

Geophysical services for mineral exploration

Bridgeporth's geophysical services provide high-quality data to support mineral exploration programmes, baseline and definitive feasibility studies, environmental monitoring, and corridor mapping.

Bridgeporth's multidisciplinary approach includes airborne data acquisition to data processing, modelling, interpretation, and integration of complementary information. Bridgeporth can provide planning, operations, and security and logistics for exploration programs as well. Our team offers a wide range of survey methodologies we can tailor to meet exploration objectives within complex geological environments.

How do Bridgeporth's airborne techniques aid mineral exploration?

- Airborne techniques are a quick and efficient way of surveying large, underexplored regions for minerals
- We have the ability to conduct a multidisciplinary survey from a single aircraft to provide a comprehensive set of data
- **High-resolution airborne data provides a roadmap for more detailed land-based exploration. By narrowing down the areas of interest to just the most promising targets, Bridgeporth accelerates the exploration timeline for mining companies**

- Bridgeporth provides the following data techniques:
 - Magnetics
 - Gravity
 - LiDAR
 - Hyperspectral imaging
 - Gamma-ray spectrometry
 - Horizontal magnetic gradient
- Our fleet of planes based at our aircraft base in Nairobi means rapid, cost-effective mobilization for exploration across the African continent and globally

Land-based services

- Once you receive your data from your airborne survey, you'll want to take a closer look on the ground at your identified targets
- Bridgeporth offers a broad range of geoscience acquisition solutions ranging from time domain electromagnetics (TDEM), very low frequency (VLF), gravity, magnetics, and ground penetrating radar (GPR) through to radiometric dating and chemical analyses
- Bridgeporth employs highly-trained ground crews to explore even the most frontier, remote areas globally



Security and logistics

- Our highly experienced, tier-1 team specialises in managing political, reputational, operational, and security risks in complex and hostile environments globally
- The Bridgeporth team has undertaken safe and successful security programmes in many of the world's most austere operating areas, providing expertise for the duration of the work program
- Fulfilled as a stand-alone or joint operating programme using trained and authorised local forces, Bridgeporth has the flexibility to enable safe, economic operation in the frontier exploration markets of the world

Integrated interpretation as key to your prospect's potential

An integrated interpretation of all data sets is key to maximising your understanding of your assets. Our interpreters have extensive experience in airborne and land geophysics. The table to the right describes the deliverables Bridgeporth's interpretation geophysicists provide.

Case study: Bridgeporth in West Africa

Bridgeporth recently completed the interpretation of a country-wide airborne exploration program in West Africa. Bridgeporth's geophysicists used data sets of magnetics, EM, and gamma-ray spectrometry to provide its clients with over a thousand promising targets for more in-depth study and an overview of the region's mineral prospects. As well as confirming and extending known targets, Bridgeporth identified several hundred previously undiscovered targets that had been missed by earlier technologies. Based on its recommendations, Bridgeporth is planning a ground-truthing program to be executed in 2014.

Deliverables

Data package

Gravity

- Raw
- Processed
- Filtered derivatives

Magnetics

- TMI
- RTE
- 1st vertical derivative

Radiometric

- Isotope plots
- Binary and ternary plots

LiDAR

- Digital terrain model
- Slope analysis

Hyperspectral

- Spectral analysis
- Spectral maps

Interpretation

Qualitative mapping

- Structural fabric
- Intrusive/zonation

Quantitative modelling

- 2D profiles
- 3D structural models
- 3D density volume
- 3D susceptibility volume
- Unconstrained inversion modelling
- Constrained inversion modelling
- Basement mapping

Updated potential terrain areas

Compilation of synoptic data package

- Reports on acquisition
- Reports on interpretation
- GIS compilation

To learn more about how Bridgeporth can help your exploration, please contact us at sales@bridgeporth.com or +44 (0)1908 667 014

