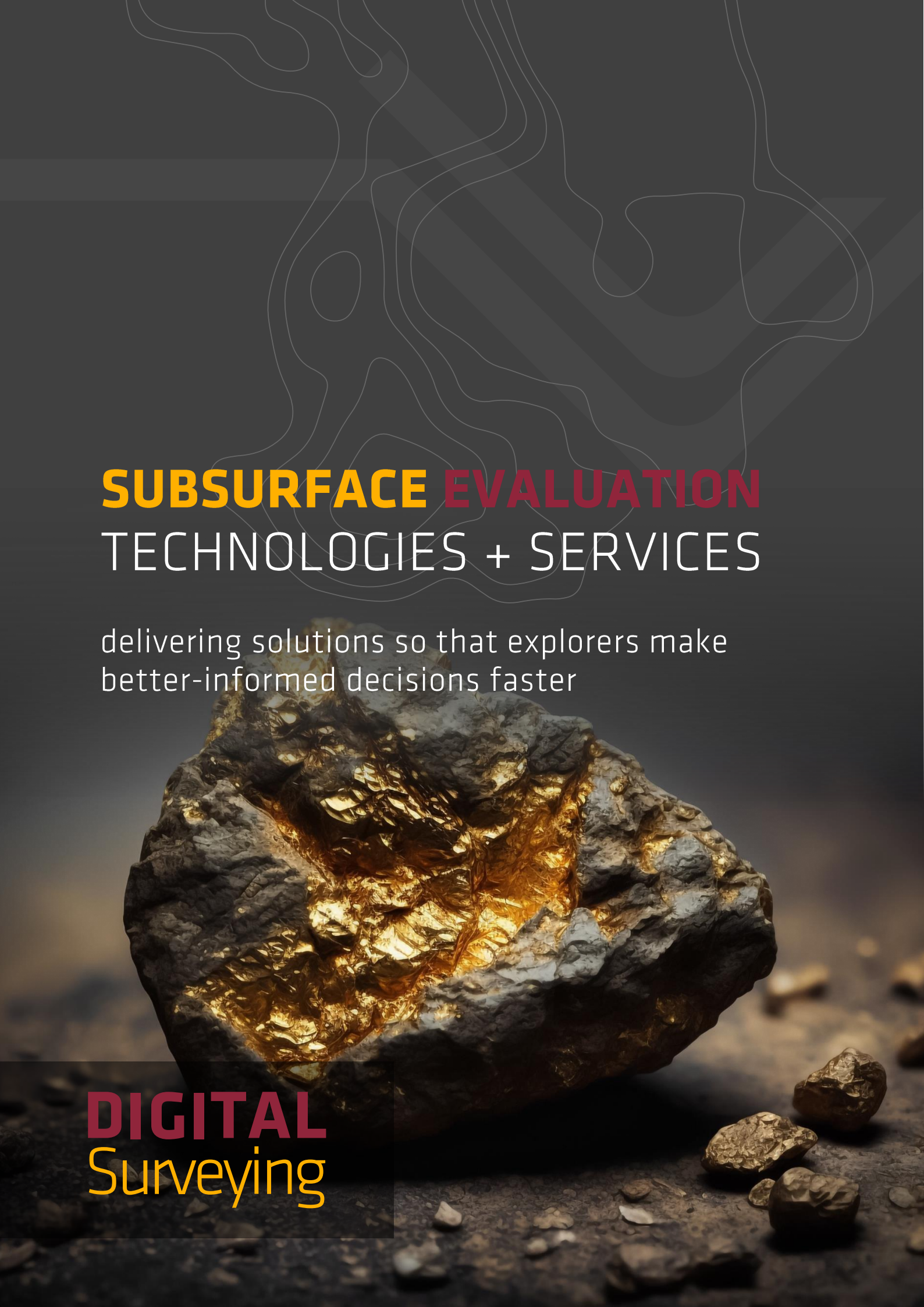
SUBSURFACE EVALUATION
TECHNOLOGIES + SERVICES

delivering solutions so that explorers make better-informed decisions faster



DIGITAL Surveying

WHO WE ARE

OUR **INTEGRITY** IS NEVER OPTIONAL.

Digital Surveying opened its doors in 2002 and has subsequently grown to become the **most diverse subsurface evaluation industry partner** by incorporating geophysical, geotechnical and hydrogeological methods into the original directional survey business.

A **trusted agent & distributor** for numerous leading brands across the extractives industries, Digital Surveying is a **turnkey provider** of **custom solutions** to meet your most demanding of project requirements.

GEOTECH & HYDRO

Geotechnical applications require the highest level of **quality assurance** as they address both **commercial & operational risk**. DS provides complete in-situ geotechnical and hydrogeological information using the latest available technologies including **Magnetic Resonance** (non-nuclear derived porosity) & **Radar** (off-hole imaging).

A **complete understanding** of the **structural environment** within which we operate is the goal to mitigate the risks associated with earth excavations.

ENGAGE DS TO ENSURE YOU HAVE THE **RIGHT KNOWLEDGE** TO **OPERATE SAFELY**.

GEOSCIENCE

WE ARE **TRUSTED** BECAUSE WE **DELIVER** GEOSCIENCE DONE **RIGHT**

Synthesis

Driving beyond mere data acquisition, all DS deliverables undergo **rigorous quality assurance**, as we know that *confidence is critical*. Our Geoscience **teams** provide **specialist formation evaluation & ore body knowledge** through expert driven processes through our **Synthesis** solutions.

Further **advances** in interpretive technologies have allowed our teams to extract yet further information from big data. DS' **machine learning** processes are able to provide proxies for lithology and grade, given the right combination of petrophysical parameters **expediting the knowledge gain** for our exploration clients.

Delivering Cutting Edge Technology & Subsurface Evaluation Solutions Worldwide

DS Answer Products

Digi-Surv

On all drilling projects, boreholes are planned to maximise the intersection of subsurface structures or orebodies. This requires that the initial rig alignment is accurate. Making use of dedicated rig alignment systems is cost-effective and provides recorded assurance.

Digi-Surv provides professional surface and underground survey-as-a-service including:

- North-seeking rig-alignment
- Electronic multi-shot survey
- North-seeking gyroscopic survey

Enviro-Log

The ability to quickly and routinely acquire calibrated, repeatable data from monitoring wells has become imperative. Combining aspects of petrophysical and hydrological logging, Enviro-Log provides focused interpretation of subsurface conditions including:

- Aquifer location
- Clay mapping and typing
- Porosity
- Flow under static or induced conditions
- Hydraulic conductivity
- Water quality, temperature and conductivity
- Casing inspections and screen locations
- Open-hole condition checks

Petro-Log

In-situ, high-precision and accuracy determination of petrophysical properties aid geoscientists in understanding the subsurface including mineralized ore bodies. Key areas in petrophysical studies include:

- Multiscale distributions
- Geospatial variations
- Elemental concentrations
- Lithology, mineralogy and formational processes
- Metamorphic processes and alteration
- Ore presence and concentrations

Tech-Log

Understanding structures and mechanical properties is vitally important to any excavation or construction project. Borehole logging and radar rapidly acquires in-situ, high-resolution data that informs:

- Fault, shear and fracture orientations and classifications
- Bedding and foliation orientations
- Fracture frequencies and RQD
- Continuous dynamic elastic moduli (calculated from density and sonic velocities)
- Site-calibrated geohazard indices

Hydro-Log

Understanding subsurface fluid distribution informs various studies associated with mine design, dewatering infrastructure and aquifer management. Technologies include Borehole Magnetic Resonance, which rapidly acquire in-situ, high-resolution data that informs:

- Aquifer location
- Flow under static or induced conditions
- In-situ porosity characterization
- Free and bound fluid volume
- Hydraulic conductivity
- Clay mapping and typing
- Wet & dry bulk densities

Synthesis

Expert interpretation of wireline log data is still common, however semi-automated interpretations and the application of machine learning algorithms are now integral to the informed decision-making process. Project requirements vary and include:

- Predicative lithology and assay
- Basic lithology blocking
- 3D modelling
- Joint interpretation
- Integrated resource and structural models

SUPPORTED PRODUCTS

A **TRUSTED** AGENT & DISTRIBUTOR
OFFERING BESPOKE, SINGLE SUPPLIER **SOLUTIONS**

Digi-Tech

As an agent & distributor for numerous leading brands across the extractives industries, Digital Surveying is the single supplier solution for your project no matter the location.

Solutions span the entire life-cycle of exploration or grade control drilling and extend into the drill and blast activities both on surface and underground. We have the expertise to put the right rig alignment, core orientation and directional survey equipment on the job and to train all stakeholders in industry-leading methodologies to ensure only the best quality performance and data are achieved.

Digital Surveying's impact extends to AI-supported models to segment rock, classify lithology and alteration, detect veins, and localize fractures.

Real time AI-derived underground advance-volumetrics and digital twins provided via data or product-as-a-service models.

DISCOVER OUR PORTFOLIO OF
TECHNOLOGIES + SERVICES

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