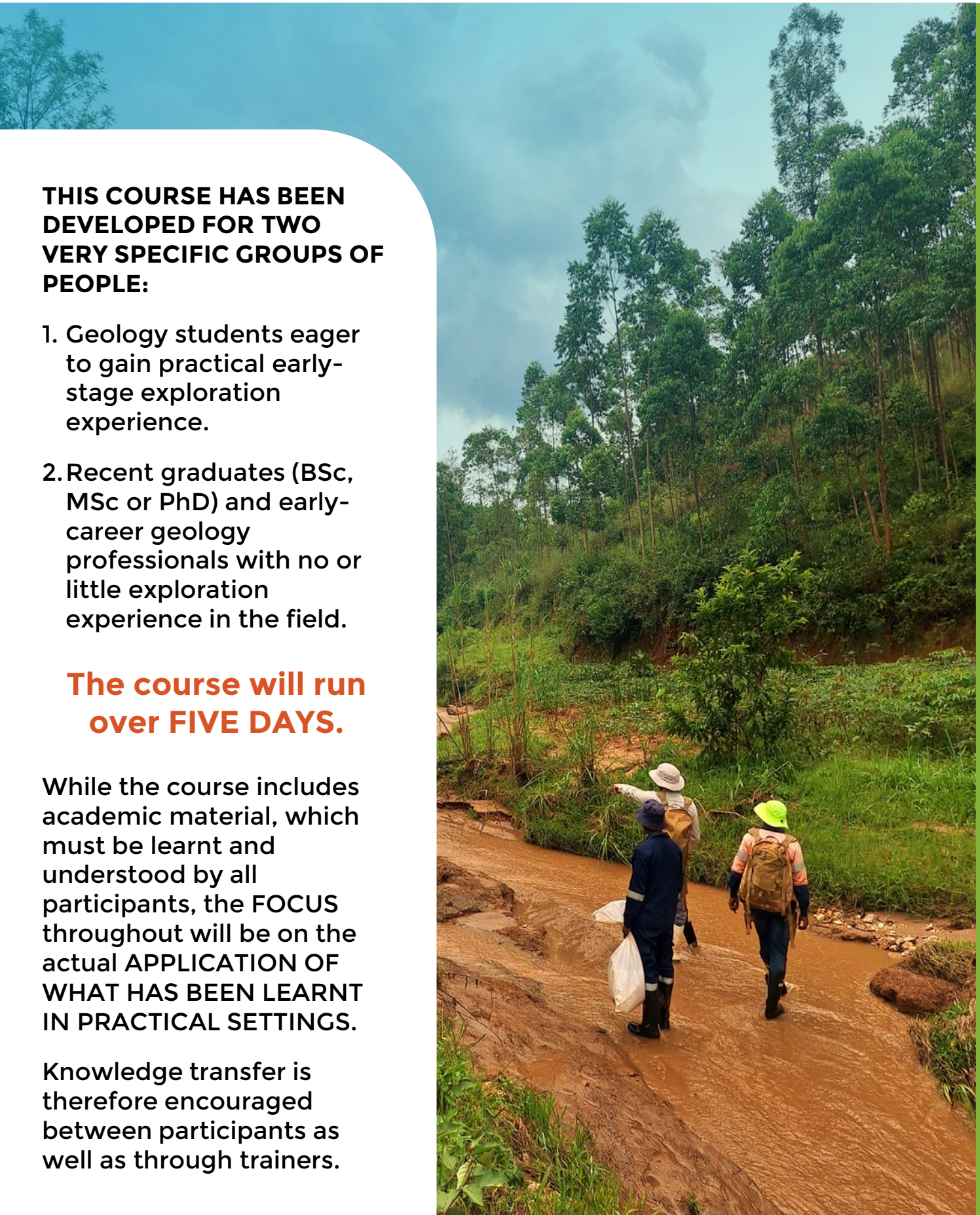
GEOFICIENT

BRIDGING THE GAP BETWEEN EDUCATION AND EXPERIENCE

MINERAL EXPLORATION FIELD SCHOOL | 6 – 10 July 2026

GEOFICIENT – BRIDGING THE GAP BETWEEN EDUCATION AND EXPERIENCE

COURSE OVERVIEW



THIS COURSE HAS BEEN DEVELOPED FOR TWO VERY SPECIFIC GROUPS OF PEOPLE:

1. Geology students eager to gain practical early-stage exploration experience.
2. Recent graduates (BSc, MSc or PhD) and early-career geology professionals with no or little exploration experience in the field.

The course will run over FIVE DAYS.

While the course includes academic material, which must be learnt and understood by all participants, the FOCUS throughout will be on the actual APPLICATION OF WHAT HAS BEEN LEARNT IN PRACTICAL SETTINGS.

Knowledge transfer is therefore encouraged between participants as well as through trainers.

COURSE OUTLINE

This course will further develop your understanding of the critical role that each of the following aspects plays in early-stage greenfields exploration.

LIST OF MODULES

1. **HSEC & FIELD AWARENESS**

2. **GPS FIELD NAVIGATION**
   - Practical Exercise

3. **COMPASS FIELD USE**
   - Practical Exercise
   - Stereonet workshop

4. **OVERVIEW OF METHODS IN SURFACE GEOCHEMICAL SAMPLING**
   - Practical Exercise – Stream sediment sampling
   - Practical Exercise – Soil sampling

5. **GEOCHEMICAL SAMPLING FUNDAMENTALS & QAQC**
   - pXRF field laboratory workshop

While the course includes academic material, which must be learnt and understood by all participants, the focus throughout will be on the actual application of what has been learnt in practical settings.

Knowledge transfer is therefore encouraged between participants as well as through trainers.

LEARNING OUTCOMES

BY THE END OF THIS COURSE, YOU WILL BE ABLE TO:

Utilize a COMPASS and GPS for precise FIELD NAVIGATION.

Use STEREONETS for plotting, analysing and INTERPRETING FIELD collected DATA to drive real-time exploration decision making.

Plan and execute surface GEOCHEMICAL SAMPLING SURVEYS with proper QA/QC protocols.

Run a FIELD pXRF LABORATORY.

Demonstrate continuous HSEC AWARENESS and field SAFETY PRACTICES.

THE ROLE OF EXPLORATION

THE NEED FOR RESOURCES EXCEEDS CURRENT SUPPLY AND REQUIRES LONG-TERM EFFORTS.

Thus, NEW RESOURCES need to be developed.

- **WHERE** do we find these resources?
- **HOW** do we find these resources?
- How do we continuously **IMPROVE OUR UNDERSTANDING** of these resources?

The answer to all these questions is **MINERAL EXPLORATION.**

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MINERAL EXPLORATION

The EXPLORATION PROCESS is a multi-stage scientific investigation aimed at discovering new natural resources.

Exploration takes a long time, and few projects lead to mines, for any number of reasons, for example;

- The resource is too small or low grade
- Fluctuating commodity cycles
- Stakeholder negotiation difficulty and license disputes
- Even if everything goes as planned, and you manage to find a mineral resource and obtain all the permits, the process can take between 10-25 years.

PHASE	TIMEFRAME (TYPICAL)	KEY ACTIVITIES	METHODS / TOOLS	OUTPUTS / DELIVERABLES	TYPICAL ATTRITION / RISKS	APPROX. PROJECTS REMAINING (FROM ORIGINAL 500)
1. PROJECT INITIATION	Year 0–1	Tenement acquisition, stakeholder engagement, preliminary desktop studies	GIS analysis, historical data review, satellite imagery, government land records	Target area(s) staked /optioned; initial geological model	Low cost but high uncertainty; regulatory hurdles	**~500**
2. FIELD INVESTIGATIONS	Year 1–3	Geological mapping, Geochemical & geophysical surveys; remote sensing; initial environmental baseline	Soil / rock / stream sediment sampling, airborne / magnetics / gravity / IP geophysics, geological / structural mapping	Anomalies identified; anomaly maps	Costly field work; false positives	**~100 – 200**
3. TARGET EVALUATION	Year 2–4	Ranking & prioritization; preliminary 3D modelling; initial metallurgical scoping	Anomaly ranking matrices, early-stage resource modelling software	Ranked drill targets	Technical & economic filters applied	**~100**
4. FIELD WORK – FIRST DRILLING PHASE	Year 3–6	Reconnaissance drilling; down-hole geophysics; basic metallurgical tests	Reverse Circulation (RC) or diamond core drilling; core logging & sampling	Initial intersection of mineralization confirmed	High cost (~millions per program); "dry" holes common	**~50**
5. FIELD WORK – SECOND DRILLING PHASE	Year 5–10	Infill & step-out drilling; hydrogeological & geotechnical studies; expanded environmental /social baseline	Denser diamond drilling; oriented core; environmental monitoring wells	Mineralization continuity & geometry better defined	Escalating costs; technical complexity	**~10 – 20**
6. RESOURCE ESTIMATION	Year 8–15+	Compliant resource modelling (JORC, NI 43-101, etc.); preliminary pit/shell optimization; scoping-level economic analysis	3D geological modelling (e.g. Leapfrog, Datamine); QA/QC protocols	Inferred / Indicated / Measured resources declared; preliminary mine plan	Very high capital & time investment; must meet economic thresholds	**~0 – 2**

MINERAL EXPLORATION FIELD SCHOOL Mineral Exploration

MINERAL EXPLORATION CONT.

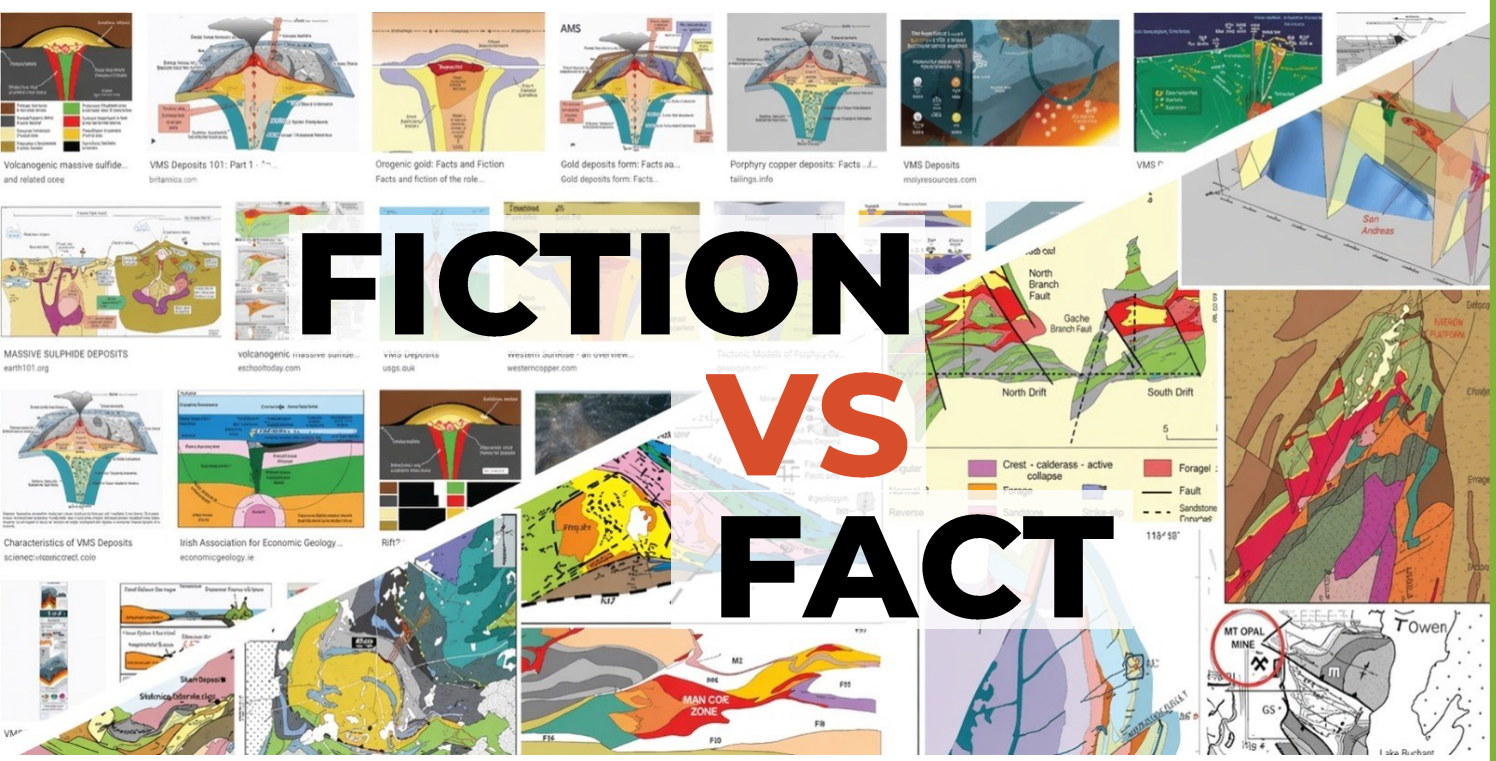
Since very few projects evolve from concept to mine, it is critical that the exploration team records and compiles accurate GEOLOGICAL DATA to ensure a robust geological understanding and interpretation.

As an aspiring exploration geologist, you will partake in various field work components that form the backbone of any EARLY-STAGE GREENFIELDS exploration program.

Understanding what field-data you will be collecting and how to WORK SAFELY and efficiently is critical to the success of these programs.

WHY WE NEED MORE BOOTS ON THE GROUND

Teaching via conceptual "cartoon" deposit models often clashes with real-world geology, fact-based mapping, cross-sections, and 3D models driven by drilling and assay datasets.



Source: Cowan, J. 2021 (https://www.linkedin.com/pulse/what-one-common-feature-volcanogenic-massive-sulfide-deposits-cowan/?trackingId=w7L9Vy6uTt%2BHrbtKRW%2FGyg%3D%3D)

MINERAL EXPLORATION FIELD SCHOOL Boots on the Ground

WHY WE NEED MORE BOOTS ON THE GROUND CONT.

- Generative AI and specialised LLM's can automate analysis of large geochemical datasets to accelerate discovery; however, these tools are only as effective as the underlying data.

  Poor-quality field data leads to unreliable outputs: garbage in, garbage out.

- Ground-truthing and validation; ensure anomalies align with actual geology, reducing false positives and costly misdirected exploration efforts.

EXPERIENCED AND COMPETENT FIELD GEOLOGISTS REMAIN ESSENTIAL FOR MAKING NEW DISCOVERIES!

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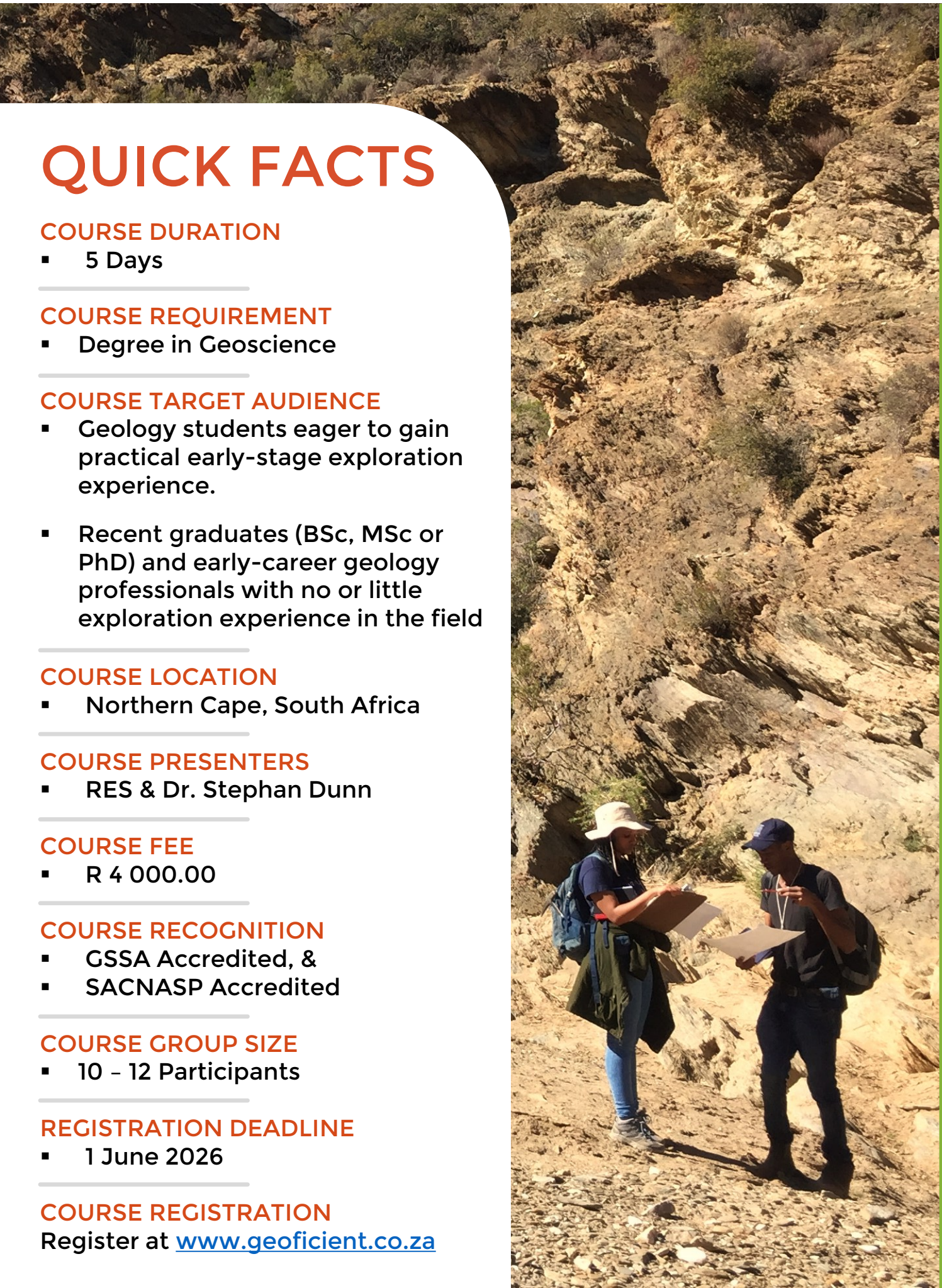

MINERAL EXPLORATION FIELD SCHOOL Boots on the Ground

QUICK FACTS

COURSE DURATION
- 5 Days

COURSE REQUIREMENT
- Degree in Geoscience

COURSE TARGET AUDIENCE
- Geology students eager to gain practical early-stage exploration experience.
- Recent graduates (BSc, MSc or PhD) and early-career geology professionals with no or little exploration experience in the field

COURSE LOCATION
- Northern Cape, South Africa

COURSE PRESENTERS
- RES & Dr. Stephan Dunn

COURSE FEE
- R 4 000.00

COURSE RECOGNITION
- GSSA Accredited, &
- SACNASP Accredited

COURSE GROUP SIZE
- 10 – 12 Participants

REGISTRATION DEADLINE
- 1 June 2026

COURSE REGISTRATION
Register at www.geoficient.co.za

COURSE PRESENTERS

Dr. Stephan Dunn

Stephan holds a PhD in Economic Geology from Stellenbosch University and has been involved in managing a number of projects across Africa for our clients.

His main interest lies within the exploration for structurally-controlled gold and sediment-hosted stratiform copper deposits. More recently, Stephan has branched into the exploration for critical metals, being involved in brownfields Lithium projects in Madagascar and Rwanda.

RES
EXPLORE INTERPRET DISCOVER

RES serves the global mining and exploration industry through the design, execution and analysis of early and advanced stage mineral exploration projects across Africa.

RESPRIME
PROFESSIONAL RIGOR IN MINERAL EXPLORATION

RESPRIME NPC is a non-profit training and development company providing accredited, practical and relevant geoscience training to industry, early career professionals and recent graduates with a focus on fieldwork, geophysics, surveying and exploration geology.

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