

# FAST RESOURCE ESTIMATION HELPS IMPROVE OPERATIONAL EFFICIENCY

LARGE SCALE MINING OPERATIONS BENEFIT FROM SURPAC 6.7



It is no secret that datasets are becoming increasingly larger and will only continue to grow as mining companies develop and expand existing properties. With the increased size in data, it has been challenging for mining software to keep pace. It can often take hours, or even days, for geology and mine planning applications to update models. That is why Dassault Systèmes has delivered one of the best resource estimation experiences anywhere in the industry with its latest version of GEOVIA Surpac™.

To become more productive, mine sites need to have the latest geological estimations included in their production schedule, as quickly as possible, to ensure that the correct material is sent to processing and waste. If waste material is sent to processing, not only will the mining company spend unnecessary money without a return, but also, will create unnecessary wear on equipment that will both shorten its life cycle and drive up maintenance costs.

When resource estimations are quickly incorporated into the production schedule, geologists will improve the efficiency in their work. No longer will they waste valuable time waiting for the computer to process estimations—as they are processed more quickly, geologists have more time to devote to other areas of the business helping to improve overall productivity at the mine site.

**“The achieved speed of resource estimation with Surpac 6.7 is really impressive. With Surpac 6.7, we had a large model that allowed us to increase the number of samples for estimation. The outcome was 16 times faster than with Surpac 6.5.1 and 10 times faster than the speed achieved with the Surpac 6.6.1. As a Surpac user, I appreciate the resource estimation improvement seen in Surpac 6.7 and the great time savings it provides. It is such an important enhancement, which will be difficult for the rival companies to outdo.”**

– Andres Beluzán, Mining Civil Engineer and Executive Director of Marco Alfaro Consultores



## CUSTOMER SPOTLIGHT

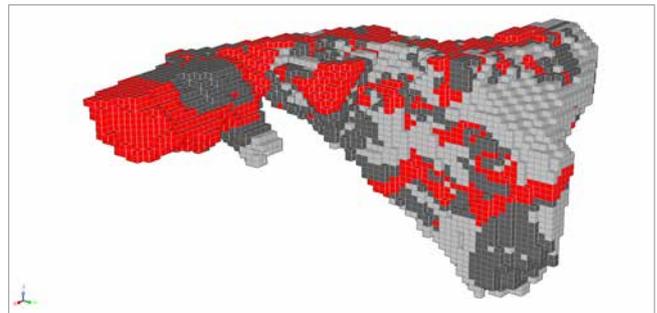
### Marco Alfaro Consultores

Based in Santiago, Chile, Marco Alfaro Consultores is a consulting company that offers services in ore deposit evaluation, specifically in the areas of ore sampling, geological modelling, geostatistics and resource estimation. Applying geostatistical theory in conjunction with the latest available technology, the firm provides practical and efficient solutions for today’s mining industry.

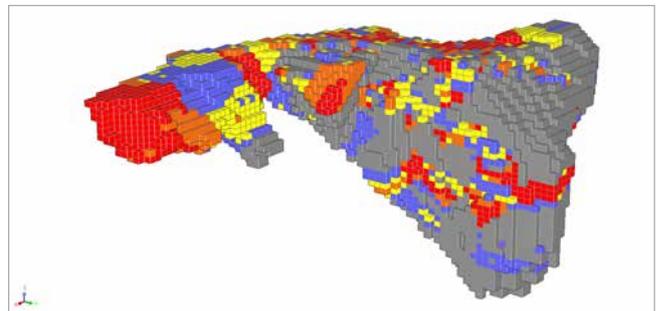
Andres Beluzan, a Mining Civil Engineer and Executive Director of Marco Alfaro Consultores, has been using Surpac throughout the past decade for his work in geological resource estimation. A recent upgrade to Surpac 6.7 has the organization impressed with the efficiency of achieving estimation results at processing speeds nearly 17 times faster.

When completing resource estimation for an iron-ore body in northern Chile in which 549,994 blocks were estimated using ordinary kriging, the entire processing time with Surpac 6.7 took only 1 minute and 30 seconds. Previously, the same process took 25 minutes and 26 second with Surpac 6.5.1, and 10 minutes and 17 seconds with Surpac 6.6.1.

At the heart of the strikingly improved block model processing is the multi-threaded technology that allows the majority of block modeling functions to use all available processors or cores. The effect of using all available cores is that users can now expect up to a **95% reduction** in processing times for block model operations such as estimations, block maths, constraining, and reporting. As well, up to **200 times performance improvement** for inverse distance, ordinary and simple kriging, and nearest neighbor estimations.



Resource block model, created in Surpac 6.7, which is colored by material class: waste, low grade, high grade.



Resource block model created in Surpac 6.7 that is colored by gold grade.

For more information email [GEOVIA.Surpac@3ds.com](mailto:GEOVIA.Surpac@3ds.com) or visit [www.3ds.com/GEOVIA/Surpac](http://www.3ds.com/GEOVIA/Surpac)

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