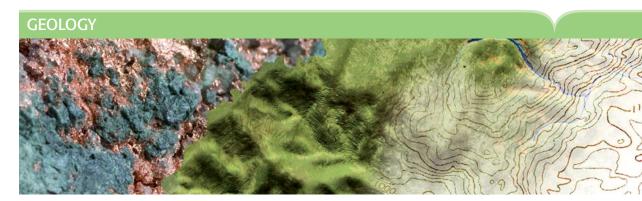


# Specialist mineral resource consulting services for the global exploration, mining and investment communities.

Z\* will ensure that estimation is based on the geological model - the foundation of any mineral resource estimate.



The Z\* Principal Analysts are all geologists with extensive experience in mineral resource estimation. This combination ensures that fundamental components of the geological model are incorporated in the final mineral resource estimate. In this regard Z\* firmly believe in forging a close working relationship with the project geologists as the geological model is the foundation of any mineral resource estimate.

### THE APPLICATION OF GEOLOGY FOR OPTIMAL MINERAL RESOURCE ESTIMATION

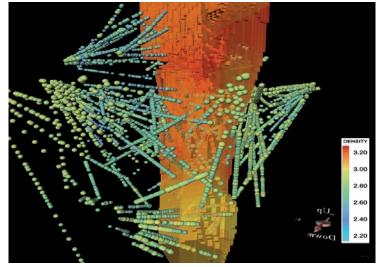
All mineral resource estimation should be undertaken in accordance with the geological model on both a regional and local scale. Of particular importance is the emplacement, depositional and/or structural history which will determine the estimation domains and their boundary conditions and thus ensure correct partitioning of data.



# GEOLOGICAL ZONATION

It is imperative that mineral resources are estimated in homogeneous zones that are typically defined by the geology. However, cognisance must also be given to the correlation between geological zones and the associated variability expected in the grade data. A thorough understanding of this mineralisation model is key to accurate estimation of the mineral resource. Z\* have extensive experience in applying interpolation solutions to refine geological boundaries.







## **OPTIMISING DRILLING PROGRAMMES**

It is important to optimise geological drilling campaigns to ensure that a cost effective programme has been planned. It must also be remembered that a range of variables may be collected from geological delineation drilling e.g. density measurements or grade data. It is important that these programmes are optimised for the full range of parameters and not driven by a single requirement e.g. pierce points for a deposit boundary. Z\* have extensive experience in optimising multivariable sampling campaigns.



Z Star provide robust assurance of mineral resource estimates and conduct risk analyses on existing mines or new projects. The company will undertake due diligence audits, resource performance analysis and provide governance advice.

## Services include:

- comprehensive geostatistical estimation service
- mineral asset valuation
- Competent or Qualified Persons Reports
- classification of mineral resources
- size frequency distribution modelling
- geostatistical simulation
- sample optimisation
- data validation
- geological modelling
- statistical analysis

#### **SOUTH AFRICA**

Suite G4, Steenberg House, Steenberg Office Park, Silverwood Close, Tokai 7945, Cape Town, South Africa PO Box 336, Steenberg 7947 Tel: +27 21 700 9320 | Fax: +27 21 702 3604

#### NAMIBIA

Unit 8, Tal Terrace, Wecke Street, Windhoek, Namibia PO Box 22707 Windhoek, Namibia Tel: +264 61 234 494