



GeoMate
2026 · Exploration Data Platform

OVERVIEW

PLATFORM OVERVIEW

GeoMate 2026

One platform, entirely offline, for mineral exploration data — from database design to the signed report.

- 19 modules · 6 functional groups
- Access or SQL Server · Android companion app
- 100 % offline — no data leaves the workstation

Prospect: (All)

Country code: (All)

Sample Tracking

Spatial Map

Geology Recovery

Exploration Analytics

Log Plot

Configuration

Total Samples

190694

Sent to Lab

157

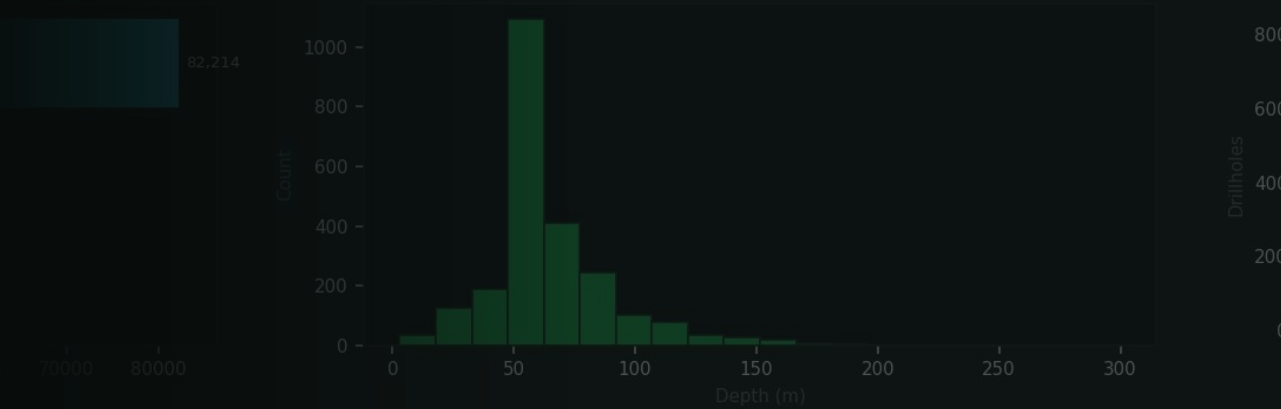
Results Received

166372

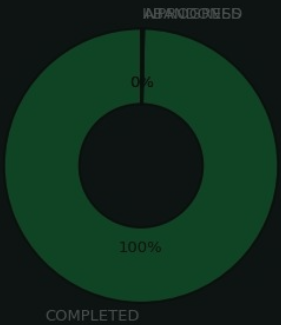
Pending

24165

Depth Distribution



Drill Status



Executive summary

GeoMate 2026 holds the whole of exploration data in one project database and one application — from schema design to the signed report — with no connection, no intermediate file and no re-keying between stages.

01 The problem it addresses

On an exploration project, data breaks between tools: an export to a spreadsheet, a correction never carried back, a quality check redone from memory. GeoMate removes those hand-offs.

02 How it is built

Nineteen modules around an Access or SQL Server database, a project file carrying the configuration, an Android companion application for the field, and built-in help on F1.

03 What sets it apart

It runs entirely offline, and it produces its deliverables itself: signed PDFs, workbooks, decks and data packages come out of the software, they are not hand-assembled.

19

modules, six functional groups

805

holes read in the demonstration dataset

26 377

samples tracked, 19.7 % of them controls

0

data leaving the workstation

Figures computed on the KOUKOUNDAN project database (Senegal) at the time this deck was built.

Contents

01 The problem

What breaks in a drillhole database, and where.

02 The GeoMate answer

A continuous platform, from field to signed report.

03 The module map

Nineteen modules across six groups.

04 The processing chain

Six stages, from schema design to deliverable.

05 The modules in pictures

Real captures of the most-used interfaces.

06 The demonstration dataset

KOUKOUDAN, Senegal — real figures, not simulated.

07 Security and governance

Roles, licensing, schema locks, signed audit log.

08 Technical profile

Engines, file types, deployment.



GeoMate 2026

SECTION I

The platform

What breaks in a drillhole database, the answer offered, and the full map of the nineteen modules.

01 The problem

02 Six pillars

03 The module map

04 The processing chain

The problem

A drillhole database is not a file: it is an asset carrying the value of a project, fed by three or four different teams over several years, often with no network.

The defect almost never originates in the analysis spreadsheet. It originates at capture, at transfer, or in an import that silently wrote NULL.

Checking arrives too late

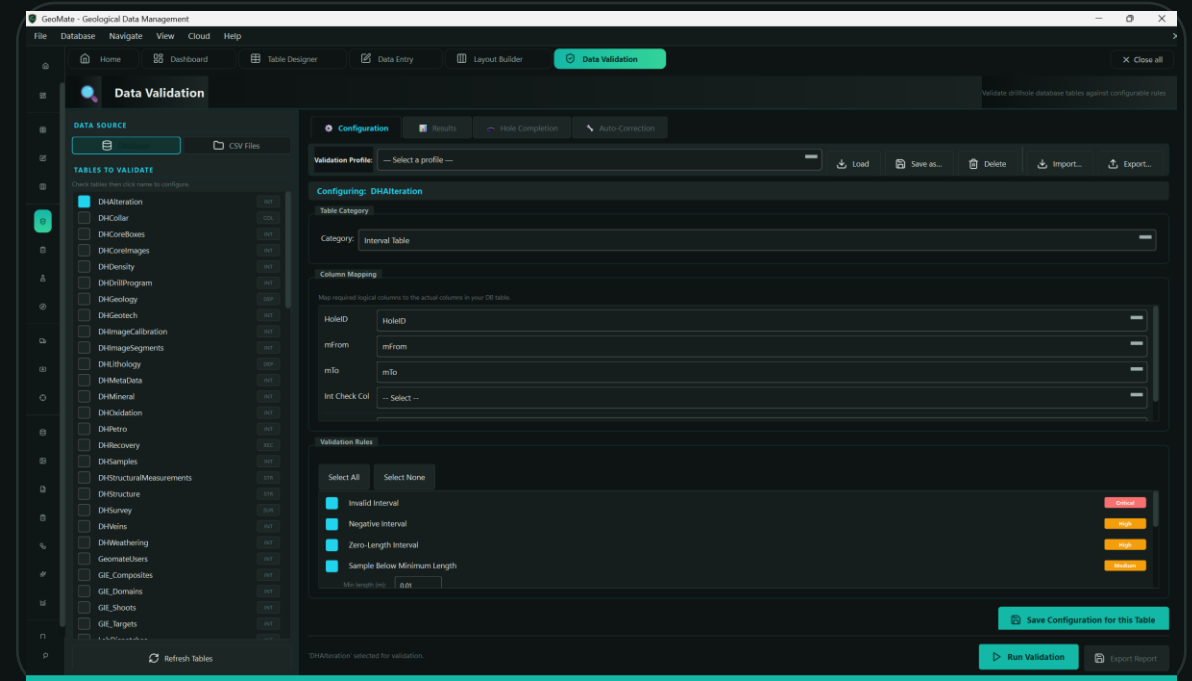
Discovering an interval overlap at resource-estimation time costs a hundred times what it would have cost at capture.

Tools are scattered

One package for the database, a spreadsheet for QA/QC, another for the intercepts, a consultant for the report.

The field has no network

Any solution assuming a permanent connection does not work where the data is produced.



GeoMate starts from those three constraints: check early, unify the chain, and work without a connection.

Six pillars



01

Checking sits upstream

Interval overlap refused at capture, off-reference code impossible, mobile package checked before the write, thirty validation rules with severity.



02

The chain is continuous

From schema design to the signed report, with no intermediate export and no re-keying between packages.



03

Entirely offline

No server, no subscription, no data transmitted. The exploration camp gets exactly the same tool as head office.



04

The discipline is built in

Westgard rules, Schmidt stereonet, Sinclair log-probability, ordinary kriging: the industry's own methods, not generic charts.



05

Everything is reversible

Every value an import or a correction replaces is logged; a whole run can be undone without restoring a backup.



06

The deliverable comes out of the software

Signed PDFs, Excel workbooks, bilingual PowerPoint decks and data packages — produced, not hand-assembled.

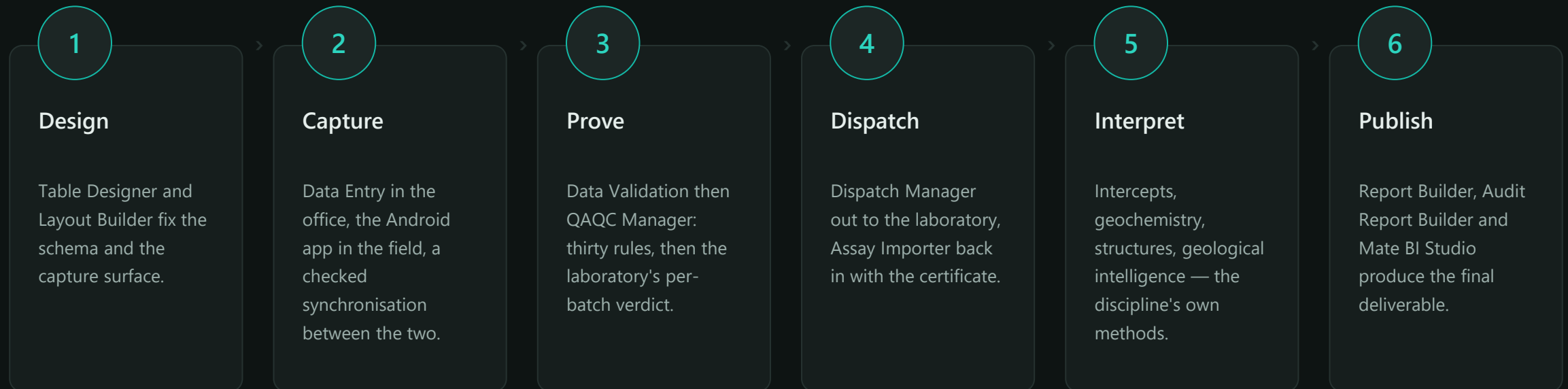
The module map

GROUP	MODULES	COUNT
Workspace	Dashboard	1
Data Management	Table Designer · Data Entry · Layout Builder	3
Analysis	Data Validation · QAQC Manager · Geochemical Analytics · Structural Analysis	4
Sample Management	Dispatch Manager · Assay Importer · Assay Intercept	3
Integration	External Data · Core Image Manager · Report Builder · Audit Report Builder · Automation Builder · Geological Intelligence · Mate BI Studio	7
Mobile	Mobile Sync	1
TOTAL		19

Alongside these nineteen modules sit the cross-cutting functions: user management, security and licensing, Log Plot, mapping, and the built-in help reachable with F1.

The processing chain

Every stage writes into the same database: nothing passes through an intermediate file.





GeoMate 2026

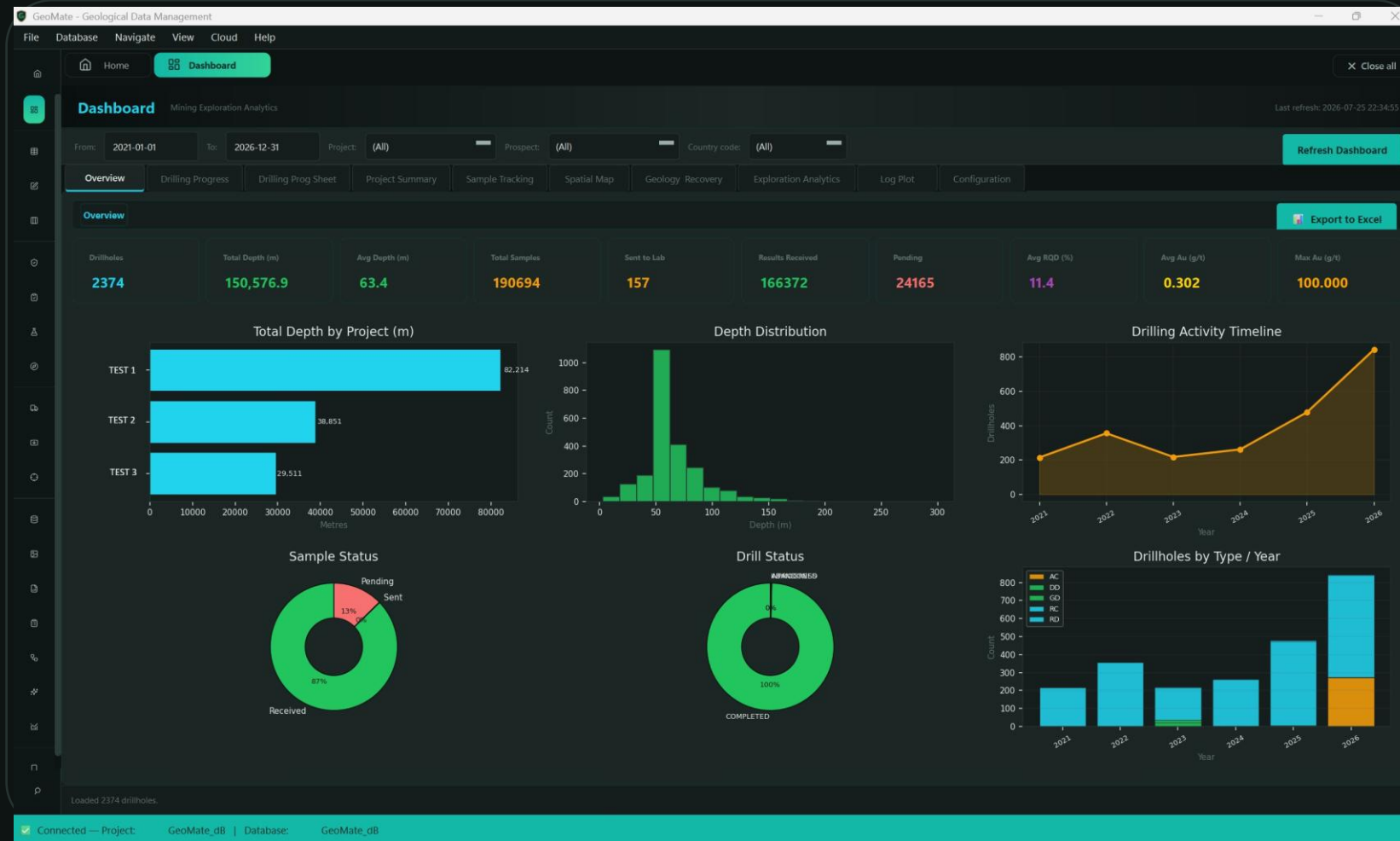
SECTION II

In practice

Three real interfaces of the platform: daily tracking, quality control and built-in business intelligence.

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- 01 The dashboard
 - 02 Quality assurance
 - 03 Built-in business intelligence
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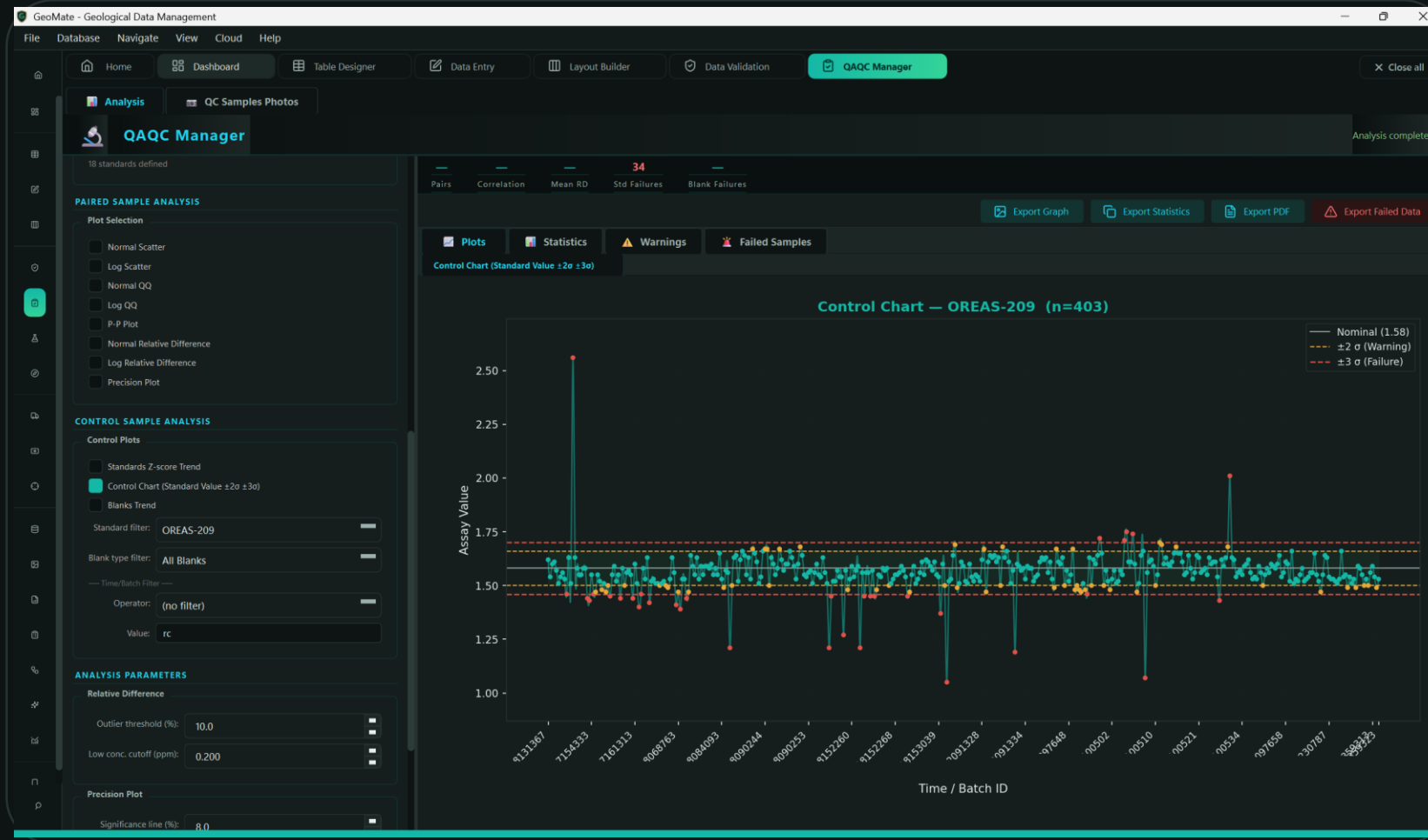
The dashboard



Actual GeoMate 2026 screen capture — Midnight theme.

- 1 Project KPIs**
Holes, metreage, samples, dispatches, results, RQD and grades.
- 2 Ten tabs**
Overview, progress, samples, map, log plot, configuration.
- 3 Global filters**
Date range, project, prospect and country code across every tab.
- 4 Non-blocking load**
A background worker populates the charts progressively.
- 5 Exports**
300 dpi PNG, Excel workbook, standalone HTML map.

Quality assurance



1 Eleven plots

Eight paired plots and three control plots.

2 Verdict bar

Pairs, correlation, mean RD, standard and blank failures.

3 Westgard rules

1-3s, 2-2s, 2of3-2s, R-4s as failures; 4-1s and 10-x as bias.

4 Batch verdict

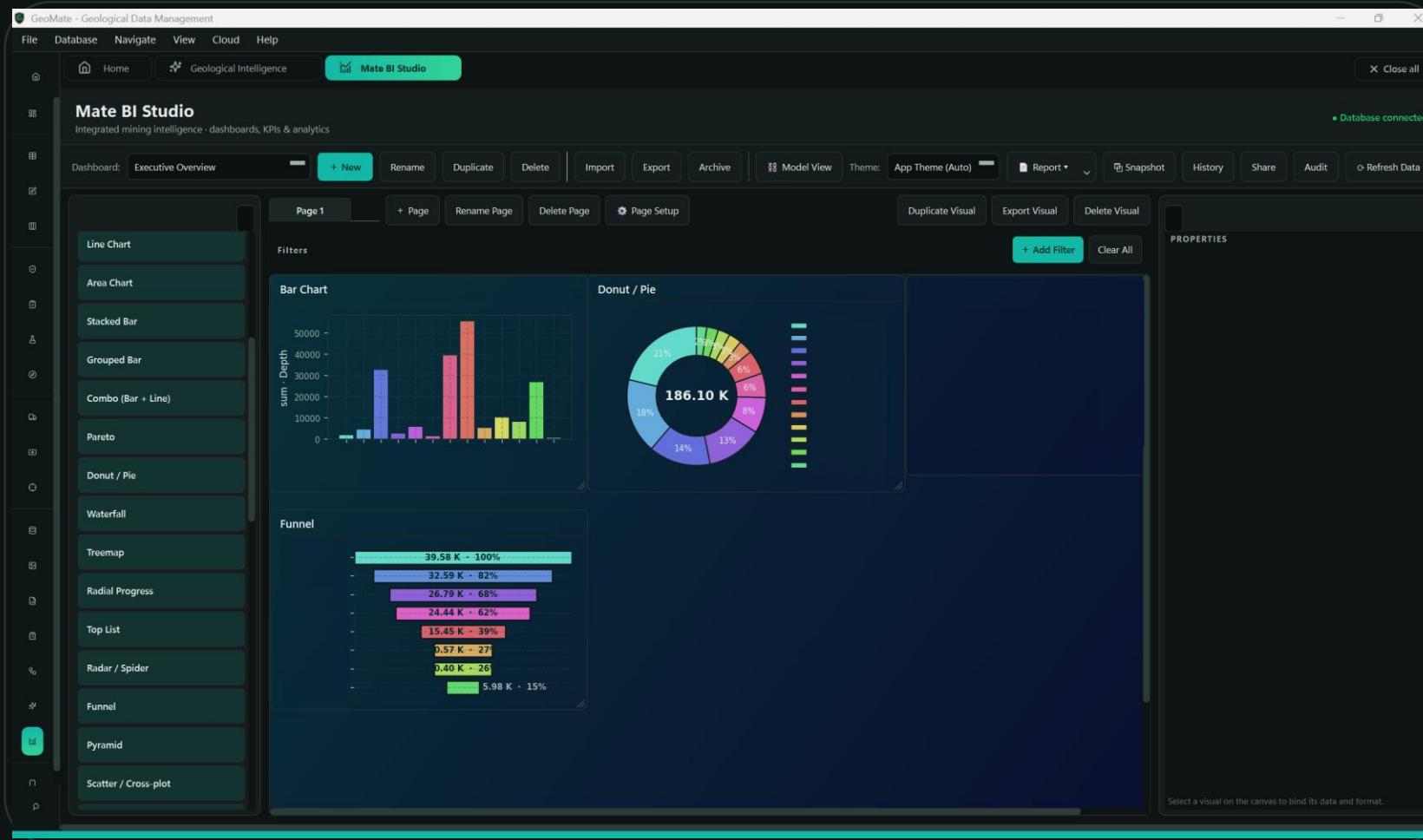
PASS, WARNING or FAIL with reasons, exportable to CSV.

5 Signed report

PDF with a Prepared / Reviewed / Approved block, and a database write.

Real control chart for the OREAS-209 standard over 403 readings, certified value 1.58, $\pm 2\sigma$ and $\pm 3\sigma$ envelopes.

Built-in business intelligence



1 Thirty-two visuals

Eight specifically mining: stereonet, variogram, grade-tonnage.

2 Relationship model

Joins drawn or detected; no fabricated cross-join.

3 Cross-filtering

One click on a bar filters the whole page.

4 Mining KPIs

Nineteen reference indicators with formula and thresholds.

5 Faithful export

PDF, PowerPoint and images at 300 dpi, identical to the canvas.

Mate BI Studio — thirty-two visuals, relationship model, faithful export to PDF, PowerPoint and images, with no connection.



GeoMate 2026

SECTION III

The data

A real dataset, exported from GeoMate: volumes, drilling breakdown and analytical quality evidence.

-
- 01 The demonstration dataset
 - 02 Drilling, in detail
 - 03 The quality evidence
 - 04 Key concepts
-

The demonstration dataset

Every figure in this deck comes from a real project, exported out of GeoMate — none is simulated.

805

DRILLHOLES

AC, RAB and RC across four prospects

41 736 m

METRES DRILLED

mean depth 51.8 m, maximum 126.0 m

26 377

SAMPLES

of which 19.7 % are control samples

198 335

LOGGED INTERVALS

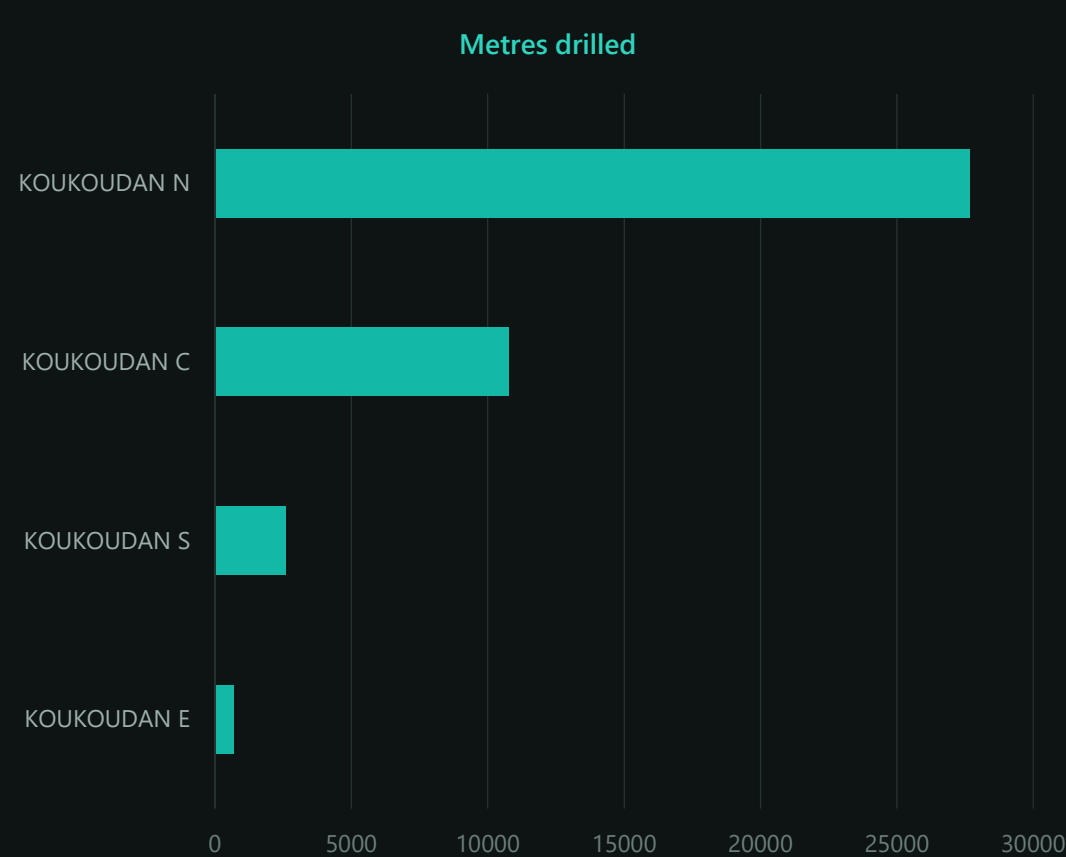
lithology, alteration, veins, minerals,
oxidation, weathering

Campaign run between 2009 and 2026 by three drilling contractors and twelve geologists, across four prospects spread over two UTM WGS84 zones — 28N and 29N. The database weighs 684 MB and holds 105 tables.

Source: KOUKOUDAN project database (Senegal) — figures computed from the real data exported from GeoMate.

Drilling, in detail

Four prospects, three rig types, two UTM zones.



BREAKDOWN	HOLES	METRES
KOUKOUDAN N	564	27 679
KOUKOUDAN C	184	10 773
KOUKOUDAN S	45	2 602
KOUKOUDAN E	12	682
TOTAL	805	41 736
Type RC	414	25 194
Type RAB	241	10 959
Type AC	150	5 583
Drilling contractors	3	
Geologists identified	12	

Source: KOUKOUDAN project database (Senegal) — figures computed from the real data exported from GeoMate.

The quality evidence

INDICATOR	REAL VALUE	READING
Standard insertion rate	1 / 17.1	Better than the usual 1-in-20 objective
Blank insertion rate	1 / 17.0	Better than the usual 1-in-20 objective
Duplicate insertion rate	1 / 18.4	Better than the usual 1-in-20 objective
Control sample share	19.7 %	5 191 controls out of 26 377 samples
Assays returned from the laboratory	11 740	two distinct analytical suites, one target table
Median Au grade	0.02 ppm	the campaign's background
P98 anomaly threshold	0.64 ppm	usable break in slope on the log-probability plot
Highest single assay	55.9 ppm	26 assays above 5 ppm
Structural measurements	568	mean strike 072°, mean dip 72°

Source: KOUKOUDAN project database (Senegal) — figures computed from the real data exported from GeoMate.

Key concepts

Project database

The Access file or SQL Server database holding the project's tables. Every module reads and writes that one, and only that one.

Interval table

A table carrying mFrom and mTo columns. Gap and overlap detection applies to these.

Control sample

A standard, a blank or a duplicate inserted into the stream to measure laboratory performance. 19.7 % of the demonstration dataset.

Project file (.dmproj)

The configuration container: database connection, capture layouts, column mappings and module settings.

Reference list

The closed list of values a coded field accepts — what stops three spellings of the same code coexisting.

Offline

The normal mode of operation: no outbound connection is required and no project data leaves the workstation.

The full documentation of every notion is reachable in the application with F1.



GeoMate 2026

SECTION IV

Governance & value

Roles and traceability, the technical integration profile, and what the platform concretely changes for a project.

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- 01 Security and governance
 - 02 Technical profile
 - 03 Frequently asked
 - 04 What the platform changes
-

Security and governance

MECHANISM	WHAT IT PROTECTS
Zeus, Admin, User, Entry roles	Page access configured account by account; the capture operator sees only capture.
PBKDF2 verifiers and HMAC protection	No clear-text passwords; an altered user record fails closed.
Account lockout	Automatic lockout after six failed attempts, manual unlock by an administrator.
Schema integrity lock	Locked columns can no longer be deleted, renamed or retyped; the table becomes undroppable.
Signed audit log	Separate SQLite database, HMAC-SHA256 signature verified on every open.
Correction log	Every value replaced by an import or a correction is reversible.
Offline enrolment tokens	An administrator issues a time-limited signed token; the user creates their account with no network and no shared credentials.
Privacy	GeoMate is entirely offline: data never leaves the machine.

Technical profile

Platform

Operating system

Windows 10 / 11

Interface

PySide6, Midnight and Aurora Light themes

Database

MS Access .accdb / .mdb, or SQL Server

Field companion

Android application, local SQLite storage

File types

.dmproj

Project: layouts, mappings, configurations

.gmate / .geomatepkg

Data packages, transfer and mobile synchronisation

.gmrpt / .gmbl

Report template, and BI dashboard

.gml

Licence — offline enrolment by signed token

Deliverables produced

Documents

Signed PDFs up to 300 dpi, A4 to Ledger

Spreadsheets

Multi-sheet Excel .xlsx, CSV

Decks

Bilingual PowerPoint from geochemistry and BI Studio

Maps and figures

Interactive HTML, 300 dpi PNG, vector SVG

Frequently asked

Q Is an internet connection required?

No. The platform runs entirely offline. Only the basemap tiles are downloaded, and they carry none of the project's data.

Q Access or SQL Server?

Both. Access suits one project and a small team; SQL Server becomes necessary as soon as several workstations write in parallel, or the database passes a few hundred megabytes.

Q Do existing data have to be migrated?

The External Data module imports CSV, Excel, Access and GeoMate packages, with an explicit conflict mode. An earlier campaign is taken in with no re-keying.

Q How long to become operational?

Initial configuration — schema, capture layouts, mappings — is done once per project and carried from one campaign to the next. Capture itself does not call for lengthy software training.

Q Are the results JORC / NI 43-101 compliant?

The Geological Intelligence figures are exploration targets, explicitly labelled as not code-compliant. Compliance rests with the competent person who signs.

Q What happens if a workstation fails?

The data lives in the project database, not on the workstation. The configuration lives in the .dmproj file, which is copied. A workstation is replaced with no loss.

Built-in documentation: press F1 in the application, or see the relevant module's detailed deck in this collection.

What the platform changes

The defect is stopped where it starts

Overlap refused at capture, off-reference code impossible, mobile package checked before the write: correction happens at its cheapest moment.

Upstream checking

The chain stops being a run of exports

Database, capture, QA/QC, dispatch, interpretation and reporting share the same project file — no more re-keying between packages.

19 modules, 1 database

The deliverable is produced, not outsourced

Signed QA/QC report, bilingual geochemical deck, BI dashboard: what used to be bought from a consultant comes out of the software.

PDF · PPTX · XLSX

Site gets the same tool as head office

No server, no subscription, no connection required — including for BI and mobile synchronisation.

100 % offline

The database becomes defensible

Dated validation, stored QA/QC verdicts, signed audit log and reversible corrections: the auditor's question finds its answer.

Auditable



One platform, from field to report

Nineteen modules, one project database, no connection required. Every module in this collection has its own detailed deck, in French and in English.

GeoMate 2026.3.1.5 · 19 modules · 6 groups · Overview

GeoMate 2026 · Built-in documentation: press F1 in the application

Platform presentation document · GeoMate 2026 · internal use · 00-overview · v2026.3.1.5