

# VANADIUM PLAYER TO HOST WORLD'S GREATEST

Yellow Rock Resources will host the first global vanadium producers conference this month, signalling an important milestone for local industry. With demand set to double in the foreseeable future, YRR will be there to cash in. **Anthony Barich** reports

**T**HE EARTHQUAKE THAT shook the mountainous Sichuan Province in China's western region in 2008 was a seismic event that triggered more than just structural damage.

The weakness of the local buildings rammed home to Chinese authorities the necessity of vanadium, just half a percent of which doubles the strength of steel.

The Chinese produce 30,000 tonnes of the annual global consumption of 60,000t. This consumption is expected to double after China changed its regulations around rebar (steel reinforcing bar) following the earthquake to improve its steel to the next grade.

Which brings us to the world's major vanadium producers, who form a global group called Vanitec, and are descending on Australia for the first time for a March 31-April 2 conference in Perth.

Yellow Rock Resources subsidiary Australian Vanadium Resources

will host the conference, which will draw producers including Chinese, American, Russian (including the world's biggest producer and distributor Evraz), Austrian, Finnish and South African.

Vanitec – the Vanadium International Technical Committee – brings together representatives of companies and organisations involved in the mining, processing, manufacture, research and use of vanadium and vanadium-containing products.

It promotes the use of vanadium-bearing materials to increase its consumption across the range of steel, titanium and chemical applications.

Vanitec also strives to provide those with a vested interest in vanadium – users, educators, students and producers – convenient access to research, events, resources and publications regarding vanadium.

Sponsoring the Vanitec conference is Australian junior Yellow Rock Resources (ASX:YRR), an exploration company with JORC resources of

iron ore with high vanadium content, uranium and good prospects for copper and gold.

YRR's flagship Gabanintha high-grade vanadium-magnetite-titanium project in Western Australia has twice the vanadium content of the Windimurra project just 160km away.

Gabanintha has a JORC resource of 125.8 million tonnes of FeVTI – iron vanadium titanium. YRR's exploration by HeliTEM has identified that the ore body could hold up to 800Mt, which puts the company on the path to being a significant player on the world scene, and sure to be talked about at Vanitec's Perth conference.

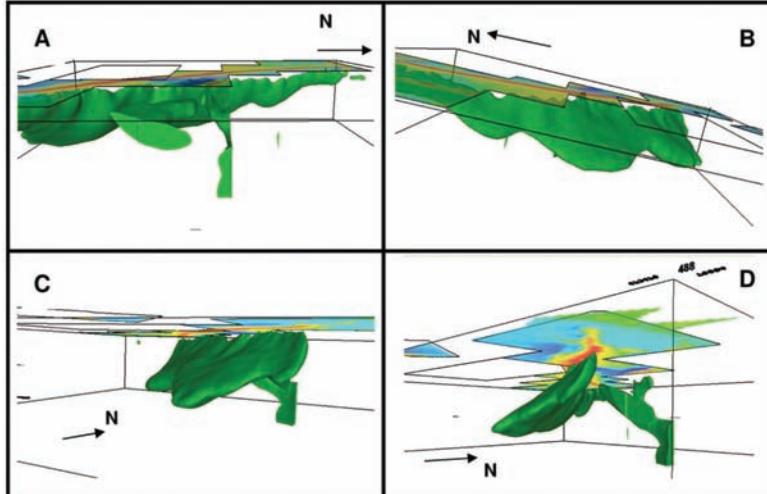
YRR's only issue there is access to port – same as all the Mid West players. But the company has 60Mt that is showing iron content of above 45%, which is much higher than others in the region, whose iron deposits are around 27-29% iron.

Vanadium flow batteries offer a promise of a power storage solution for renewable power (solar, wind, wave etc).

A Chinese vanadium flow storage battery producer noted at the last Vanitec conference in Beijing that China would need 2Mt of vanadium in China alone to install flow-battery storage systems in place of nuclear power.

These systems are preferred to nuclear because they don't have the issue of disposing the waste that nuclear power stations have. Because the storage systems operate like cells, this eliminates the need for transmission lines, which have also proved to be a major issue in China – having collapsed under natural forces because they weren't reinforced by vanadium.

The TMI grid draped over the 0.3 SI magnetic susceptibility isosurface, viewed from the (A) east; (B) west; (C) south; and (D) southeast.



Known vanadium resources globally are estimated at 63Mt, with the majority in China, Russia and South Africa – though North America, Australia, Canada, Brazil, Finland and Madagascar also have deposits.

The Gabanintha deposit is recognised as being among the highest grade of known FeVTI deposits.

China's exponential economic growth and the need to strengthen buildings against the natural elements have brought vanadium firmly into the spotlight for governments, and subsequently for investors, which is why the Perth conference is expected to generate plenty of interest.

Importantly, YRR has attracted interest from Chinese buyers of iron ore.

It sent bulk samples of Gabanintha vanadiferous iron ore to two such buyers after meetings at the Vanitec conference in Beijing in September.

The keynote speaker of the Perth Vanitec conference gives a strong indication of what is driving investment interest in vanadium. He is one of the developers invested in the Canadian ion flow battery, which was invented by NASA to store renewable energy for satellites and space stations.

But vanadium also has important applications for daily life, especially with the major push by governments around the world to find less environmentally damaging sources of energy such as renewables.

"The biggest problem with renewable power and power generally is storage, because when the source isn't there (like sun), there's no power," YRR chairman Sydney Chesson told *RESOURCESTOCKS*.

"Now, in Europe and Japan, they're producing a unit the size of a refrigerator you can put in your house.

"Currently there are 1 million homes in Australia producing power from solar panels to feed back into the grid, then when it's night time they need to draw it back from the grid.

"With the flow battery storage system you can eliminate that problem."

"That's a simple small-scale application, but the Japanese and the Chinese are working on a large-scale application where they have these units stored over hectares of land.

"This offers a potential alternative solution to the nuclear power issue.

"The developers have done over 12,000 complete charges and discharges in trials without any change in the material.

"Another big benefit is you don't

need transmission lines. So if you set these up in Geraldton for example, you don't need to transport the power across the country from Collie."

YRR has also confirmed a JORC uranium resource of 2.06Mt at a grade of .44kg/t U<sub>3</sub>O<sub>8</sub>, which is contiguous with Toro Energy's Nowthanna indicated mineral resource of 7.31Mt at 0.45kg/t. YRR's vanadium deposit could be the source of the uranium.

Additionally, YRR is drilling up a copper-gold resource for compliance adjacent the successful Gabanintha mine.

Chesson said that while the Gabanintha mine was depleted to some extent, "we have high prospects in our tenement adjacent to the mine. HeliTEM, IP (induced polarity) and soil results all indicate existence of a high grade copper and gold resource".

The company is currently drilling out this deposit to prove to JORC resource standard – and the company has high hopes which are grounded in solid data.

"We have a JORC resource on the vanadium, but gold and copper are a lot easier to mine and process," Chesson said. "So if we find something really significant there – which we think we are onto – then we might be able to move on to mine that."

After a scout drilling program last year at Gabanintha, the company reported in November intersections of 5m at 9.64gpt gold and 12.3% copper within an interval of 5m at 8.72gpt gold and 3.05% copper from 31m down hole.

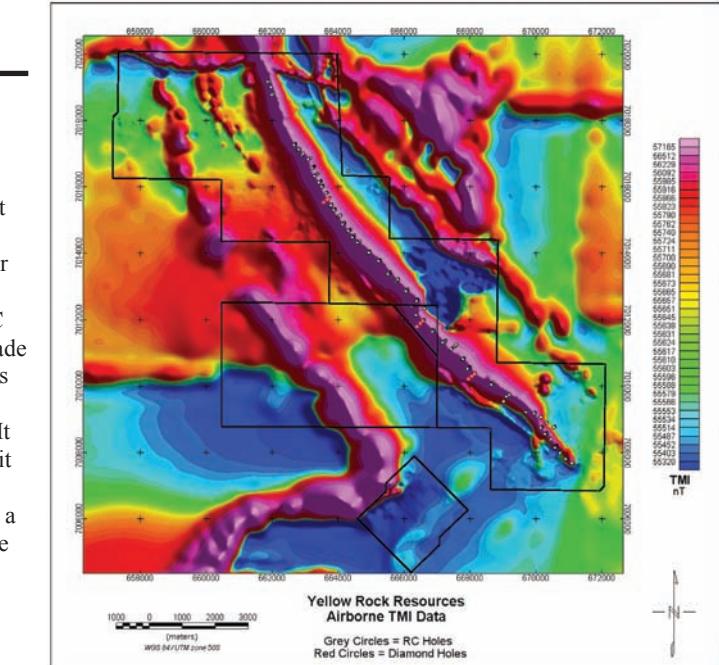
Another hole drilled in the northern sector of YRR's Gabanintha tenements in WA's mid-west intersected 5m at 9.64gpt gold and 0.18% copper.

YRR has lodged a permit with WA's mines department to drill about 20 RC holes to about 80m depth for a total of 1600m. The company will conduct a rights issue in March to fund the program.

With these impressive results, the activity of YRR's neighbours generated interest around the bright future of its own copper-gold deposits.

Monument Mining has bought KGL Resources' Murchison project, which is adjacent to YRR's Gabanintha tenement, giving rise to speculation that YRR's own copper-gold hits could lure another key acquisition in the region.

With its strategically significant vanadium assets, its uranium assets generating some interest and impressive copper-gold hits, YRR is a company that could play an increasing role in some of the world's most critical markets.



Yellow Rock Resources' TMI data merged into regional TMI data. A +/- linear magnetic anomaly orientated northwest – southeast through the survey area is the magnetic response to a magnetite-rich sill.

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**SYDNEY CHESSON**  
YELLOW ROCK RESOURCES

## YELLOW ROCK RESOURCES AT A GLANCE



6 months ending February 12, 2014

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### MARKET CAPITALISATION

\$A4.9 million (at press time)

### QUOTED SHARES ON ISSUE

349 million

### MAJOR SHAREHOLDERS

Kimbriki Nominees Pty Ltd 5.73%  
Kelro Pty Ltd 4.68%  
Kalimanta Nominees Pty Ltd 4.3%  
Perrett Nominees Pty Ltd 4.18%  
Rilukin Holdings Pty Ltd 4.01%