



## SCANNING FALLS OF GROUND, EMESENT HOVERMAP Romany Grove



### MINE/PROJECT LOCATION:

South Africa

### YEAR OF PROJECT:

2022

### PROJECT FOCUS:

Emesent Hovermap scan of FOG shape and volume

### DWYKA MINING SERVICES SOLUTION:

Emesent Hovermap scanner attached to a drill rig boom

### PROBLEM:

A Fall-of-Ground had prevented production in a stope for a period of several months. No entry was allowed to the area due to safety considerations. A scanning device which would not require personnel within the stope was sought to analyse the FOG in order to open the stope and resume production.

### SOLUTION:

The Emesent Hovermap LiDAR SLAM scanner was attached to the boom of a rig, and the boom was extended beneath an area of bad hanging wall in order to access the vertical entrance to the area of fall out. The scanner works by emitting laser pulses that bounce off surfaces and return to the scanner, creating a detailed 3D map of the area. This technology can be used to scan the FOG from a safe distance and create a detailed model of the affected area.

Once the model has been created, it can be analysed to identify any remaining stability risks and develop a plan for safely resuming production. This could involve identifying areas where additional support is needed or determining the best approach for removing any remaining debris.

### RESULT:

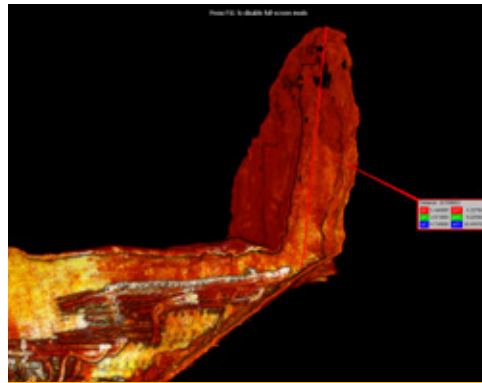
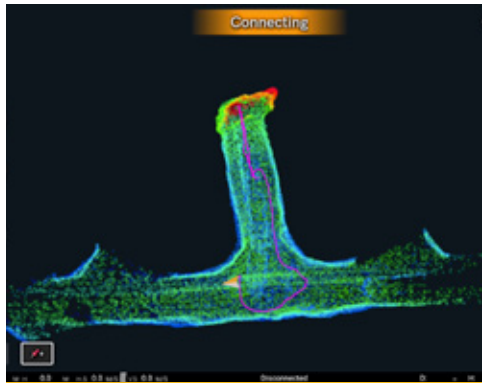
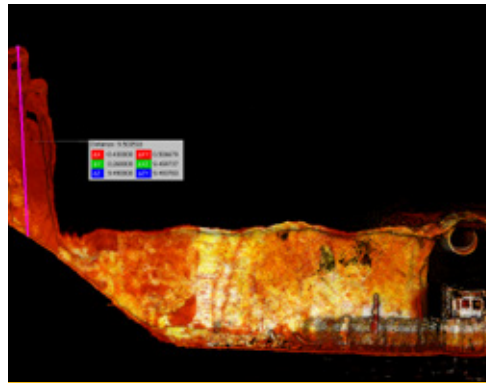
The Emesent Hovermap scanner provided a safe and effective way to visualise the shape and volume of the Fall-of-Ground (FOG) that had blocked entry to a particular area for several months. By using LiDAR technology, the Hovermap was able to create a detailed 3D map of the area, which allowed for a better understanding of the FOG without requiring personnel to enter the stope.

With this visual data, the mine can identify any remaining stability risks, develop a plan for safely resuming production, and determine the best approach for removing any remaining debris. The scan provides a level of detail that would be difficult or impossible to obtain through other methods, and it can help to expedite the process of resuming production while ensuring the safety of all workers involved.

**In Summary: Dwyka Mining Services enabled understanding of the FOG shape and volume safely and in real-time. Such information had been required from the date of the FOG (that is, several months before the scan was performed), but no solution for performing such a scan was known of at the time of the FOG.**

### KEY TAKEAWAYS:

- ✓ The Emesent Hovermap scanner enables Beyond Visual Line of Sight (BVLOS) scanning.
- ✓ The Emesent Hovermap scanner decreases risk to personnel.



For more information on this case study and/or general info on Dwyka Mining Services, send us an email, or visit our website.