



DATA MANAGEMENT

Data Entry

Executive summary

Data Entry is the logging geologist's workstation: one tab per table, a grid on top, a form below, and gap-and-overlap detection that blocks the save before the error reaches the database.

01 What it replaces

The logging notebook re-keyed in the evening, with its double handling, its mis-copied depths and its overlaps discovered three months later.

02 How it works

The form is the one the Layout Builder drew: value lists, computed fields and visibility rules included. Interval validation runs on every keystroke.

03 Who it is for

The geologist at the rig and the data-entry technician: both work on the same database, with the same reference lists and the same checks.

Volumes measured on the KOUKOUDAN project database.

198 335

intervals captured on the campaign

6

logging tables kept in parallel

0

overlaps tolerated on save

Ctrl+N

to chain the next interval

Contents

01 One entry surface per table

Record grid on top, configurable form below.

02 Edit Mode

Drag and resize the fields with the mouse, then save.

03 Formulas and conditions

Computed fields, conditional visibility, locked fields.

04 Interval checking

Gap and overlap detected as you type; saving is blocked.

05 Reference lists

Dropdowns are fed from the project's rf* reference tables.

06 Project filter and codes

A country/project filter applies across all tabs at once.

07 Anonymised data

198,335 logged intervals captured on the KOUKOUNDAN campaign.

08 Business value

The check happens at capture, not three months later.



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SECTION I

The module

The problem addressed, the capabilities delivered, the processing chain and the module's place in the platform.

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- 01 Context
 - 02 Key capabilities
 - 03 Processing chain
 - 04 Place in the platform
-

Context

The overwhelming majority of defects in a drillhole database are born at capture: an interval overlapping the previous one, a code that exists in no list, a depth that missed the decimal point.

GeoMate moves the check to where it is cheapest — under the geologist's fingers, at the moment the row is saved.

— An overlap blocks the save

On any table carrying mFrom / mTo, an interval starting before the end of the previous one is refused, with the conflicting depths shown.

— A gap is reported, not refused

An unsampled zone is geological information, not an error: it is flagged and left to the geologist's judgement.

— The form belongs to the project

The field layout is stored in the .dmproj file and follows the team from one workstation to the next.

The screenshot displays the GeoMate Geological Data Management software interface. The top menu bar includes File, Database, Navigate, View, Cloud, and Help. Below the menu, there are tabs for Home, Dashboard, and Table Designer. The main window is titled "Data Entry" and features a "Save Project" button. The form is divided into several sections for data entry, including Project, Drillhole Entry, and various geological parameters. A table at the bottom lists drillhole records with columns for ID, PLANID, PROGRAMTYPE, ROIC, OLEI, GRID, UTM EASTING, UTM NORTHING, UTM RL, DEPTH, AZIMUTH, DIP, COLLISURVTYPE, HOLEPURPOSE, PRECOLLAR, DRILLTYPE, STICKUP, and RIG. The table shows a list of drillholes with their respective coordinates and depths.

ID	PLANID	PROGRAMTYPE	ROIC	OLEI	GRID	UTM EASTING	UTM NORTHING	UTM RL	DEPTH	AZIMUTH	DIP	COLLISURVTYPE	HOLEPURPOSE	PRECOLLAR	DRILLTYPE	STICKUP	RIG
9810	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	170.15	37.0	90.0	-60.0	GPS	N	AC					
9811	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	168.63	47.0	90.0	-60.0	GPS	N	AC					
9812	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	170.29	31.0	90.0	-60.0	GPS	N	AC					
9813	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	170.41	33.0	90.0	-60.0	GPS	N	AC					
9814	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	172.0	45.0	90.0	-60.0	GPS	N	AC					
9815	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	171.9	27.0	90.0	-60.0	GPS	N	AC					
9816	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	172.01	31.0	90.0	-60.0	GPS	N	AC					
9817	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	171.5	20.0	90.0	-60.0	GPS	N	AC					
9818	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	170.05	27.0	90.0	-60.0	GPS	N	AC					
9819	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	170.36	50.0	90.0	-60.0	GPS	N	AC					
9820	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	170.49	33.0	90.0	-60.0	GPS	N	AC					
9821	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	170.04	50.0	90.0	-60.0	GPS	N	AC					
9822	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	168.57	50.0	90.0	-60.0	GPS	N	AC					
9823	Plan...	EXPLORATI...	KD...	B...	UTM_WGS84...	167.11	27.0	90.0	-60.0	GPS	N	AC					

The Disable Gap/Overlap button exists for non-contiguous spot-sample campaigns. Always switch it back on afterwards.

Key capabilities



01

One tab per table

Collars, metadata, surveys, samples, lithology, minerals, alteration, oxidation, veins, weathering, recovery, density, geotechnics, structures.



02

Edit Mode

A toggle that makes every field draggable and resizable — the form mirrors the order of the paper logging sheet.



03

Formula fields

A field marked f computes its value: interval length, composite identifier, converted grade. The geologist never types it.



04

Conditional visibility

A field marked  appears only when a condition holds — the alteration block opens only on an altered lithology.



05

Interval checking

Live gap and overlap detection on mFrom / mTo, with the conflicting depths named in the status bar.



06

Reference lists

Every dropdown draws on an rf* table: a code absent from the list cannot be entered.

Processing chain

What comes in at the keyboard, what the application checks, what gets written.

A Inputs

Field and reference lists

- Logging observations: lithology, alteration, veins, minerals
- From and to depths, interval length
- Value lists defined per table and per field
- Form layout coming from module 04
- Project / country filter active across every tab

B Live checks

On every keystroke, before writing

- Gap detection: an interval starting below the previous one
- Overlap detection — the save is blocked
- Formula fields recomputed and flagged with f
- Conditional visibility rules flagged with 
- Schema constraints: required, type, uniqueness

C Outputs

Project database

- Record created or updated — Ctrl+S
- Insert and clear the form for the next interval — Ctrl+N
- Grid refreshed instantly
- Layout saved into the .dmproj file
- Data immediately readable by every other module

THE GUARD RAIL AND ITS RELEASE

The overlap block is deliberately strict: it is the most expensive error to correct afterwards. For legitimately non-contiguous capture — spot samples, for instance — the Disable Gap/Overlap button lifts the check temporarily. To be switched back on afterwards.

The status bar names the conflicting depths: that is where to look when a record refuses to save.

Place in the platform

FED BY

02 Table Designer

Defines the tables and fields that become the capture tabs and controls.

04 Layout Builder

Draws the form, its value lists, its formulas and its visibility rules.

19 Mobile Sync

Brings back the .geomatepkg packages captured in the field for integration.



Data Entry

The point at which data enters the platform.
Everything analysed, validated or published
later is captured here.

FEEDS

05 Data Validation

Runs the thirty geological rules over what has just been captured.

09 Dispatch Manager

Takes the sample register to build the laboratory submissions.

01 Dashboard

Counts, aggregates and maps what has been captured.

Gap and overlap detection applies only to tables carrying mFrom / mTo columns — that is, to every interval table.



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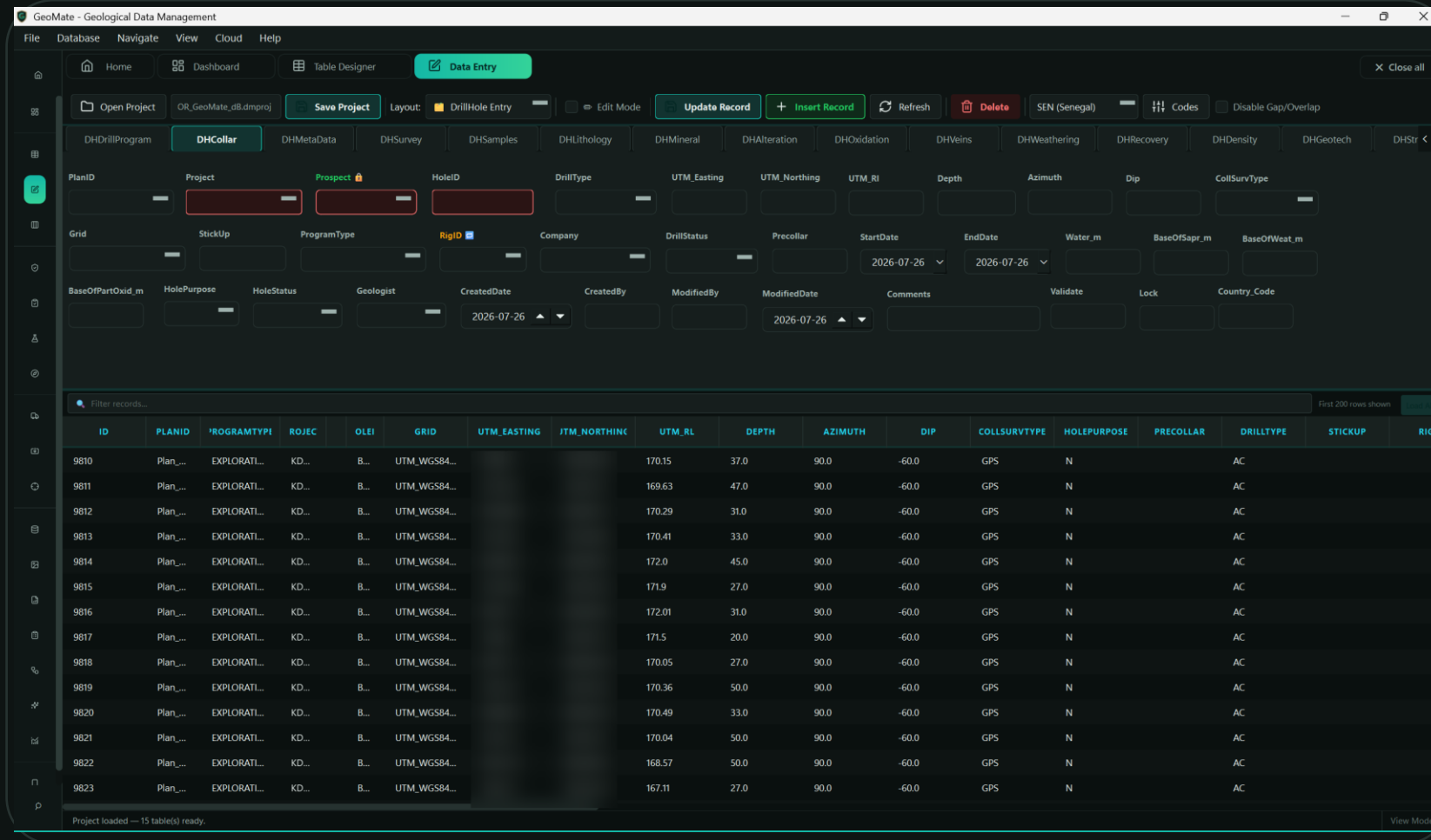
SECTION II

In practice

The real interface, the operating workflow, the reference settings, good practice and the questions that come up.

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- 01 The interface
 - 02 Operating workflow
 - 03 In depth
 - 04 Good practice
 - 05 Frequently asked
-

The interface



1 Toolbar

Open/Save project, active layout, Edit Mode, insert, refresh, delete, country filter.

2 Table tabs

The 15 tables of the "DrillHole Entry" layout, in the order set in the Layout Builder.

3 Configurable form

Freely positioned fields; unfilled required fields are outlined in red.

4 Record grid

The first 200 rows, filterable; one click loads the record into the form.

5 Status bar

Confirms the project load, the number of tables ready and the current mode.

Actual GeoMate 2026 v2026.3.1.5 screen capture — Midnight theme.

Operating workflow

The capture loop is five actions and never leaves the keyboard.

1

Pick the tab

Lithology, alteration, samples — the tab maps onto the database table.

2

Load or create

A click in the grid loads the row; Ctrl+N opens a blank record.

3

Fill in

Dropdowns offer valid codes only; formula fields compute themselves.

4

Automatic check

Gap and overlap are evaluated on the fly on mFrom / mTo before the write.

5

Save

Ctrl+S writes the row and updates the grid immediately.

Toolbar and shortcuts

COMMAND	SHORTCUT	EFFECT
Open Project	—	Opens a .dmproj and connects its database
Save Project	—	Writes every form layout into the project file
Edit Mode	—	Enables field dragging and resizing
Update Record	Ctrl+S	Saves the form as a new or updated record
Insert Record	Ctrl+N	Inserts, then clears the form for the next entry
Refresh	F5	Reloads data and reference lists for the current table
Delete	—	Permanently deletes the selected records
Project filter	—	Restricts every tab to one country / project code

Edit Mode badges

Three markers are enough to understand a form inherited from another geologist.

BADGE	MEANING	WHAT IT MEANS FOR THE OPERATOR
	The field carries an automatic formula	The value is computed: do not type it, it would be overwritten
	The field carries conditional visibility rules	It appears or disappears according to another field's value
	The field position is locked	Drag-and-drop is disabled for that field

Good practice

The habits of a clean capture session.

✓ Open the right project

The project / country filter applies to every tab: capture done under the wrong code lands in the wrong scope.

✓ Capture in depth order

Gap and overlap detection compares against the previous interval: sequential capture keeps its messages legible.

✓ Read the status bar on refusal

It names the conflicting depths. That is faster than re-reading the whole hole.

✓ Switch the check back on

Disable Gap/Overlap is a momentary release, not a session setting. Left on, it lets real overlaps through.

✓ Use Ctrl+N to chain

Insert-and-clear avoids accidentally editing the previous record — the most common capture error.

✓ Save the project at session end

The form layouts live in the project file: they are preserved only by Save Project.

Frequently asked

What comes up most often while capturing.

Q “Interval overlap detected” — now what?

An existing interval in the same table conflicts with the range you typed. The status bar gives the conflicting depths; adjust them. If the overlap is intentional, use Disable Gap/Overlap temporarily.

Q Why is this field orange?

The f badge marks a formula field: its value is computed, not typed. Changing the source fields updates it.

Q A field has disappeared from the form

The  badge indicates a conditional visibility rule: the field shows only when its condition is met. It is set in the Layout Builder.

Q How do I move a field on the form?

Turn on Edit Mode: fields become draggable and resizable. The  badge marks a locked position.

Q Difference between Update and Insert?

Update Record (Ctrl+S) writes to the loaded record; Insert Record (Ctrl+N) creates a new one and clears the form for the next.

Q Where do the dropdowns come from?

From the database's reference lists, wired field by field in the Layout Builder. Refresh reloads them after a change.



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SECTION III

The data

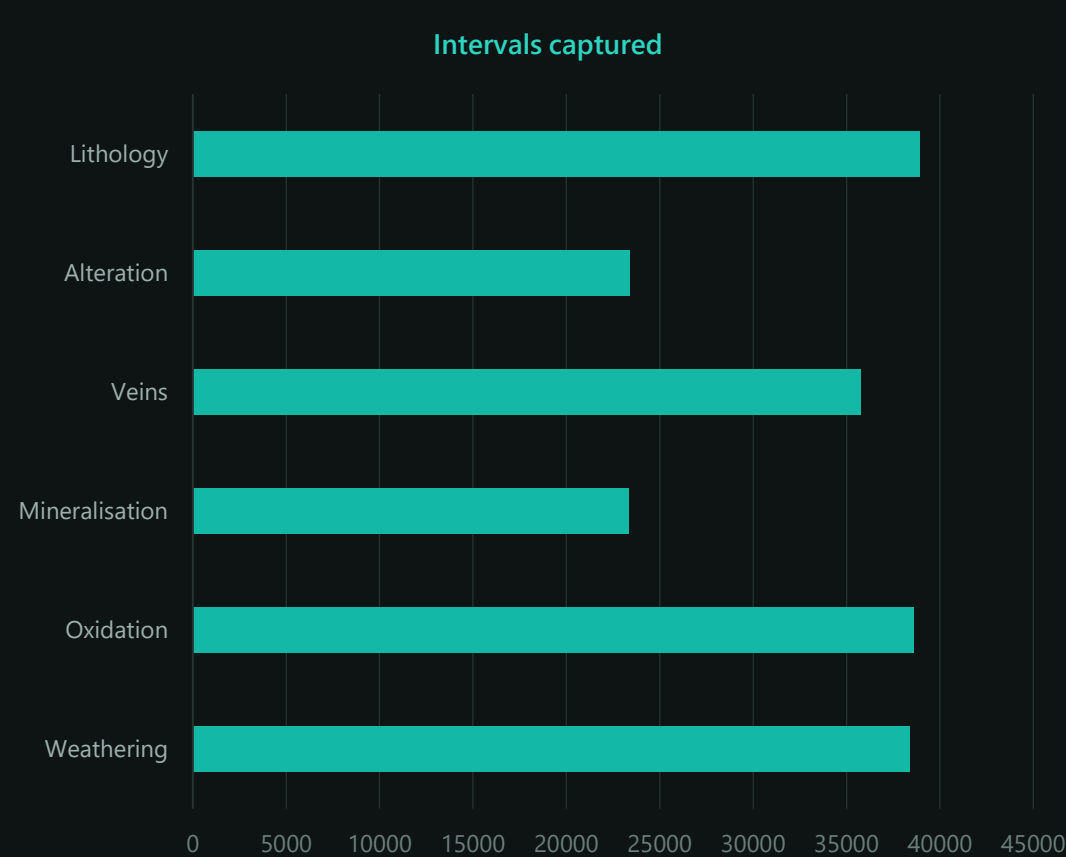
What the module produces on a real dataset, and the vocabulary needed to read those results.

01 Anonymised data

02 Key concepts

Anonymised data

Volume actually captured on the KOUKOUDAN campaign, by logging table.



LOGGING TABLE	INTERVALS	METRES LOGGED
Lithology	38 924	39 160
Alteration	23 400	37 000
Veins	35 756	37 048
Mineralisation	23 319	36 362
Oxidation	38 572	40 907
Weathering	38 364	38 785
TOTAL CAPTURED	198 335	
Collars	805	41 736
Survey stations	5 645	

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

Key concepts

The vocabulary of interval capture.

Interval

A run between two depths, mFrom and mTo, to which observations attach. The elementary unit of any log.

Overlap

An interval starting before the end of the previous one: the same run described twice. Blocking on save.

Conditional visibility

A rule that shows a field only in a given context: the form displays only what is relevant.  badge.

Gap

An interval starting below the end of the previous one: a zone of the hole described by nothing. Flagged, not blocking.

Formula field

A field whose value is computed from others — interval length, weighted grade. *f* badge in edit mode.

Reference list

The closed list of values a coded field will accept. It is what stops "SCH", "Sch" and "schist" coexisting.



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SECTION IV

Value & specifications

What the module changes for the project, and its technical integration profile.

01 Business value

02 Technical profile

Business value

The error is stopped at source

An interval overlap never enters the database: it is refused at save time, not discovered at validation three months later.

Blocked on the spot

The form matches the paper sheet

Edit Mode reproduces the exact order of the logging sheet — the geologist stops hunting for fields.

No learning curve

Off-reference codes disappear

A dropdown fed by the rf* tables makes an invented code impossible to type — the first cause of noise in a database.

Guaranteed codes

Computed fields stop being wrong

Interval lengths, composite identifiers and conversions are produced by formula, never re-typed.

Auto-computed

One configuration for the whole team

The layout lives in the project file: every workstation opens the same form, in the same order.

.dmproj file

Technical profile

Form

Layout

Free drag-and-drop, per-field position and size

Formulas

Dedicated editor, references to other fields in the table

Conditions

Per-field visibility rules, condition editor

Persistence

Stored in the .dmproj project file

Capture-time checks

Intervals

Overlap blocks, gap reported

Required

Unfilled field outlined in red

Reference lists

Dropdowns fed from the rf* tables

Logging

Created-by / modified-by and timestamps written automatically

Scale

Tables in the layout

15 (extensible to 101)

Grid preview

First 200 rows, full-text filter

Multi-user

Shared Access database or SQL Server

Field

Complemented by the GeoMate Android app



One platform, from field to report

The “Data Entry” module is one of the 19 modules of GeoMate 2026 — a single, fully offline platform covering the whole chain: database design, data entry, validation, QA/QC, dispatch, analysis and reporting.