

## White Rock identifies zinc-silver targets at its Red Mountain VMS Project

### ASX Code: WRM

### Issued Securities

Shares: 401.8 million  
Options: 15.5 million

**Cash on hand (31 Mar 2016)**  
\$0.6M

**Market Cap (15 July 2016)**  
\$10.4M at \$0.026 per share

### Directors & Management

Brian Phillips  
Non-Executive Chairman

Geoffrey Lowe  
Non-Executive Director

Peter Lester  
Non-Executive Director

Matthew Gill  
Chief Executive Officer

Shane Turner  
Company Secretary

Rohan Worland  
Exploration Manager

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White Rock Minerals ("White Rock") is pleased to announce that a number of high priority volcanogenic massive sulphide ("VMS") zinc-silver targets have been identified within White Rock's Red Mountain tenement package along strike from the main mineralisation at Dry Creek, Alaska.

Red Mountain is a quality advanced exploration project centred on an established VMS district where there is significant potential to discover a new large zinc-silver-lead-gold-copper deposit in addition to the known zinc-silver-lead-gold deposits at Dry Creek and West Tundra Flats (*ASX Announcement 15 February 2016*).

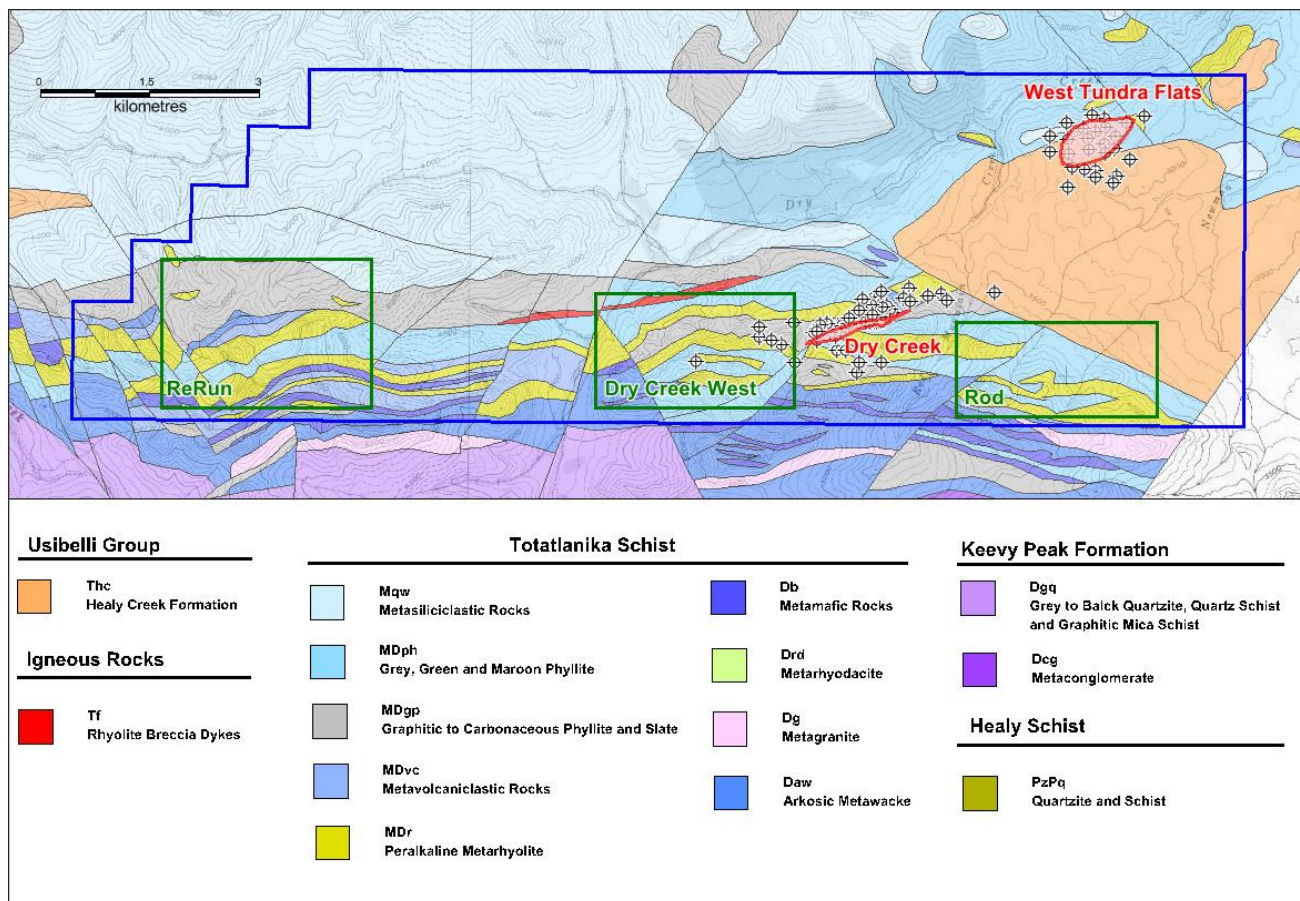
Dr Jim Franklin, a recognised global VMS expert, completed an assessment of the historical geochemical data in context with the geological mapping recently released by the Alaskan Division of Geological and Geophysical Surveys (DGGS). Based on alteration zonation patterns for local and global VMS deposits, the assessment was able to identify a number of high priority targets with high grade zinc-silver potential along strike of the mineralisation at Dry Creek, these being ReRun, Dry Creek West and Rod (Figure 1).

Observations based on the zonation of geochemical alteration and detailed geological mapping provided by the DGGS suggest that each target area shows extensive lateral and vertical footwall alteration, and the potential for a number of mineralised horizons and indicators for proximal base metal (zinc-lead) and precious metal (gold-silver) mineralisation.

This modern vector analysis of the geochemical data will be incorporated with the detailed interpretation of the electromagnetic and magnetic surveys currently being completed by Condor Consulting Inc., specialists in all aspects of airborne geophysics. When both the geochemical and geophysics interpretations are combined, White Rock anticipates that this work will provide a pipeline of prospective targets for field work in the coming months. In turn this work will define targets for drill testing.

CEO Matt Gill said "VMS deposits typically occur in clusters (VMS "camps"). We are excited that the analysis of existing geochemical data has been able to highlight a number of additional high priority zinc-silver VMS targets within our tenement package. The findings reinforce our belief that the Red Mountain VMS camp will yield significant new discoveries at a time when commodity prices, particularly zinc and silver, look to be on the up.

We believe that this commodity diversification positions the Company well, given that its cornerstone asset at Mt Carrington in northern New South Wales contains JORC resources totalling some 338,000 ounces of gold and 23.5M ounces of silver, another two commodities that we believe have a strong future. The recent US\$19.7M financing package announced with Cartesian Royalty Holdings (*ASX Announcement 27 June 2016*) puts the advanced Mt Carrington project firmly on a pathway to completing its feasibility study and subsequent development."



**Figure 1:** DGGs geology map (after Freeman et al., 2016) with locations for the Alaskan Dry Creek and West Tundra Flats VMS deposits, historical drill collars and target areas (ReRun, Dry Creek West and Rod) defined by geochemical alteration.

For more information about White Rock and its Projects, please visit our website  
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*This announcement has been prepared for publication in Australia.*

*This announcement does not constitute an offer to sell, or a solicitation of an offer to buy, securities in any other jurisdiction.*

### **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 his information in the form and context in which it appears.*

**About Red Mountain** (ASX Announcement 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 110 mining claims over a total area of 71km<sup>2</sup>.
- The Red Mountain Project contains polymetallic VMS mineralisation rich in zinc, silver and lead. Previous exploration has defined mineralisation at the two main prospects (Dry Creek and West Tundra Flats).
- Previous drilling highlights 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 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
- Mineralisation occurs from surface, and is open along strike and down-dip.
- Good preliminary metallurgical recoveries of >90% zinc, >70% lead, >80% gold, >70% silver.
- VMS deposits typically occur in clusters ("VMS camps"). Deposit sizes within camps typically follow a 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.



### About Mount Carrington

- The Mt Carrington Project is located in northern NSW, near the township of Drake on the Bruxner Highway, 4 hours' drive south-west of Brisbane. The tenement package comprises 22 mining leases and two exploration licences over a total area of 229km<sup>2</sup> (Figure 2).
- The Mt Carrington Project contains gold-silver epithermal mineralisation associated with a large 250km<sup>2</sup> collapsed volcanic caldera structure. Gold was first discovered in the district in 1853. In 1988 a mining operation at Mt Carrington focussed on extracting open pit oxide gold and silver ore from the Strauss, Kylo, Guy Bell and Lady Hampden deposits. The oxide ore was depleted by 1990, and with metal prices at US\$370/oz gold and US\$5/oz silver, the small scale mine was closed.
- Since 2010, White Rock has successfully expanded the inventory at Mt Carrington. Indicated and Inferred Mineral Resources total 338,000oz gold and 23.5Moz silver. There are four gold dominant deposits (Strauss, Kylo, Guy Bell and Red Rock), one gold-silver deposit (Lady Hampden) and three silver dominant deposits (White Rock, Silver King and White Rock North). All of these deposits apart from White Rock North are amenable to open pit mining, with mineralisation extending from surface.
- Scoping studies (ASX Announcements 29 March 2016, 30 September 2015, 16 September 2014 and 31 July 2012) support the development of a gold-silver operation at Mt Carrington. Using A\$1,600/oz gold and A\$22/oz silver, the Mt Carrington Project forecasts:-
  - ✓ production of 111,000 oz gold and 6.7Moz silver over a mine life of 7 years,
  - ✓ a low capital cost of A\$24.2M,
  - ✓ an NPV<sub>10</sub> of A\$60.6M and an IRR of 103%,
  - ✓ free cash flow of A\$100M (undiscounted),
  - ✓ a quick payback of 10 months, and
  - ✓ with a C1 cash cost of A\$754/oz gold and \$A10/oz silver.
- The scoping study contemplates a processing circuit capable of treating all ore types. For the gold dominant ore types the optimized pathway consists of a standard milling and flotation circuit producing a rougher concentrate which is subsequently reground and treated in an intensive leach process to recover the precious metals as dore. For the silver dominant ore types the flotation circuit would be upgraded to enable a cleaned concentrate to be produced. Production of a saleable silver concentrate is the most profitable processing pathway for the silver rich deposits.



- The low capital cost is augmented by the presence of already existing key infrastructure from the historic mining operation. This existing infrastructure includes granted mining leases, a 1.5 Mt tailings dam, a 750 mL freshwater dam, site office, the old plant footprint and foundations, a reverse osmosis water treatment plant and access to state grid power. This existing infrastructure has been valued at A\$20M in terms of the savings with respect to a greenfields development scenario.
- The positive results from the scoping studies strongly support the implementation of feasibility studies and future development of the Mt Carrington Project. A number of pre-development optimisation activities are underway in preparation for feasibility studies to be completed in 2017 with development targeted in 2018.
- The Mt Carrington Mining Leases are enveloped by a large portfolio of Exploration Licences with demonstrated potential for epithermal and intrusion-related gold, silver and copper mineralisation. White Rock has generated and refined an extensive exploration target portfolio at Mt Carrington for staged advancement and drill testing for gold and silver concurrent with the development of the current Resource base (Refer Figure 3: Mt Carrington exploration target pipeline). In addition, more recent work has demonstrated the potential for the project to host significant intrusion-related (porphyry) copper mineralisation.

*The scoping study referred to in this report is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised. The material assumptions relating to the scoping study at Mt Carrington provided in the ASX Announcements dated 29 March 2016, 30 September 2015, 14 September 2014 and 31 July 2012 continue to apply and have not materially changed.*

*In discussing 'reasonable prospects for eventual extraction' in Clause 20, the JORC Code 2012 ('Code') requires an assessment (albeit preliminary) in respect of all matters likely to influence the prospect of economic extraction including the approximate mining parameters by the Competent Person. While a Scoping Study may provide the basis for that assessment, the Code does not require a Scoping Study to have been completed to report a Mineral Resource.*

*Scoping Studies are commonly the first economic evaluation of a project undertaken and may be based on a combination of directly gathered project data together with assumptions borrowed from similar deposits or operations to the case envisaged. They are also commonly used internally by companies for comparative and planning purposes. Reporting the results of a Scoping Study needs to be undertaken with care to ensure there is no implication that Ore Reserves have been established or that economic development is assured. In this regard it may be appropriate to indicate the Mineral Resource inputs to the Scoping Study and the process applied, but it is not appropriate to report the diluted tonnes and grade as if they were Ore Reserves. While initial mining and processing cases may have been developed during the Scoping Study, it must not be used to allow an Ore Reserve to be developed.*

MT CARRINGTON INDICATED & INFERRED MINERAL RESOURCE SUMMARY					
Gold Dominant Resources					
Resource Category	Tonnes	Au (g/t)	Gold Oz	Ag (g/t)	Silver Oz
Indicated	2,830,000	1.3	116,000	3.1	286,000
Inferred	3,810,000	1.3	158,000	2.9	353,000
Indicated & Inferred	6,640,000	1.3	275,000	3.0	639,000
Silver Dominant Resources					
Resource Category	Tonnes	Au (g/t)	Gold Oz	Ag (g/t)	Silver Oz
Indicated	3,550,000	0.3	37,000	72	8,270,000
Inferred	8,950,000	0.1	27,000	51	14,533,000
Indicated & Inferred	12,500,000	0.2	64,000	57	22,803,000
Total Resources					
Total	19,140,000		338,000		23,442,000

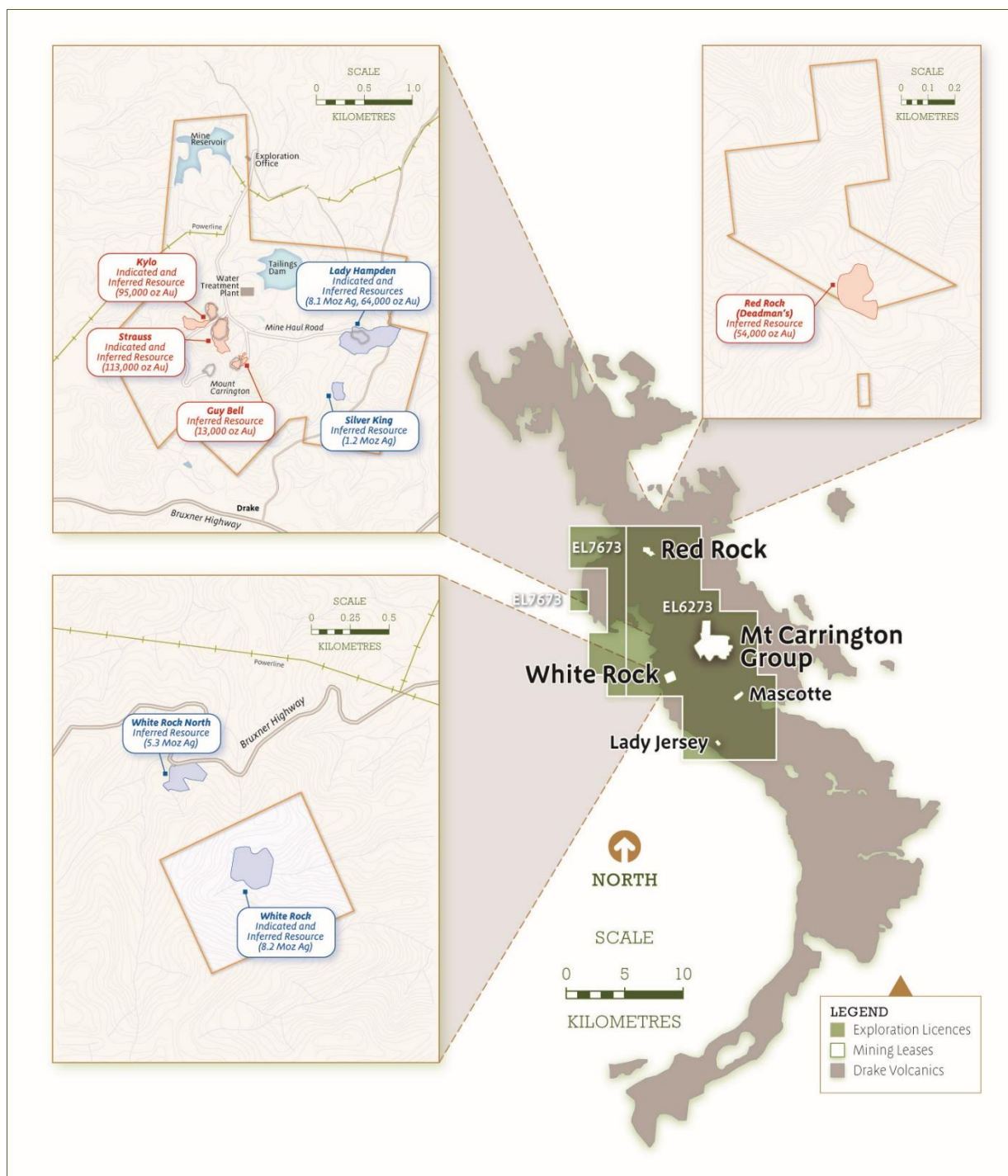
#### Mt Carrington Project - Mineral Resource Summary.

##### *Competent Persons Statement*

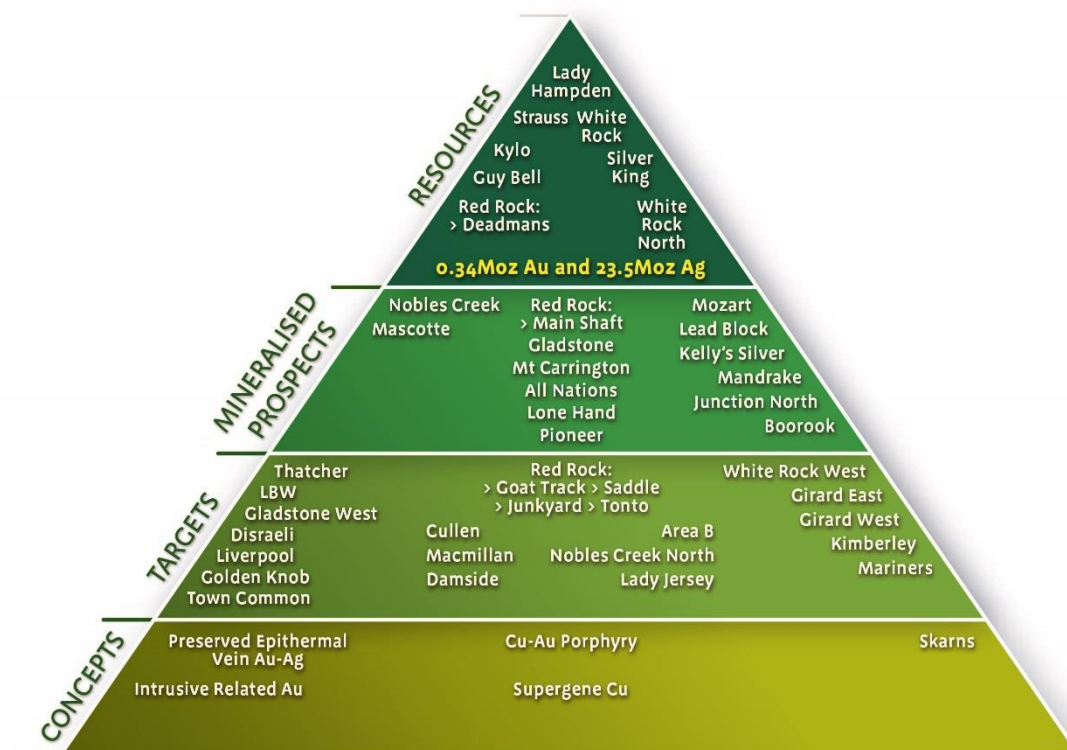
The gold and silver Resource figures for White Rock, Red Rock, Strauss, Kylo, Lady Hampden, Silver King and White Rock North have been taken from Resource estimates of February 2012, July 2013 and November 2013 prepared by Ravensgate Minerals Industry Consultants on behalf of White Rock Minerals Ltd and authored by Mr Don Maclean. Mr Maclean is a member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves." Mr Maclean consents to the inclusion in this report of the matters based on this information in the form and context in which it appears. This information was prepared and first disclosed under the JORC Code 2004 as per ASX releases by White Rock Minerals Ltd on 13 February 2012, 11 July 2013 and 20 November 2013. The Resources figures have not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

The gold and silver Resource figures for Guy Bell have been taken from the Resource estimate of October 2008 prepared by Mining One Pty Ltd on behalf of Rex Minerals Ltd and authored by Dr Chris Gee who is a professional geologist with more than 10 years' experience in resource estimation. Dr Gee is a Competent Person as defined by the JORC Code. Mr Gee consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

This information was prepared and first disclosed under the JORC Code 2004 as per the ASX release by Rex Minerals Ltd on 10 December 2008. The Resources figures have not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.



**Figure 2: Mt Carrington Project Tenement and Resource Summary**



**Figure 3: Mt Carrington exploration target pipeline.**