

# Customer Testimonial

Tahmoor Colliery - Australia



## Equipment

- Viper MID MKII180
- VSEAL50, VSC53 & VRC52-6R
- Lubricant VCG-1

## Customer Profile

Tahmoor Colliery is an underground coal mine at Tahmoor in the Southern Highlands region of New South Wales, Australia, extracting coal from the Bulli coal seam. Most of the mine product is hard coking coal used for steel making. A small quantity of steaming blend coal used for power generation is also produced. Both products are exported to Europe and Asia.

The majority of coal is extracted from the mine using the longwall mining system, with a much smaller part coming from the mine development. The CHPP is able to process 650 tonnes per hour and separates the coal into the higher quality coking blend and lesser quality steaming blend, while removing rock and other foreign materials through many screening and cyclonic processes. Tahmoor Coking Mine Operates 24 hours a day. Water and Coal contamination on wire ropes are typical in this application.

## Application

As part of an ongoing programme of improving their maintenance practices, Viper WRL Pty Ltd was contacted to discuss improved processes for the Cleaning and Lubrication of their 1600m, 52mm Underground drift Wire Ropes.

## Challenge

Before contacting Viper WRL, the only option open to the maintenance team at Tahmoor was to manually lubricate the drift rope. This process was not only time consuming and messy but also required the staff to directly interact with the rope, which increased the risk of injury. Further, the process of manually lubricating wire ropes does not achieve the same end result with uneven application and minimal penetration of the lubricant into the core of the rope. This reduces the effective protection the rope has once it is placed in service and will lead to reduced wire rope life.

## Viper Solution

Viper WRL introduced the Viper Mid Wire Rope Lubricator to the maintenance team at Tahmoor along with the Viper WRL rope cleaner.



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## Results

The maintenance team were impressed with the Health Safety and Environment benefits of using the Viper WRL. It wasted no lubricant, it doesn't leak meaning no mess, it is light weight allowing for safe application, the rope can be lubricated at a safe distance and ever gram of grease goes on the rope.

The Tahmoor maintenance team saw several benefits of using the Viper WRL. Not only significant improvements in safety and efficiency but financial benefits as well.

### Before the Introduction of Viper WRL – Manual Lubrication

- Two men, working 12 hr each (24 hr in total), were required to manually lubricate the rope by hand with paint brushes
- Approximately 10 x 20 kg pails of grease – a total of 200 kg of grease on each occasion = 800 kg/yr.
- The lubrication process would occur every three to four months (i.e. four times per year).

The following is the basic cost breakdown of this manual process.

- Lubricant US\$275 per 20 kg pail x 10 = US\$2750 per lubricant.
- Four times per year (every three months) = US\$11 000/yr.
- Labour: Two men, 12 hr at US\$60/hr, (24 hrs in total) = US\$1440 per lube.
- Four times per year (every three months) = US\$5760/yr.
- Annual cost: approximately US\$16 760/year to manually lubricate the drift rope.

### Using the Viper WRL

- VCG-1 grease 190 kg = US\$4520. This drum lasts twelve months
- (two lubricant sessions) = US\$4520/yr.
- Two men, 4 hr at US\$60/hr (eight hours in total) = US\$480 per lube.
- Twice per year (every six months) = US\$960/yr.
- Annual cost: approximately US\$6890/year to lubricate the drift rope using the Viper Mid Mk II Wire Rope Lubricator.

### Annual saving: approximately US\$9870/yr.

The move to the Viper WRL for Tahmoor was an easy decision with the potential of the drift rope failure dramatically reduced. Benefits of using the Viper WRL package included:

- Dramatic reduction in Equipment Down time **16 hours** of extra production **every two** months, not including change time due extension of Drift Rope operational life.
- Reduced OH&S issues due to no personal contact with potential broken wires when manually lubricating.
- Man, hours saved. 40 hours every 8 weeks saved.
- Potential risk of Drift Rope failure dramatically reduced



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