01 | Case Study

Development of analytical model for Flotation circuit optimisation

Business Opportunity

Vantaz was engaged to build a multi-disciplinary team whose mission was to increase flotation circuit recovery through advanced analytical modelling, helping the shift supervisor / metallurgist / operator to make better decisions.

Solution

Vantaz developed strategies for increasing flotation circuit recovery through machine learning models to predict, simulate and deliver optimisation recommendations.

- Deliver recommendations for operational set points and operating ranges, for example:
  - Airflow in a column.
  - Foam level in a conventional cell.

- Provide recommendations for the addition of reagents, e.g.:
- pH (CAL)
  - Primary and secondary collectors
  - Nash
  - Foamer

Results

- Improve recovery by 0.5% -1.5% in the flotation circuit.
- Enabled operation at optimal operating points.
- Created ability to perform simulations of operational changes.
- Improved understanding of the impact of variables on the process.

VANTAZ
Specialized Mining Consulting