



CASE STUDY: Kolomela Mine

MAKING MINING SAFER

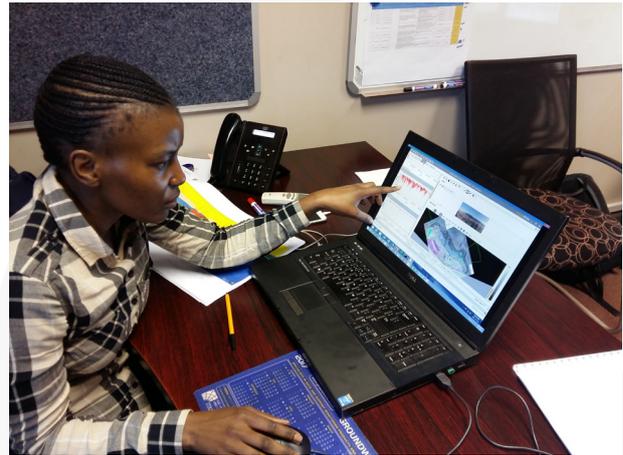
BROAD AREA COVERAGE ACROSS MULTIPLE LARGE OPEN-PIT MINES

The Kolomela Mine is located 22km from Postmasburg in the Northern Cape province of South Africa. The mine produces direct shipping iron ore and is operated by Anglo American.

Kolomela Mine consists of three open-pits: Leeuwfontein, Kapsteveld and Klipbankfontein. Kolomela Mine has undergone multiple ramp-ups and is currently producing in the order of 13 million tonnes of direct shipping iron ore.

Since 2011, Kolomela Mine has purchased six Slope Stability Radars (Four SSR-XT's and Two SSR-FX's) and has expressed an interest in replacing some older SSR-XT radars with new SSR-FX systems. Ideally, the SSR-XT systems will be used for critical monitoring once the SSR-FX's have identified areas of concern.

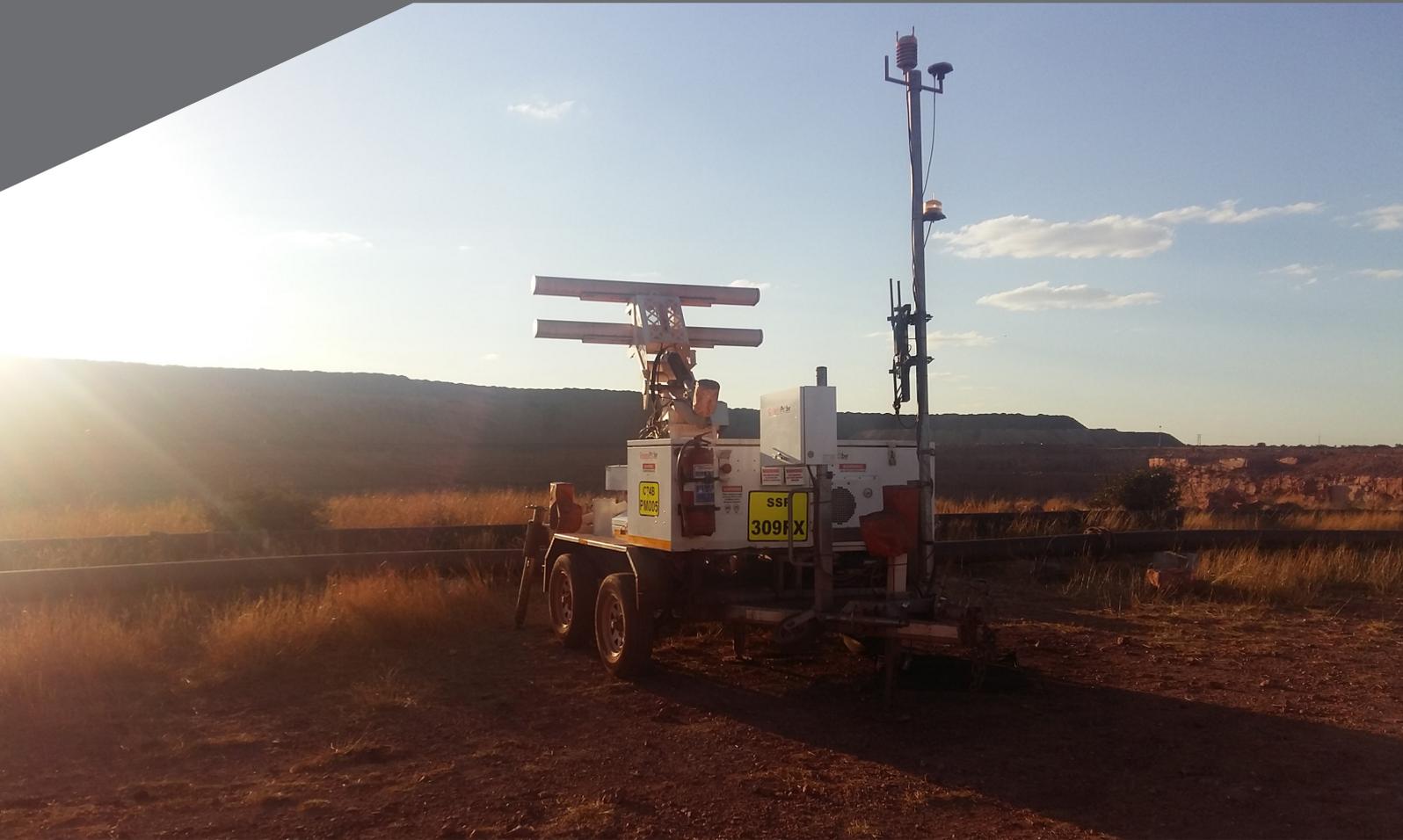
The two current SSR-FX systems at Kolomela Mine have been extremely successful in meeting Anglo American's needs in terms of providing mobile slope monitoring radars with the fastest scan speed available and unparalleled broad area coverage.



Developed as a broad area monitoring solution to scan large open-pit mines, the mobile deployment of the SSR-FX is ideally suited to monitoring Kolomela Mine's large open-pit operations as they can be easily transported, deployed and re-deployed.

“Although the SSR-FX has been developed for broad area monitoring it has also been successfully used at Kolomela Mine to do critical monitoring as well. With a good understanding of how the system works and fine tuning of alarm thresholds the SSR-FX can be easily used for critical monitoring if needed, the SSR-XT although provides better and more accurate information for critical monitoring.”

**Eduan Hatting, Geotechnical Engineer,
Kolomela Mine.**



“The SSR-FX is designed to detect unknown hazards and deformation hotspots across vast areas making it extremely useful for early detection of movement or slope failures in large mines like Kolomela,” said Clifford Walsh, GroundProbe’s Business Manager for Africa and Europe.

“The SSR-FX is capable of scanning 180 degrees in less than two minutes without the need to scan up-and-down - the fastest scan time of any slope monitoring radar on the market - ensuring better data quality over a large area and early detection of wall movement.

“This 180 degree scan area and rapid scan time is perfectly suited to meet the needs of Kolomela Mine’s expected expansion project by providing broad-area background monitoring allowing for the early detection of wall movement and geotechnical peace of mind.”

“The GroundProbe’s SSR-FX system has allowed more effective primary monitoring of the high wall without blind spots in-between,” said Nkiyasi Mthembi, Kolomela Mine Geotechnical Engineer.

“Although this is a broad area scanning tool we have been able to use it for critical monitoring in certain cases.”

Like the SSR-XT, the SSR-FX is extremely durable; capable of operating in inhospitable environments, including altitudes of 5000m above sea level and temperatures from -40°C to +55°C. Furthermore, the SSR-FX is capable of operating in intense sun, rain, wind, snow and humidity.

GroundProbe has successfully deployed SSR-FX systems in North America, South America, Australia and Africa with great results.