

Perfect design conformance solution

Maptek™ PerfectDig™ provides the ideal solution for survey, geology and geotechnical teams at the Barrick Cortez gold operations in Nevada.

Since 2012 Barrick Nevada, Cortez District has applied the Maptek™ I-Site™ 8800 laser scanner to a range of survey solutions. With the addition of Maptek™ PerfectDig™ software, their I-Site point clouds are now being used in new ways.

PerfectDig is an intuitive system for rapidly comparing digging against designs, improving decision making and resource recovery. Photo-realistic comparison of site designs and excavation progress in real-time fosters communication between surveyors, engineers, supervisors and operators.

Cortez initially deployed PerfectDig to solve survey challenges. The first was to improve their process for checking the highwall toes and crests once the shovels had mined to design.

PerfectDig lived up to its name. Having daily scans as a shovel mines a final highwall allows Cortez to check for toe and crest design conformance without sending a surveyor near a highwall.

This simple change to process improves their ability to safely and accurately perform design checks, and allows them to check conformance of both vertical walls and benches. And now, Cortez is also using PerfectDig to check the design conformance of mine and dump haul ramps.

'We can now conduct design checks efficiently and safely. And we have data that is useful for feeding back to our open pit operations group.'

At Cortez, a scene is created in PerfectDig for each conformance scan. The scene is provided to the operations supervisors who can then share visual and verbal conformance feedback with shovel operators. The operators receive a reliable and accurate indication of how they are digging.

In the future Cortez plans to create PerfectDig scenes in the field and send them directly to operators in near real-time.

Once an entire bench has been mined, or upon request from the geotechnical group, all of the scenes generated for that bench are combined to form a Design Conformance Report. This is an extremely useful tool for determining design conformance and evaluating bench performance.

A report of this scope would take a dedicated person many hours to complete using conventional methods. With PerfectDig it takes just 20 minutes from start to finish.

PerfectDig also provides a geology solution for Cortez. When the survey group captures laser scans they pay attention to image quality as well as the point cloud data. Ensuring that the digital images acquired are of high quality, allows the geology team to perform highwall mapping directly on the laser scans. This derives additional value from the scans and keeps geologists safely away from highwalls.

For Barrick, personnel safety is paramount. PerfectDig allows survey, geotechnical and geology colleagues to work safely and effectively while collecting valuable operations data.

*Thanks to
Brandon Bamum
Chief Surveyor
Barrick Nevada, Cortez District*

