

Increased efficiency in underground mining



Task

TPS300 on-board mining software utilized in Underground Platinum Mining

Customer

Modikwa Platinum
Burgersfort, South Africa

Date

Installation 2000

Project Facts

Instruments

- TPS300 and TPS400

Applications:

- Checking of HD, VD and the setting of a back direction from setup to reference peg.
- Collecting and checking of observation data against preset limits
- Calculation of final co-ordinate of new peg
- Calculation and setting of grade lines
- Capturing of tache points for later plotting in a 3D cad package

Benefits

- Onboard calculations and checks save time and increase efficiency
- System eliminates potential mistakes by manual data entry
- Automatic check of measurements against predetermined sets of limits
- Increased safety due to reflectorless measurements



The Leica on-board mining software for TPS300/TPS400 increases the efficiency of underground survey work. The system saves a lot of time, simplifies the survey process and enhances security of operation.

The system removes the need to manually enter data into the total station, thereby eliminating a potential source of errors. All measurements are checked against a predetermined set of limits during the process of the survey and a report given if they are exceeded. Final values are available to the surveyor as he completes his observations thus eliminating a major cause of time wasting by enabling the surveyor to see his results before leaving the work place and not having to carry raw observations to the surface to be calculated.

This can often save the need to repeat a survey when errors are found only after he has arrived on surface. Grades are calculated on board and set out from the total station, eliminating the need to take extra equipment like an automatic level to the work place. This will also eliminate mis-

takes in manual calculation and measuring.

Tache data (commonly known as off-sets in the South African mining industry) can be measured in Reflectorless mode and captured electronically. The major benefit with this is the fact that the surveyor does not have to send an assistant into a hazardous area with a reflector.

Overall this system is more efficient than conventional methods as it is less labour intensive, less time consuming and less prone to errors.

"The Leica software is streets ahead of the competitors. The laser pointer of TPS300 makes all the difference."

**Paul Davis
Modikwa Platinum
South Africa**

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Application Report: Underground Platinum Mining