

# Use of Deswik.CAD for underground surveying

**Company:** Independence Group NL, Nova Project | **Mining Method:** Underground Metals | **Country:** Australia

## OVERVIEW

In May 2015, Stephen Rowles and Luke Waller from Independence Group NL began work at the new Nova Project in Western Australia. They were tasked with setting up best of breed systems for the survey department. As Deswik was already in use by the planners, its survey functionality was reviewed and found to show potential. Working in conjunction with the Deswik development team, their core CAD platform was enhanced to suit the site needs and simplify the typical surveying processes.

## SOLUTION

- It was paramount that Deswik Survey integrate with the total stations used underground. Deswik Survey has the ability to read and write the native Leica DBX files to transfer data between Deswik.CAD and the instruments. Other file types are also supported.
- By adding the survey tools into Deswik.CAD, these survey functions are built upon an already robust mining specific CAD platform and can take advantage of existing CAD functionality including a powerful solids handling engine.
- One example of this is the creation of drive solids from the survey as-builts. With the previous software on site, the process had to be performed manually or have a script written to automate it. Deswik.CAD has a process in place called the Tunnel As-Built wizard. By using some simple attributes linked to the polylines (floor, shoulders, backs, etc.), updating the drive solids is now simply a case of refreshing the wizard. While this creates one layer for the whole mine, filtering by the 'level' attribute allows the user to inspect any level or area they wish.
- In September 2015, the decision was made to begin transferring all underground work from the existing software to Deswik.CAD. In the weeks preceding this, advice was sought from Deswik and the onsite engineering team to build the most robust system possible. This needed to fulfil all the requirements of the survey department while at the same time allowing the attributes and filters to follow the rules that had already been created by the engineers. This ensured continuity throughout the mining sequence.

## IMPACT

- One of the highlights has been the plotting setup within Deswik.CAD. The interactive nature of the plotting windows allows changes to be made in the model viewport which then modifies the plot. This represented a major shift from the previous software and has allowed a significant improvement in the quality of plots.
- Because of the ease of use and presentation of the plotting, the decision was made to produce the statutory plans required by the governing body in Western Australia in Deswik.CAD.
- As the Nova Project transitions from lateral development to full production, the survey team will focus their attention to making sure that the production side of Deswik Survey works just as well as the current release. While the tools will already be in place to facilitate this, they will be coordinating with Deswik for ways to improve the process and make the platform even more impressive than it is already.
- The survey functions in Deswik.CAD now enable data generated by the engineers and surveyors to be used by each other without the need for file conversions. This has allowed seamless integration when transferring data between the mining departments.



SEAMLESS INTEGRATION



INTERACTIVE PLOTTING