially robust project at current metals prices. One key to the project is the expected low capex requirement, by virtue of access to infrastructure, and facilities remaining on site. Our initial thoughts, as mentioned earlier, was that the capex as presented in the Scoping Study update seems low, however this will be quantified in the DFS and the project will be able to absorb any potential moderate increases in capex, given the relatively low sensitivity of the project to this factor.

The recent Scoping Study indicates that project economics have been improved by ongoing falls in Australian operating costs, which have fallen by up to 20% since the height of the boom. This has largely come about by decreases in wages and contractor rates, and most recently oil prices. Operating costs are also helped by the low strip ratio mineralisation – 2.0:1 for the life of the mine – and the availability of grid power.

A key strength of Mt Carrington is the exploration potential, both for gold/silver and for copper. Any discoveries will provide an opportunity to increase throughput and/or mine life, supporting a significant operation.

In Red Mountain in Alaska, White Rock is acquiring an exciting project, with plenty of exploration upside in addition to the high grade historic resource estimates already defined. This is in a reasonably challenging location; however is quite close to the coal mining centre of Healy.

The Company is managed by personnel with extensive experience in the resource sector, including project development and operations.

Similar to many companies that will need development capital in the medium term, White Rock is being severely discounted given very tight capital markets for resource projects.

Funding is now the challenge for White Rock, with this required both for the planned Mt Carrington DFS and as part of the conditions precedent for the Alaskan acquisition, however funding for the latter is now underway.

We rate White Rock as a SPECULATIVE BUY, with a base case price target of \$0.061/share

We rate White Rock as a Speculative Buy, with a base case price target of \$0.061/share, a 400% premium to the current share price. If funding can be achieved on reasonable terms the key price movers will become achieving material progress on the DFS and permitting at White Rock.



Board and Management

Non-Executive Chairman
Brian Phillips

Brian Phillips is a mining engineer with over 40 years' experience in the mining industry. Mr Phillips joined MPI Mines Limited in 1992 and was Managing Director of that company from October 2002 until December 2004, followed by two years as Chairman of Leviathan Resources Limited. He was a Non-Executive Director of Perseverance Corporation from January 2007 until February 2008, and was a Non-Executive Director of Tawana Resources NL until July 2009 and Rex Minerals Limited until June 2010. He is a currently a Chairman of Panoramic Resources Limited.

Non-Executive Director
Geoffrey Lowe

Geoffrey Lowe is a geologist with over 25 years' experience in greenfields and near mine exploration for gold and copper in Australia. His career includes 18 years with the Normandy Mining Group and Newmont Australia Limited where he held geological and senior management positions in Queensland, Northern Territory and South Australia, followed by two years with Leviathan Resources Limited and Perseverance Corporation Limited. Mr Lowe joined Rex Minerals Limited as Exploration Manager in August 2007. Mr Lowe led the exploration team responsible for the discovery and delineation of the Hillside copper-gold deposit in South Australia, and was appointed Executive Director – Exploration of Rex in February 2010. In 2008 he introduced the Mt Carrington project into the Rex portfolio, and managed the re-validation of the current Inferred Mineral Resources and generation of current exploration targets. Mr Lowe resigned from Rex in June 2010 to take up his appointment with White Rock.

Non-Executive Director
Peter Lester

Peter Lester has over 35 years' experience in the mining industry, and has held senior executive positions with North Ltd, Newcrest Mining Limited, Oxiana Limited and Citadel Resource Group Limited. Mr Lester's experience covers operations, project and business development and general corporate activities. Mr Lester is a non-executive director of Nord Gold NV, Chairman of Doray Minerals and Chairman of Kidman Resources.

Chief Executive Officer
Matthew Gill

Matthew Gill is a mining engineer with over 30 years' experience. He has a strong technical, operational and executive management background; having worked as an underground miner, mine planning engineer, supervisor, general manager and managing director in Australia, Papua New Guinea, India, Ghana and Bolivia. He holds three First Class Metalliferous Mine Manager's Certificates of Competency and has been instrumental in the successful development of three gold mines (Porgera, Beaconsfield and Ballarat). He is a three-time winner of the Australian Mine Manager of the Year Award and received the AusIMM Leadership Award in 2008. Previously, he was Group Chief Operating Officer for Singapore-listed LionGold Corp. Also, he has worked for Castlemaine Goldfields, Rio Tinto, WMC, Placer Pacific and Renison Goldfields.

Matthew also provides technical, leadership and risk management consultancy advice to industry, including Myanmar's largest gold mine and is a lecturer for mining engineering undergraduates at Monash University.

Exploration Manager
Rohan Worland

Rohan Worland is a geologist with 23 years exploration experience including 14 years with the Normandy and Newmont groups. Mr Worland recently held the roles of Exploration Manager with WCP Resources Limited and Buka Gold Limited, prior to his role as Exploration Manager for Rex Minerals Ltd. He has extensive experience in a variety of gold deposit styles in Australia, North and South America and New Zealand. Mr Worland resigned from Rex in June 2010 to take up his appointment with White Rock.

Company Secretary/CFO
Shane Turner

Shane Turner is a Chartered Accountant with 29 years' experience and joined White Rock on 28 August 2015. He has extensive experience in Business Advisory, Initial Public Offerings, ongoing compliance and Corporate Governance. Mr Turner is employed by RSM Australia and is a non-executive director and company secretary of MRG Metals Ltd and local agent for Redcliffe Resources Ltd.

**Director CV's extracted from company website, March 23, 2016*



Analyst Verification

We, Grant Craighead and Mark Gordon, as the Research Analysts, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

Disclosure

Breakaway Investment Group (AFSL 290093) may receive corporate advisory fees, consultancy fees and commissions on sale and purchase of the shares of White Rock and may hold direct and indirect shares in the company. It has also received a commission on the preparation of this research note.

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