

## ACTIVITY REPORT FOR THE QUARTERLY PERIOD ENDED 30 SEPTEMBER 2015

Yellow Rock Resources Ltd (**Yellow Rock**) continued to progress key activities at its Gabanintha Vanadium Project in Western Australia.

Following highly successful drilling results, reported in July 2015, the Company is accelerating its project towards development and commencing a vanadium flow battery vertical integration program. Progress is being made in the following areas;

- AMC (Australian Mining Consultants) in Perth are undertaking an updated Mineral Resource Estimate and a subsequent Mining Study.
- Bureau Veritas Perth Metallurgical Laboratories are conducting a beneficiation test work program under the supervision of the Company's consulting metallurgists, Battery Limits Pty Ltd.
- The Centre for Exploration Targeting (CET) at UWA completed a detailed petrographic and mineralogical study of the mineralised rocks at Gabanintha identifying the amenability of both high and low grade ores to beneficiation.
- Mining Lease Application MLA 878 is currently being considered by the DMP (WA) for granting.
- Discussions are advancing with the Yugunga Nya traditional owners to draw up a Mining Agreement with a successful meeting held in Meekatharra during the quarter.
- The Company announced and commenced a vertical integration strategy focused on Vanadium Flow Batteries. Subsidiary VSUN Pty Ltd is focused on Vanadium Flow Battery market development and sales in Australia, as well as electrolyte plant development to supply battery makers.
- Discussions continued with Vanadium Flow Battery manufacturers in UK and Germany in order to establish working agreements and logistics for future battery and electrolyte sales.
- Yellow Rock lodged two new tenement applications ;
  - E51/1685 (15 Blocks) situated to the west of Gabanintha which has good potential for vanadium and base metal exploration.
  - E52/3349 (70 Blocks) situated north-west of the Horseshoe Lights copper-gold Mine which has good potential for copper and gold mineralisation.

30.10.2015

### ASX ANNOUNCEMENT

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### Projects:

**Gabanintha** Vanadium  
**Gabanintha** Gold, Copper  
**Nowthanna** Uranium  
**Northern Territory** Uranium



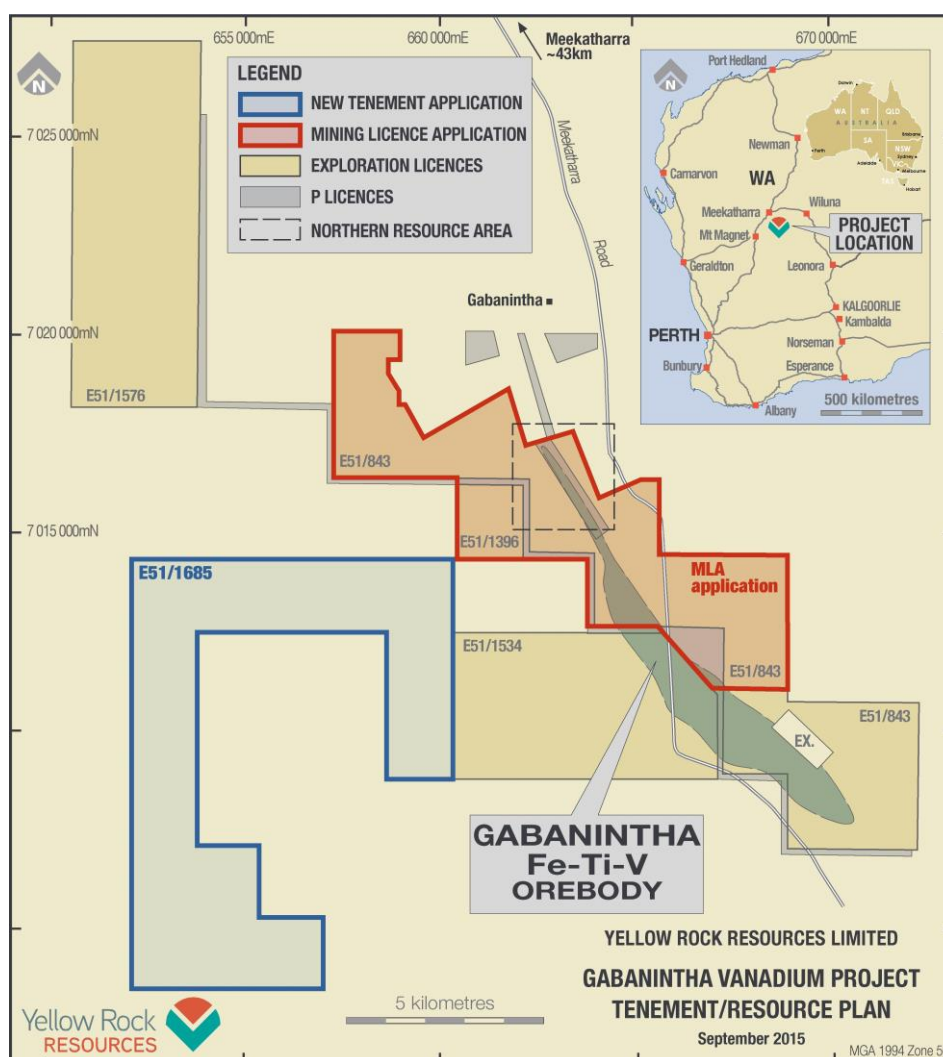


Figure 1: Location Diagram of the Gabanintha Vanadium Project showing the Mining Licence Application, new tenement application and licence tenure.

### September 2015 Quarter: Activities underway to advance Gabanintha towards feasibility.

Following the successful completion and release of results from all the 2015 RC and diamond drilling program, the Company will now rapidly move forward to advance key project milestones in the coming months.

#### Mineral Resource Estimation

AMC (Australian Mining Consultants) in Perth are undertaking a Mineral Resource Estimate and a subsequent Mining Study. AMC has considerable expertise and capability in preparing resource estimates and mining studies at scoping, pre-feasibility and feasibility levels of accuracy. AMC also has significant and recent vanadium expertise.

On completion of the Mineral Resource Estimate and mining study, the Company will utilise the new results, combined with the metallurgical test results to commence and complete a Scoping Study report, based on the principles outlined in the previously released Concept Study (*ASX Announcement 15 September 2014*), which indicated the project's potential.

The interaction and review process of the new resource modelling is rapidly nearing completion. The company's use of an external consultant to sign off on the resource, which is the key "supply" for any future mine, is to ensure all future work based on the resource is fully modelled and understood.

The updated Mineral Resource Statement can be expected by early November 2015

## Metallurgical testing

Bureau Veritas Perth Metallurgical Laboratories have been engaged to conduct a beneficiation test work program under the supervision of the Company's consulting metallurgists, Battery Limits Pty Ltd. Work includes grind optimisation, Davis Tube analysis, WetLIMS and WHIMS analysis as well as density separation test work. Six composite samples of varying mineralised material types have been selected for analysis.

The samples comprised Oxide, Transition and Fresh samples each from Low Grade (disseminated) and High Grade (massive) material. Tests include crushing and grinding parameters, analysis of recoveries from oxide, transition and fresh ore using gravity and magnetic separation techniques and confirmation of suitable process plant options.

The test work will supply vital information for more detailed test work and plant design which will take place as part of the planned 2016 feasibility study.

The tests are nearing completion and results are expected during the December Quarter by the Company.

## Geology and Petrology

During the Quarter, work was conducted by the Centre for Exploration Targeting (CET) at UWA who conducted petrographic and mineralogical descriptions of the mineralised rocks at Gabanintha.

The findings were released to ASX on 21 October 2015 and added confirmation that the Gabanintha Vanadium Project presents favourable mineral characteristics for vanadium extraction.

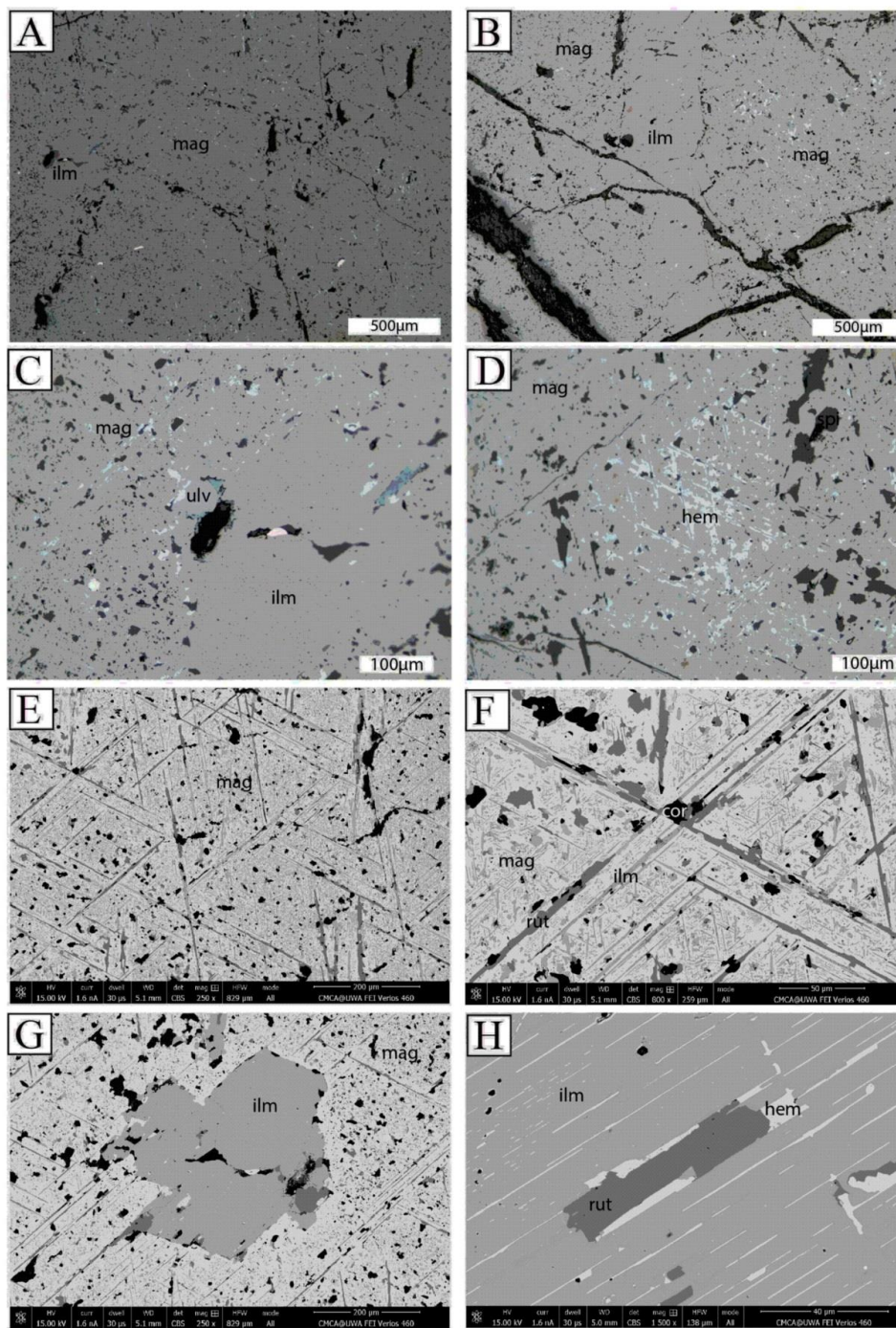
19 samples were examined and analysed in detail by petrologists from the UWA Centre for Exploration Targeting. The authors of the report are Professor Steffan Hageman and Mr Stephane Roudaut. Preparation for polished thin and thick sections was completed for transmitted and reflected light petrography. The samples were then prepared for TESCAN VEGA3 Scanning Electron Microscope (SEM) and FEI Varios Extreme High Resolution SEM with energy-dispersive X-ray Spectrometry. Analysis of the material was conducted by high resolution photography and qualitative as well as semi-quantitative chemistry.

Key Findings included;

- Results show magnetic separation techniques will be applicable for both high-grade and low-grade ores.
- Eighteen core and one surface sample representing typical mineralised and un-mineralised rocks across Gabanintha were examined and analysed in detail by petrologists from the University of Western Australia's Centre for Exploration Targeting (CET).
- Analysis of the material was conducted by high resolution photography, Scanning Electron Microscope (SEM), X-ray Spectrometry and qualitative as well as semi-quantitative chemistry.
- Titano-Magnetite is dominant as the ore mineral (Figure 2) and oxidises to Martite (Hematite) in the weathering profile, maintaining the same crystal structure and all its associated vanadium.
- The oxidised materials, contain significant relict magnetite remaining partially magnetic - making magnetic separation techniques applicable in the high grade oxide material.
- Magnetite particles in the low grade samples (magnetite gabbro), show high contained vanadium, supporting the magnetic separation of low grade ores to yield significant additional vanadium units.
- In sample 913-130.3, local SEM values up to 3.09%  $V_2O_5$  in magnetite were observed from sample compared with the sample head grade of 0.77%  $V_2O_5$ .
- All results and findings are being used in the ongoing metallurgical assessment and will form key components to final process design in 2016.

Yellow Rock Chief Executive Vincent Algar commented: "the high quality and very detailed mineralogy gives us a micro-level understanding of our material. This gives us new and essential information as we integrate our resource and all important metallurgical test work into a mine plan for the future. The key finding on the high contained vanadium in our low grade gabbro material provides us with even more significant opportunities for Gabanintha's development"

See YRR announcement to ASX of 21st October 2015 for details.



**Sample 916-154.9:** A, B and C: Titano-magnetite and ilmenite grains. D: trellis intergrowths in partially martitised titanomagnetite. E: SEM imaging of trellis work textures in titanomagnetite. F: SEM imaging of exsolutions in titanomagnetite. G: SEM imaging of ilmenite grain. H: SEM imaging of intergrowths in ilmenite grain.

Figure 2: An example of mineral textures using Scanning Electron Microscope (SEM) in massive high grade vanadium mineralisation

### Heritage Survey and Mining Lease Application

During the September Quarter, Yellow Rock representatives met with representatives of the Traditional Owner groups at Meekatharra to commence discussions relating to the development of the project and advancing the Mining Lease Application (MLA51/ 878). A Mining Agreement is currently being drawn up in consultation with the YMAC and Traditional Owners as the final part in the ML application process. The successful progress of the Mining Lease application is a significant step forward for the Company as it advances the project towards a detailed feasibility study over the coming year.

## New Tenement Acquisitions

Yellow Rock lodged two new tenement applications during the quarter;

- E51/1685 (15 Blocks) situated to the west of Gabanintha which has good potential for vanadium and base metal exploration. (Figure 1)
- E52/3349 (70 Blocks) situated north-west of the Horseshoe Lights copper-gold mine which has good potential for copper and gold mineralisation.

## Vanadium Battery Vertical Integration Strategy

During the September Quarter, Yellow Rock Resources announced a vertical integration strategy which will help to cement its position in the rapidly growing battery storage market.

Yellow Rock CEO, Vincent Algar commented on the historic step for the Company. “As we develop this project we are seeing the rapid development of commercial grid storage technologies, such as the scalable Vanadium Redox Flow Battery. The VRFB is very well suited to the commercial and grid solutions being called for in this exciting space. Our step into the battery and vanadium electrolyte distribution market is designed to build a significant market share as an integrated company, benefiting shareholders with early cash flows “

The Company has long held a focus on supplying its potential vanadium production to the battery storage market, which is growing fast alongside energy production from renewable sources such as lithium-ion batteries. It is expected that over the next few years, as demand for grid-scale energy storage grows, up to 30 per cent of the storage demand will be satisfied by Vanadium Redox Flow Batteries as part of over 185Gwh of expected storage capacity required.

“The amount of power being generated from renewable energy sources is growing as people recognise the value of a sustainable and predictable source of energy,” Mr Algar said.

“Battery storage is integral to the continued development of this market in order to regulate and take full advantage of renewable energy creation.”

In terms of vanadium demand, it is likely that this battery market growth will lead to demand for an additional 300,000 tonnes of vanadium, purely for use in batteries. This represents a three-fold increase in current vanadium consumption in the global steel industry.

Yellow Rock is securing a position in this market now and increasing exposure to the positive growth by vertically integrating its business. Over the past few months the Company has entered into negotiations with electrolyte producers, battery manufacturers and Australian-based solar installers as first steps in the process.

Yellow Rock has created a 100% owned subsidiary company, VSUN Pty Ltd, which will be controlled by Yellow Rock and focus on the development of VRFB market opportunities, initially within Australia. It will primarily be concerned with the distribution of vanadium flow batteries from global producers, leveraging off installer partners and their existing client bases. VSUN will also evaluate how it can participate in the manufacture of vanadium electrolyte – the key element of the batteries. The development of Australian electrolyte plants will maximise value within the local markets.

These negotiations have now resulted in a partnership with a prominent local solar installer, and securing the right to distribute German VRFB's from two suppliers inside Australia. This has formed the basis of the VSUN subsidiary company, which is already progressing leads with companies operating within Australia who want to augment their planned solar installations with storage.

### *Integration with the Gabanintha Vanadium Project*

Yellow Rock's high-grade Gabanintha Vanadium Project, currently on a pathway through feasibility studies, contains the highest vanadium grades of any Australian vanadium-titanium-iron deposit. The resource upgrade process currently underway will cement the world class nature of the project and pave the way to more definitive economic studies in 2016.

As a potential producer of vanadium, Yellow Rock and the subsidiary company VSUN will be able to utilise locally-produced vanadium as part of the electrolyte manufacture. This electrolyte would then be used in the batteries distributed by the subsidiary company.

With this strategy Yellow Rock, as the parent company, will benefit from increasing vanadium demand from the existing steel market (6% per annum) as well as positive exposure to the growing battery storage market which will include early cash flows.

### *Market Development*

VSUN will undertake market development activities to identify potential clients. It will also finalise detailed technical discussions with the battery suppliers and electrolyte plant developers. Interested parties can make contact through the yellow rock website or via [vsun.com.au](http://vsun.com.au).

## Corporate

During the Quarter, CEO Vincent Algar continued active marketing activities to support the Company's exploration and project feasibility program. The following activities were undertaken as part of the marketing campaign;

- Retail and institutional investor presentations in Perth, Melbourne and Sydney and London
- Presentation at the Read Corporate Resource Rising Stars Conference in the Gold Coast in September
- Presentation at the RIU Melbourne Mining Conference in September.
- Attendance at International Flow Battery Forum, Glasgow, Scotland.
- Boardroom Radio presentation on July 14, 2015.
- Site visit to Vanadium Battery installation at University of New South Wales in Sydney in September.
- Site visits to German and UK battery and electrolyte producers took place in October.

## Vanadium Market Developments

Yellow Rock has continued to advance its opportunities in the Vanadium Redox Battery market by forming relationships with key players. The Company has formed a battery focused subsidiary, VSUN Pty Ltd, which will sell Vanadium Batteries on behalf of two European producers in the Australian Market. Opportunities will focus on businesses and off grid opportunities, but due to the scalability of VRB's, many other applications can be envisaged. Including domestic, farm-production and Electric Vehicle charging stations.

The rapid acceleration in the development of renewable energy projects on a global scale is being accompanied by rapidly growing interest and need for grid storage technologies. The uptake of VRB technology along with other grid storage technologies could have a significant effect on the vanadium ( $V_2O_5$ ) market as the use of  $V_2O_5$  electrolyte is a large component (up to 50% of current cost) of the battery units.

The unique characteristics of VRB's, specifically their scalability, long lifespan cycles and the use of one battery element (Figure 3), make them a strong candidate to earn up to 30% of the growing energy storage market, which is expected to grow from a current 0.4GW to 40GW in just the next 7 years.

Yellow Rock, as a potential vanadium producer, recognises the importance of the steel markets, but is also actively seeking to link the use of its products to the rise of this globally significant use Vanadium Battery technology.

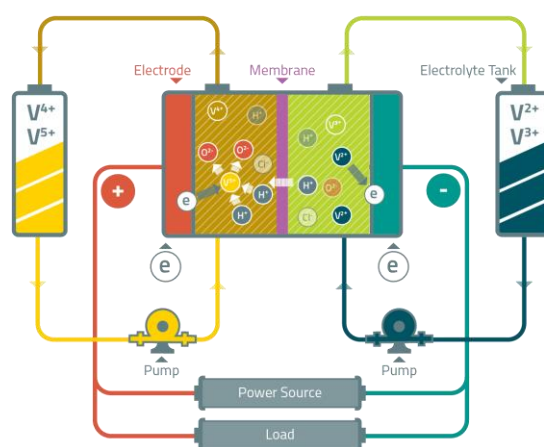


Figure 3 Schematic diagram showing the operation of a Vanadium Redox Flow Battery

## December Quarter 2015

The Company is undertaking and completing a number of important project milestones in the December Quarter;

- Finalisation and release of the Resource Estimation Update to JORC 2012 compliance.
- Finalisation and release of metallurgical test results from new drilling data
- Commencement of Mining Study and commencement of Scoping Study update
- Ongoing lead development for vanadium battery sales in Australia working towards first sale.
- Finalisation of master sales agreement with leading battery producer
- Contracting and specification with vanadium electrolyte consultants on electrolyte plant design.

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Tenement Information as Required by Listing Rule 5.3.3 For the Quarter Ended 30 September 2015					
Project	Location	Tenements	Economic Interest	Notes	Change in Quarter %
Western Australia	Gabanintha	EL51/1534	100% Granted		0
		E51/1576	100% Granted		0
		EL51/843	100% Granted		0
		E51/1396	100% Granted		0
		P51/2634	100% Granted		0
		P51/2635	100% Granted		0
		P51/2636	100% Granted		0
		P51/2566	100% Granted		0
		P51/2567	100% Granted		0
		MLA51/878		100% On application	0
	E51/1685		100% On Application	100	
Western Australia	Nowthanna	MLA51/771		100% On application	0
Western Australia	Peak Hill	E52/3349		100% On application	100
Northern Territory					0
Arunta Region	Mt Denison	ELA25418		100% On application	
	Mt Nicker	ELA27503		100% On application	0
West Arnhem	Table Hill	ELA28158		100% On application	0
	Mann	ELA28159		100% On application	0

### **Competent Person Statement**

The information in this statement that relates to Exploration Results or Mineral Resources is based on information compiled by independent consulting geologist Brian Davis B.Sc (Hons), Dip.Ed. Mr Davis is a Member of The Australian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Brian Davis is employed by Geologica Pty Ltd and is the Non-Executive Chairman of Yellow Rock Resources Limited. Mr Davis has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is undertaken 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. Davis consents to the inclusion in the report of the matters based on the information made available to him, in the form and context in which it appears". The information that refers to Exploration Results and Mineral Resources in this announcement was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since last reported.

### **Forward Looking Statements**

No representation or warranty is made as to the accuracy, completeness or reliability of the information contained in this release. Any forward looking statements in this presentation are prepared on the basis of a number of assumptions which may prove to be incorrect and the current intention, plans, expectations and beliefs about future events are subject to risks, uncertainties and other factors, many of which are outside Yellow Rock Resources Limited's control. Important factors that could cause actual results to differ materially from the assumptions or expectations expressed or implied in this presentation include known and unknown risks. Because actual results could differ materially to the assumptions made and Yellow Rock Resources Limited's current intention, plans, expectations and beliefs about the future, you are urged to view all forward looking statements contained in this release with caution. The release should not be relied upon as a recommendation or forecast by Yellow Rock Resources Limited. Nothing in this presentation should be construed as either an offer to sell or a solicitation of an offer to buy or sell shares in any jurisdiction.