



## Beyond the assay – building holistic rock property models

---

Challenges of bi-modal gangue mineralogy in mining geology — *T Callaghan*

Integration of geology and geotechnical data through construction of a rock quality designation block model at Olympic Dam — *J M Clark*

Comparison of three indicator interpolation approaches to implicit modelling of an ore related alteration-type at the Invincible deposit, St Ives Goldfield, Western Australia — *D A Douth and M Roux*

Beyond the assay – geometallurgy at Olympic Dam — *K Ehrig, V Liebezeit, E Macmillan and M Smith*

Pattern recognition in transformed data – search for domain shapes in mine geology data — *S Juras, S McKinley and E Uludag*

Local uncertainty benchmarking – a coal case study — *C Mawdesley, D Barry, O Bertoli and R Saha*

Alteration at Kisladag gold mine, Turkey – a progressive study in geology, geotechnics and geometallurgy — *S McKinley, T Baker and Y Öztas*

Application of normative ore mineralogy to geological and metallurgical datasets at the Hera Au-Pb-Zn-Ag mine, New South Wales, Australia — *A R McKinnon*

Geomechanical modelling of the Ernest Henry iron oxide copper gold deposit – identifying fluid pathways to predict potential mineralised zones — *J McLellan and B Miller*

Statistical learning as an input to mineralisation mapping and domain modelling in metals deposits — *J Pooce, D Corley and A Diaz*

The importance of geometallurgical test work for industrial minerals projects — *B Shaw and A Skogings*

## Demonstrating value through best practice reconciliation

---

Systemic approach to managing mine to mill reconciliation process — *R Adofo*

Mine value chain reconciliation – demonstrating value through best practice reconciliation — *C Morley*

Effectively linking mining geology with waste management – a case study from western Tasmania — *A Parbhakar-Fox and B G Lottermoser*

Value enhancement in underground mining using conditional simulation and boundary optimisation — *W J Shaw, G Matthews, S Khosrowshahi and A Weeks*

## Education, interface and knowledge management

---

The application of practical geology solutions to manage mineral resource risks – Edna May Operation case study — *H Andersen, O Browne, G Rawlinson and M Van Rensburg*

Go with the flow – managing hydrogeological staff turnover at Ernest Henry Mine — *D Ashton, B Miller and C Hawtin*

Rewriting the rule book – geology organisational design — *B Catto and T McLeod*

Driving cultural change – creating opportunities in a stagnant workplace — *M Keys and K Balharrie*

Improved assurance for mineral resource and ore reserve estimates and reporting through peer review and auditing — *M A Noppé*

## Efficiently linking exploration and mining geology

---

QTS Central ore system, CSA Mine, Cobar, New South Wales, Australia — *A Apaza and R Neumayr*

Near-mine geophysics – expanding and defining the resource with DHEM — *K E Hine and J R Bishop*

Improving coal quality estimations using geostatistics and auxiliary variables — *R Jeuken, C Xu and P Dowd*

Pajingo Gold Mine – evaluation of the Camembert deposit — *S Lindsay*

Velvet underground exhumed – the challenge of optimising mining with discovery — *G Lorusso and J Rogers*

Starting from scratch – defining remnant resources from publically available data: a case study from the Lord Nelson and Lord Henry gold deposits in Sandstone — *L M Olssen and C Jia*

Fosterville – setting new standards — *N Phillips*

Keeping the dream alive – adding value through resource growth at Newmont's Tanami operations, Northern Territory — *S Schmeider, L Griesel, K Dudgeon, S Perazzo and C Robinson*

Evolution of the Pegmont lead-zinc project – assessment and development — *P Voulgaris*

## Mining geology and the future

---

Local kriging neighbourhood optimisation – the next step in high-confidence resource estimation — *A Cook*



The new standard of coal handling processes to maintain good coal quality — *M T Gandapradana, M D S Wicaksono, B T Purnomo, A Z Romi, S H Nugroho, F Febriansyah, T A Putra and A Gustifram*

Sulfur – the new geometallurgical grade in gold-sulfide deposits — *S Juras*

3D mine mapping – improving grade control and reconciliation in underground mines using photogrammetric imagery and implicit modelling techniques — *R H Knight*

Measuring ore quality using real-time on-belt elemental analysis – more than grade control — *H Kurth*

Sampling strategy by statistical analyses of LIBS data in the context of a portable gold analyser — *B Nguegang Kamwa, M Laflamme, M Constantin, K Rifai, M Castello and K Fytas*

Transient electromagnetic exploration for heat-affected coal — *H J Stedman*

Charles Dickens on the (potentially) changing role of globalisation and sustainability in the long-term future of mining and exploration — *J P Sykes, A Trench, T C McCuaig and M Jessell*

Automated joint mapping using the concentric shells algorithm — *P Valenzuela*

Driving productivity by increasing feed quality through application of Innovative Grade Engineering® technologies — *S G Walters*

### **Mining geology practice**

Adding value with RC drilling at Pueblo Viejo — *M Almond and L Ventura*

Development of grade control systems at the Purnama Au-Ag deposit, Martabe, North Sumatera, Indonesia — *A Arifin and J Hertrijana*

Diamond drilling at Efemçukuru gold mine, Turkey – a case study on the benefits of timely and cost-effective drilling to short-term planning — *N Arslan and M Ozkayhan*

Value-based ore control — *H Arvidson*

Empirical mill throughput modelling and linear programming for blend optimisation at the Phu Kham operation in Laos — *J Carpenter and B Saunders*

Best practice sampling QA/QC for gold and base metal mining – how to assess the applicability of underground reverse circulation grade control sampling — *J Carswell*

An integrated approach to mine planning – building the integrated planning model at Tropicana Gold Mine — *B Catto, D Elder, R Edwards, M Kent and J Woodward*

The role of pit geologist to prevent sales penalty due to coal quality loss — *M T Gandapradana, M D S Wicaksono and C Setiaji*

A new approach to logging and modelling faults at the Dugald River Pb-Zn-Ag deposit, Northwest Queensland — *K George*

The manganese copper relation at the Olympic Dam Fe-oxide Cu-U-Au-Ag deposit – a case study using existing data to improve drill hole targeting — *J Griffith and K Ehrig*

Washability modelling and estimation techniques used to improve coal handling preparation plant beneficiation — *P J Handley*

Minimum sample mass from RC grade control drilling at Rocklands Copper Project — *M G Hawtin*

The necessary role of the geologist in geotechnical data gathering — *P Hills*

Case study of joint structure and the design and performance of open pit walls at the Kanmantoo Copper Mine — *B J Hutchison, J Chambers, S Gannon and D Oke-ohoh*

Testing new estimation techniques – rank and replace: a stockwork case study — *D Kentwell and D Finn*

Geoscience input into blasting operations – let's set a new standard — *T N Little*

Application of implicit geological modeling to improve the grade control process at White Mountain gold mine, Jilin Province, China — *S McKinley*

Setting new standards at Kanmantoo – a case study on effective pit to mill ore delivery — *M Reid and H Arbon*

The practical use of underground 3D photogrammetry data at MMG Rosebery polymetallic mine, Tasmania — *M Robertson*

Why combine reverse circulation and diamond drilling in resource estimation at Purnama? — *D A Sims, J Pooe, A N Kasnanto and B Pulungan*

Progress of mineral resource evaluation system at Hindustan Zinc Ltd – a journey towards JORC — *K S Solanki and L S Shekhawat*

Public reporting – new standards or no standards? — *R Sterk and J Coombes*

Blast movement monitors or polypipe? A study into cost effective blast movement monitoring at White Foil gold mine, Western Australia — *M E Watson*

Underground reflection seismology to guide exploration drilling — *R A Lynch*