



EMPRISE
CONCEPTS

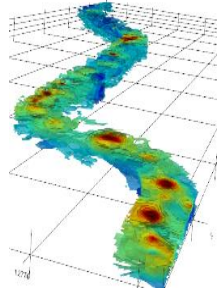
**ALWAYS
DELIVER
MORE
THAN
EXPECTED**

**GROUND RISK / GEOSTATISTICS
SERVICES**

ABOUT

With an appreciation for the complexities and uncertainties often faced in subsurface conditions, Emprise Concepts takes a holistic approach to ground characterization, risk assessment, and geotechnical engineering.

GEOSTATISTICS: A class of applied statistics used to analyze the spatial relationship of data to make predictions at unsampled locations by modeling the spatial distribution and variability of geological and geotechnical properties. It provides a framework to integrate data from many sources (e.g., geological interpretation, direct measurements, and secondary measurements). The data-driven method is practical, repeatable, and can easily be updated as additional information is obtained.



ADDED VALUE

MORE competitive bids at tender and **LESS** project cost escalation potential through:

- ✓ Uncertainty metrics
- ✓ Quantification of risks
- ✓ Assessing ground risk and opportunity
- ✓ Quantify potential for differing site condition claims
- ✓ Addressing unforeseen issues faced during construction
- ✓ Reduced insurance premiums
- ✓ More confidence in geotechnical baselines



DATA AUDITING & EXPLORATORY ANALYSIS

We provide independent evaluations of project ground investigation data and employ geostatistical tools to identify spatial trends, anomalies, and outliers/errors in the data.



PROBABILISTIC SUBSURFACE MODELLING

Geostatistical simulations provide the means for developing probabilistic geological and geotechnical parameter ground models. Our models characterize the complex and variable ground conditions, providing more clarity than conventional deterministic interpretations.



UNCERTAINTY AND RISK QUANTIFICATION

We provide the know-how and experience to assist you with translating the geological-geotechnical model to a 3D risk model. With this model, we can quantify specific risks spatially over the project extent, leading to significantly improved risk assessments and mitigation planning.

MISSION AND VALUES

As part of Emprise Concepts' approach to providing exceptional service, we consider how every decision has a direct impact on the public. By taking a collective approach, basing decisions on sound engineering judgment, understanding our ethical responsibilities, and striving for sustainability, Emprise Concepts provides superior service to its clients, while actively contributing to the enrichment of our surrounding communities.



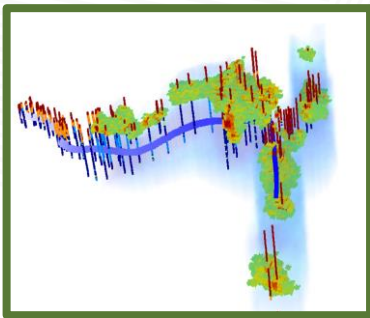
EXPERTISE & EXPERIENCE

We work with Owners, Consultants, Designers, Contractors, and Insurers to provide geostatistical analysis and ground risk assessment during all stages of the project - design, construction, and claims.

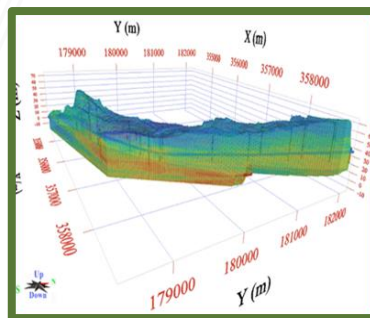
EXPERTISE

Jacob Grasmick, PhD, PE leads Emprise Concepts' geotechnical engineering and construction data analysis divisions, and has supported the geotechnical evaluation, risk assessment, risk management, and engineering analysis of multiple high-profile underground construction and tunnelling projects globally. We specialize in utilizing site investigation, remote sensing, monitoring, and construction data to achieve a better understanding of subsurface characteristics, reduce uncertainty and risk, and optimize construction/design. Emprise Concepts partners with expert consultants, including Maxwell GeoSystems and NovoConsult to complement their service offering.

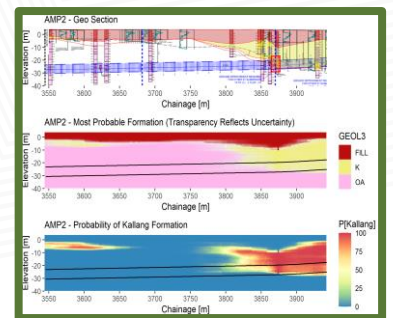
PROJECT EXPERIENCE*



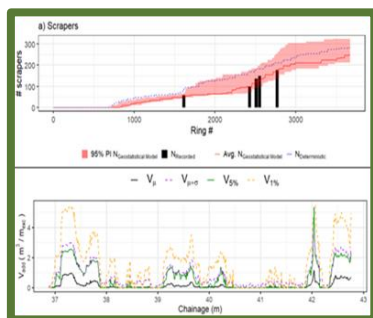
City Rail Link (Auckland, NZ)
Rockhead elevation, geotechnical baselines



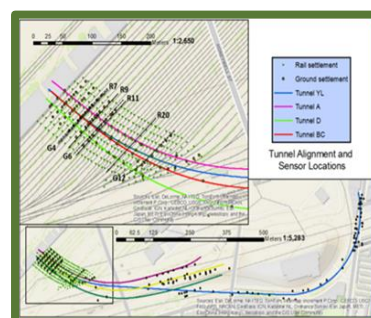
North Bristol Relief Sewer (UK)
Marginal facies, groundwater



Changi Airport (Singapore)
Rock/soil transitions, ground deformation



Northgate Link Extension (Seattle, WA)
Cutter tool wear, clogging



East Side Access (New York City, NY)
Face pressure, ground deformation

* Experience presented is Jacob's personal experience.



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Contact us to discuss how our services can help your project.

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