CRUZ
GEOSCIENCE

CAPABILITY STATEMENT

Structural clarity for better exploration decisions.



Cruz Geoscience helps exploration and mining companies understand what controls their mineralization, map what matters and focus drilling on the targets most likely to succeed. We work with junior explorers, mining companies, joint ventures and geological surveys that need senior structural and exploration input without adding permanent headcount.

15+
Years of international experience

~80,000 km²
Mapped in greenfield terrain

27,000+ m
Drilling planned and supervised

5
Countries of fieldwork

Services

FROM THE OUTCROP TO THE DRILL TARGET

Structural geology

Field structural analysis, litho-structural interpretation and 3D structural modelling to define deformation history and the structural controls on mineralization.

Target generation and project evaluation

Definition and ranking of targets from deposit models and integrated data, plus independent evaluation of districts, prospects and mining waste sites.

3D geological modelling

Geological, structural and ore block models in Leapfrog Geo/Edge, Vulcan and ArcGIS Pro for resource estimation, mine planning and near-mine exploration.

Technical reporting and advisory

Geological syntheses, technical reports, maps and independent technical opinions for board, partner and investment decisions.

Geological mapping

Campaigns at every scale, from regional 1:1,000,000 to detailed 1:5,000 to 1:500 and underground face mapping, supported by remote sensing.

Drilling programme support

Programme design, drillhole planning, core logging and sampling protocols, and set-up or audit of QA/QC systems.

Data review and integration

Validation of exploration databases and data workflows across IMDEX HUB, KRUX Analytics and ioGAS, ready for interpretation and reporting.

Training and structural workshops

Field mentoring and workshops for your geologists on structural data collection, interpretation and modelling.

Ways to work with us

Every engagement starts with a written scope of work and budget.

FIELD
Mapping campaigns
Programmes of 1 to several weeks, from reconnaissance to detailed structural mapping.

DESK
Structural reviews
Remote review of maps, geophysics, drilling and models, with recommended targets.

RETAINER
Ongoing support
A set number of days each month, remote and in the field, for programmes needing continuity.

TRAINING
Workshops
On-site or remote structural geology workshops tailored to your project and team.

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Track record

VMS, orogenic gold and base metal systems

SAUDI ARABIA · ARABIAN SHIELD

VMS Cu-Zn-Au exploration

From licence start-up to resource definition: more than 27,000 m of drilling, target generation over new areas, detailed 1:500 to 1:5,000 mapping and the 3D litho-structural model behind a completed Mineral Resource Estimate.

PORTUGAL · IBERIAN PYRITE BELT

Underground Cu-Zn mining

Underground mapping, grade control, production and exploration drilling, and 3D lithological, structural and ore block models at Neves-Corvo, one of Europe's largest underground VMS operations.

ANGOLA · CONGO CRATON

Regional geological mapping

Approximately 80,000 km² mapped at 1:50,000 to 1:1,000,000 for the Angolan Geological Institute, with 7 published geological maps, geochemical campaigns and prospect evaluation.

Approach

A clear sequence, from desk to drill target

01

Integrate

Magnetics, imagery, historical maps and drilling combined into a preliminary structural interpretation.

02

Validate in the field

The interpretation is tested on the ground, with your geologists working alongside.

03

Refine the mapping

From district scale down to detailed 1:5,000 maps over the areas that matter most.

04

Model and target

3D structural models linking geology, structure and mineralization directly inform drilling.

João da Cruz Correia

FOUNDER AND STRUCTURAL GEOLOGIST

A structural and exploration geologist who has worked across the full exploration-to-mining cycle in Saudi Arabia, Portugal, Spain, Angola and Morocco. He has supervised exploration from licence award to Mineral Resource Estimate, built 3D models for an operating underground mine and mapped large areas of greenfield terrain for a national geological survey.

Every Cruz Geoscience engagement is led personally by João, from scoping to final report.

Deposits	VMS (Cu-Zn-Au-Ag), orogenic gold, base and industrial metals, metal recovery from tailings
Regions	Saudi Arabia, Portugal, Spain, Angola, Morocco, Canada, United States
Software	Leapfrog Geo/Edge, Vulcan, ArcGIS Pro, QGIS, IMDEX HUB, KRUX Analytics, ioGAS
Training	SRK Applied Structural Geology in Leapfrog Geo; Seequent Advanced Leapfrog Geo
Languages	Portuguese, English, Spanish, French
Member	Portuguese Association of Geologists (APG)

SELECTED PUBLICATIONS

Ferreira, E., Lehman, J., Correia, J.C., et al. (2024). Zircon U–Pb and Lu–Hf isotopes reveal the crustal evolution of the SW Angolan Shield (Congo Craton). *Gondwana Research*, 131, 317–342.

Correia, J.C., et al. (2024). Remote sensing applied to litho-structural and regolith mapping of SW Angola. *Congreso Geológico de España / IGME.*

Co-author of 7 published Geological Maps of Angola at 1:100,000 and 1:250,000. *IGEO, Luanda, 2020–2021.*

Tell us about your project

Send a short description of your project area, objectives and timeline, and we will reply with a proposed scope and approach. Based in Portugal, available worldwide.

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