

# Developing Australia's First Pure Vanadium Mine

The Australian mining industry is synonymous with hard work, conjuring images of long hours of physical labour in some of the country's most remote locations.

Vincent Algar knows the reality of working underground all too well, having cut his teeth in the industry as an underground geologist in his native South Africa.

But having served as managing director (MD) of Australian Vanadium Limited (AVL) since 2014, Vincent believes getting a junior explorer to production is just as demanding.

"It's a very difficult thing to do," he said.

"You've got to raise money, keep exploration activity going and when you do discover something you've got to keep the market appetite going to keep the funding coming."

AVL is a junior explorer working to establish a pure vanadium mine in Western Australia and Vincent said his day could range from dealing with members of the board, the ASX and the company secretary to project delivery and managing external stakeholders.

"When we have a project underway like we do at Australian Vanadium, a lot of resources are focused around that," he said.

"Keeping the team focused on their day-to-day tasks of completing that and making sure the strategy at the high level is in place down at the low level."

Before joining AVL, Vincent held roles ranging from consultant to software salesman and said the breadth of his experience aligned with the demands of being an MD.

"I think as an MD you've got to be a bit of a generalist," he said.

"I've got a very strong interest across the spectrum, from the geology and processing side, to the corporate side with capital raising and promotion."



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But despite making it a point of pride to stay ready to jump on the tools and do practical tasks, Vincent said the real secret to success in the role was humility.

"One of the things you can really fail at as an MD is trying to do everything," he said.

"You need to build your team up as much as possible and not do it all yourself, to realise you don't know everything – that's the key part."

Vincent's approach and his hard work is starting to produce results.

The Australian Vanadium Project was granted Major Project Status by the Federal Government in September, recognising the expected benefits for the communities it operates in and its strategic importance for the wider Australian economy.

The project is targeted to start production at the end of 2021, assuming it makes it through the approvals process unscathed.

"Approvals are strict – as they should be," Vincent said.

"We don't want to be operating in a cowboy-like environment where brown paper bags are being handed over."

The project would be the only pure vanadium mine in Australia, and just the fourth in the world.

Vincent said the project would create 400 jobs during construction and about 250 full-time positions going forward.

He said recruiting the workforce to operate the mine would require hiring tradespeople with similar skillsets in addition to training new workers at regional centres like Geraldton, Albany and Bunbury.

As a critical metal, the vanadium itself could also have a dramatic impact on Australia.

People living in most cities are surrounded by vanadium, even if they might not be aware of it.

The element is commonly used as a catalyst in the acid-making process and in steel beams used for high rise buildings.

"If you look hard enough, vanadium will be there – sometimes in very small quantities but making a very big impact," he said.

Vanadium also has a range of emerging applications, including in vanadium redox flow batteries and in the cathode of lithium-ion batteries.

Temperature controlling vanadium window film could also drastically reduce energy use in office buildings and research is being undertaken on using vanadium to improve charge retention and charge rate for the electric vehicles of the future.

The signs are good that AVL will make the transition from explorer to producer, but Vincent said the nature of the industry meant many others would not without more support.

"It's a fickle investment base and we're trying to do a long-term job in a short-term environment," he said.

Vincent said the people in exploration accepted the risk to build a stronger future for Australians.

"All the junior companies, the guys that are in them, the girls that are in them, are trying to do the right thing – to discover something," Vincent said.

"It's critical that people realise we are job creators, we are innovators and that people who are investing in us need to take a long-term view, not a short-term view.

"If they get involved in the detail, they will see we are trying to build something."