



General Manager: Rhovan
Adriaan Brugman

About Rhovan and vanadium

The opencast Rhovan operation is mining a vanadium deposit within the well-known Bushveld Complex in the North West province. Based on what the operation knows of current ore reserves, Rhovan – which first started mining in 1989 and was purchased by Xstrata in 1997 - will continue to produce vanadium for more than fifty years.

Ferrovandium is an alloy which, even in small amounts, makes steel stronger. Vanadium steel is lighter and stronger and is used to produce specially steel alloys, like those used in the aerospace industry.

Vanadium in its chemical form is used to make sulphuric acid and fertilizers; it is used in sunglasses to protect eyes from ultraviolet light, and in the manufacture of synthetic rubber. Coatings containing vanadium phosphate improve the quality of red light on television and computer screens. Vanadium salts are used to make dyes for material, leather and ceramics.

Sound environmental management

A chemical process is used to produce ferrovandium, which is why management at Rhovan has a strong focus on the operation's impact on the environment.

The operation received the international ISO14001 environmental certification in 2002 and is guided by Xstrata's 17 Sustainable Development Standards.

A zero-discharge policy at Rhovan ensures that no solution containing sodium or vanadium is released from the operation.

Ground and ground water pollution are the biggest environmental challenges. Water management is important and there are several initiatives to ensure that there is zero run-off from the plant.

One such initiative is the recently built R20 million lined storm water dam which is intended to catch rain water and run-off from the operation for reuse in the plant. The dam is specially designed with alternating layers of plastic and clay to ensure that there is no contamination of ground water from the water that is stored in the dam.

General Manager, Adriaan Brugman says that finding ways to reduce the operation's footprint on the environment is always important when designing new technology or implementing capital projects.

Leaders walking the talk in safety

When the number of lost time injuries increased in 2010, Rhovan management decided to implement a visible felt leadership (VFL) campaign to support their existing safety initiatives.

If senior managers actively talk to employees about safety they will identify issues that may be causing risky behaviour but it will also show that management is serious about safety. The initiative has only been in place for less than a year but General Works Manager, Adriaan Brugman, says: "We are already starting to see the benefit in our safety statistics and in the attitude of our employees to working safely."

It is just as important to ensure that supervisors are properly trained to provide a safe work place for employees.

Brugman says they spend a lot of time on housekeeping at the operation, and for good reason. "I really believe that a pleasant work environment makes people more motivated to work better, smarter and safer."

Doing it for themselves

"We have saved millions by doing it ourselves," says Rhovan's General Works Manager Adriaan Brugman as he proudly shows off their newly-built projects workshop.

Since the operation established the project team, built the workshop and upgraded the drawing room, most of the projects at the mine and plant are done in-house and contractors are only brought in for specialist projects.

The plant infrastructure is getting old and many of the structures need to be replaced or upgraded. This is keeping the project team very busy. They are also in the process of building a new crusher plant.

Most of the mining is done in-house, with only drilling and blasting contracted out. Similarly, the mine has chosen to run its own fleet of heavy earth-moving equipment and mining vehicles instead of outsourcing because it is more cost-efficient.

Social and Labour Plans

The Rhovan operation draws most of its labour from the nearby local villages of Makolokwe, Bethanie, Modikwe and Barseba. It makes sense, therefore, for these communities to be the focus of the mine's social and labour plan (SLP) and social investment spend.

Over the next few years, the focus of Xstrata's investment in Rhovan's local communities will be infrastructure development and the mine is finalising the details of a partnership with the local Department of Health to build an R11 million clinic in Bethanie.

Meet Rhovan's Works Manager

Recently appointed to the position of Works Manager, Thivhafuni Tshithavhane (or Thivha as he is known to friends and colleagues), has a list of responsibilities that extend way beyond those he had when he started with the operation as a Junior Chemical Engineer in 2002.

Tshithavhane has to ensure that the highest quality vanadium is produced to meet production targets, safely and within budget. He is also responsible for sustainable development - especially health and safety management, stakeholder engagement, including industrial relations, and ensuring that the operation is compliant with all the relevant national and international regulatory requirements as well as Xstrata's Sustainable Development Standards.

Rhovan doesn't believe in "office engineers". Tshithavhane told us that the hands-on approach to development at the operation has given him the skills and experience to progress up the management ladder.

It was important for South Africa's first democratic government to put regulations in place in the mining industry to make it more inclusive and Tshithavhane firmly believes that transformation in the industry will lead to greater economic development of the country.

Thirty three-year old Tshithavhane has plans to study further. He believes that you should always be ready to take advantage of the opportunities that come your way and would like to improve his financial management skills or complete an MBA.



Works Manager:
Thivha Tshithavhane