GOLD PROSPECTING

A Complete Field Guide for Prospectors

■ YOUR COMPLETE FIELD COMPANION ■

- Geology & Rock Identification
- Placer & Lode Gold Tactics
- Desert, Tropical & Greenstone Environments
- Tellurides, Opals & Rare Minerals
- Claim Staking & Legal Requirements

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CHAPTERS

Gold Prospecting Series • Complete Edition

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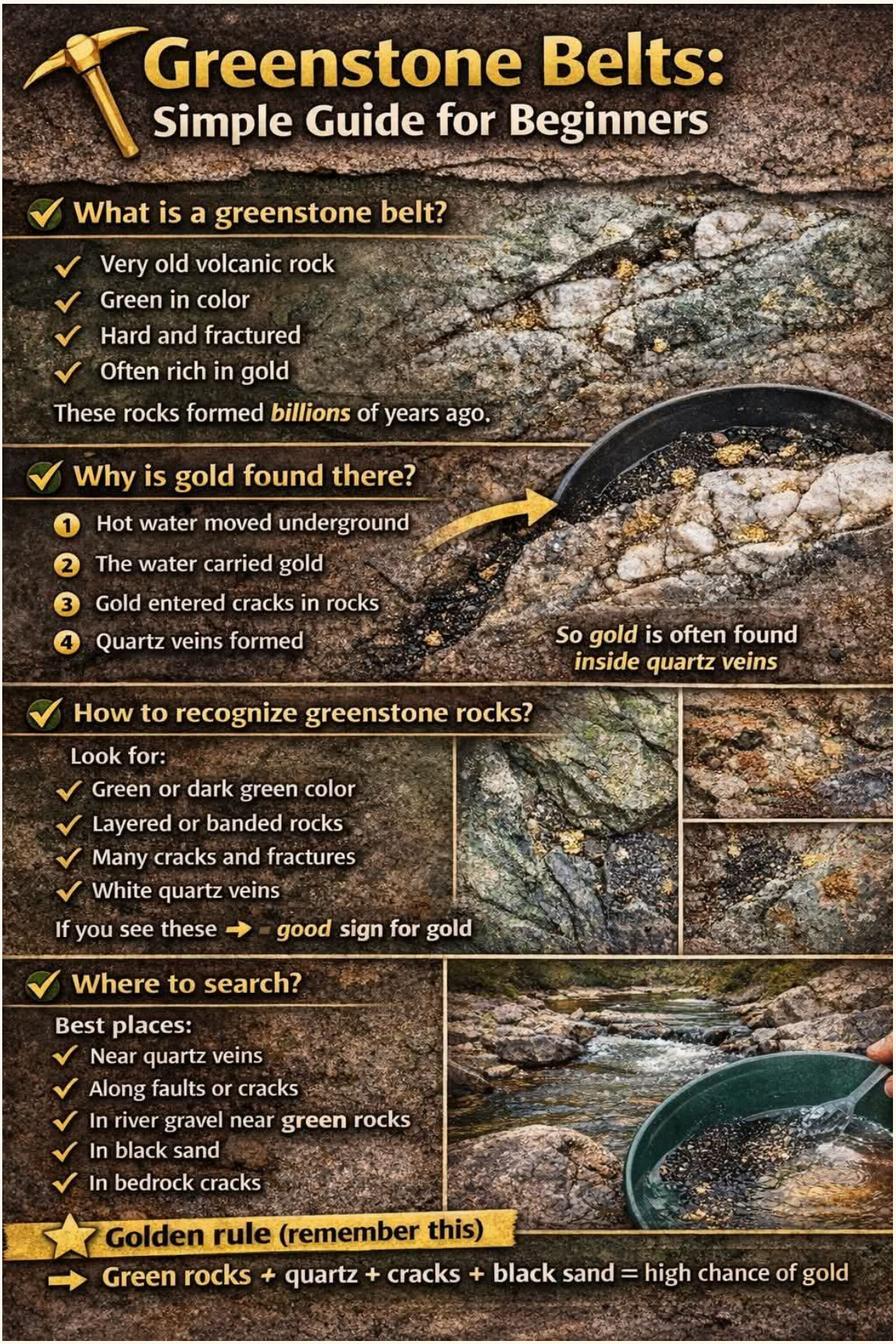
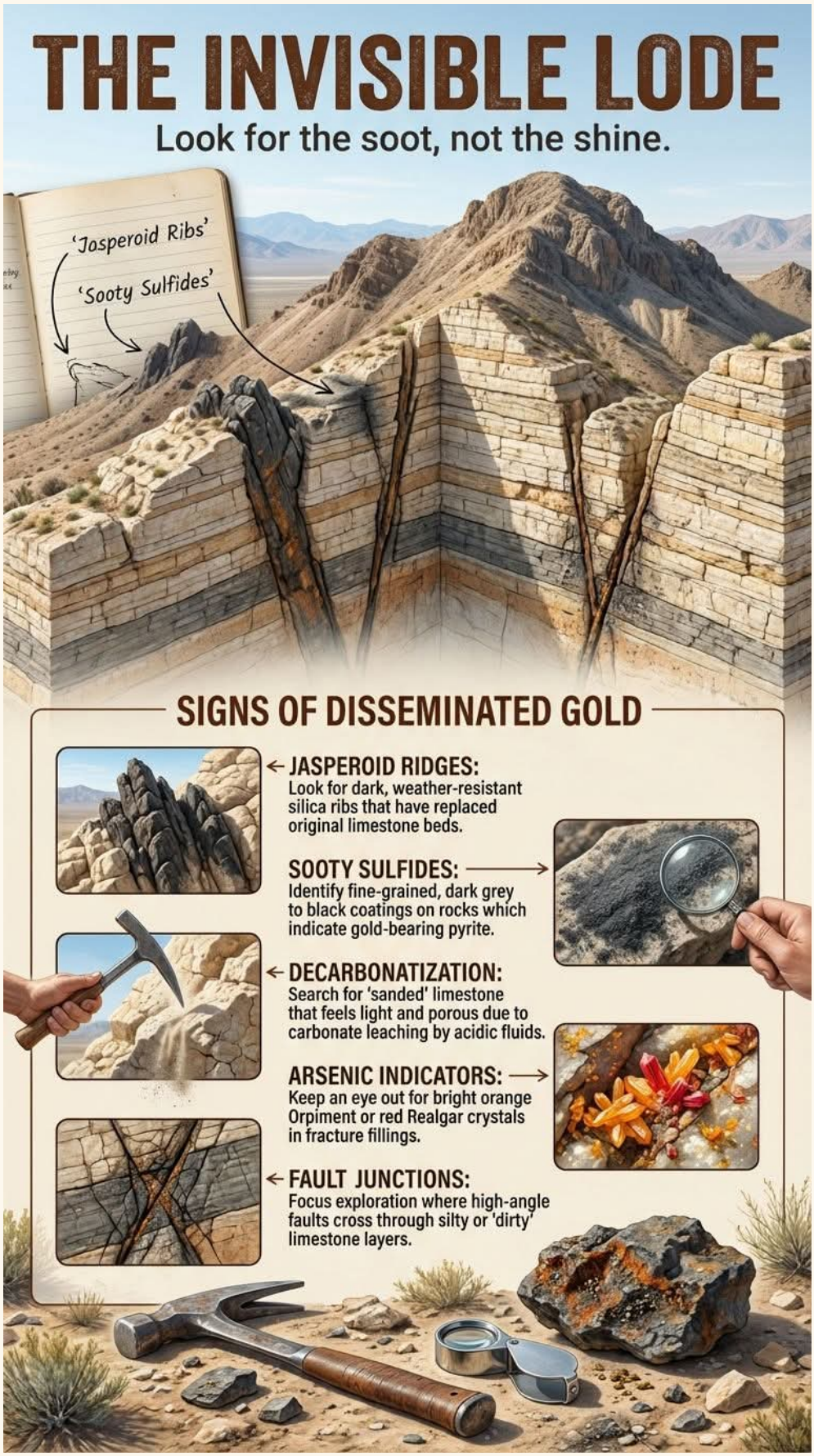


Greenstone belts are ancient volcanic formations billions of years old — hard, fractured, and often rich in gold. Hot hydrothermal waters once moved underground carrying gold into rock cracks, forming the quartz veins prospectors seek today. The golden rule: green rocks + quartz + cracks + black sand = high chance of gold.

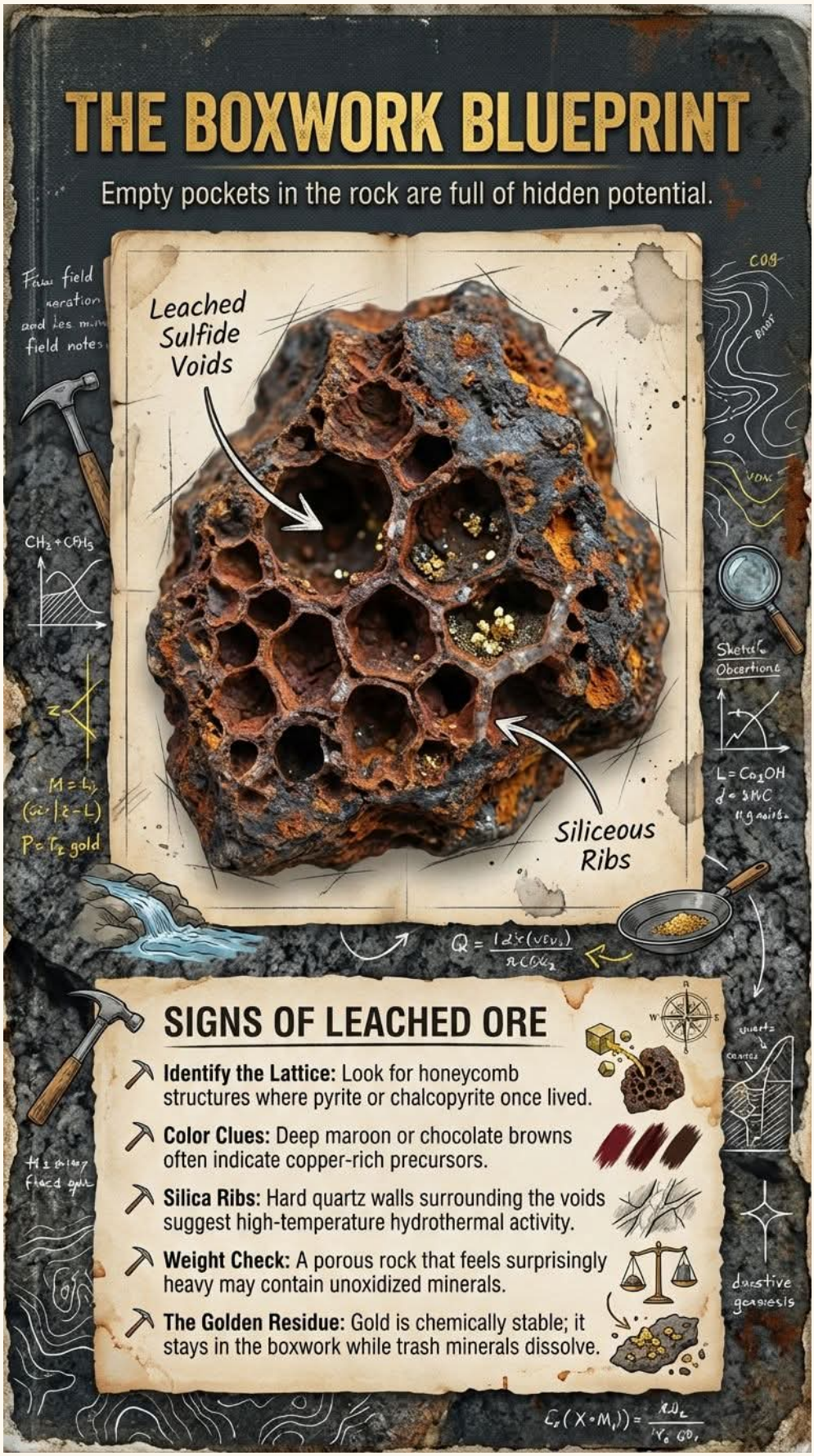
The Greenstone Clue



Search the contact zones where ancient lava meets granite. Look for dark mafic rocks signaling ancient volcanic activity, follow shear zones, seek sugary quartz veins, and watch for alteration halos of rusty carbonate or iron-sulfide staining on rock surfaces.

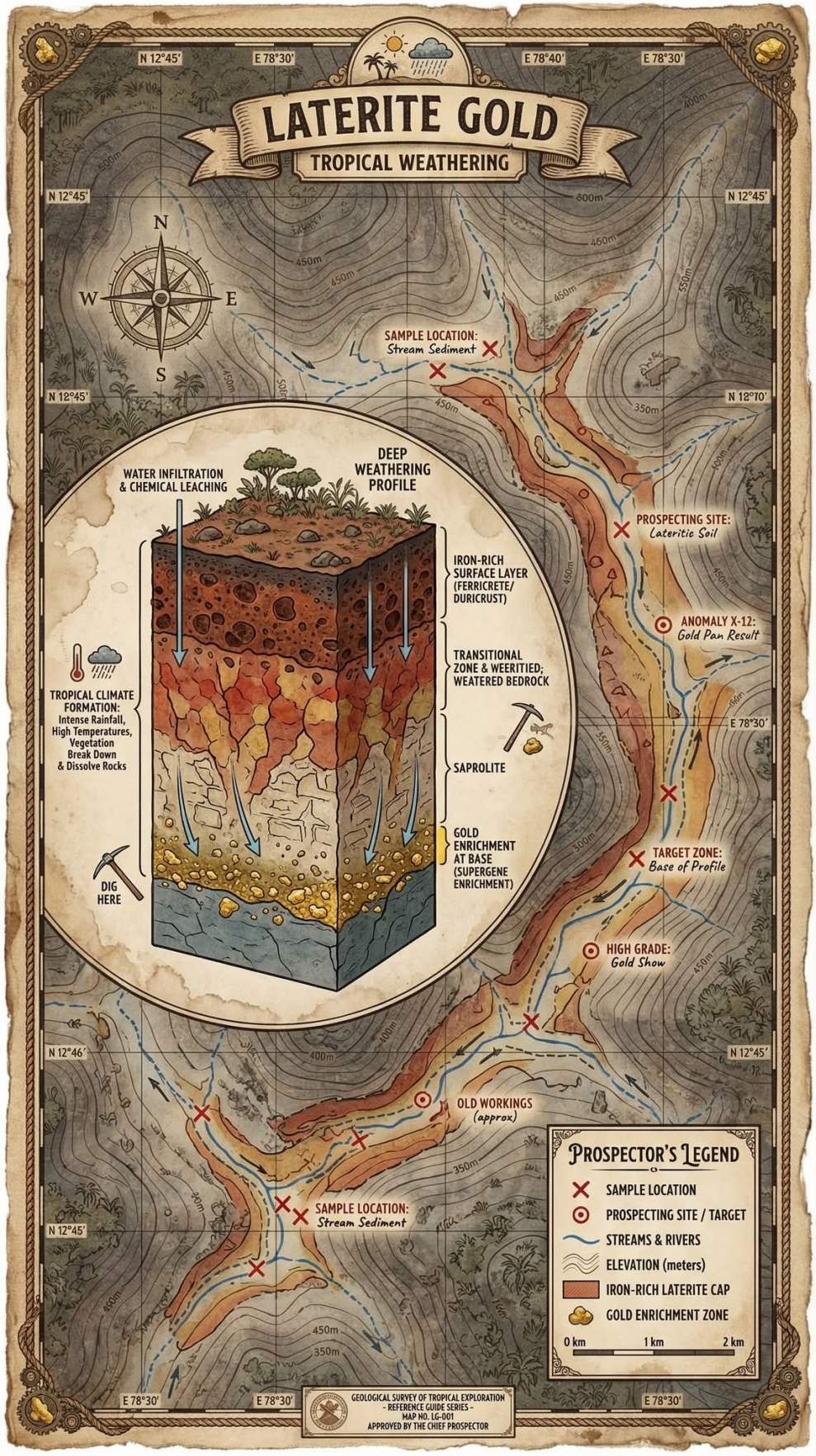
The Serpentine Signature

Follow the green host rock to the golden contact. Serpentinite hosts waxy, soapy-textured rock with quartz stringers branching from shear zones. Focus on the 'Contact Zone' where different rock types meet, use a magnet to check for magnetite concentrations, and look for orange-red iron staining on green rock surfaces.



Mountain-building riches. Orogenic gold is shear-zone hosted, located in deep fault systems and fractures. Formed during intense heat, pressure, and mountain building, it occurs in quartz-carbonate veins at mesothermal depths of 1.5–6 km. Unlike surface placer gold, lode mining requires specialised drilling and processing.

The Arroyo Anatomy

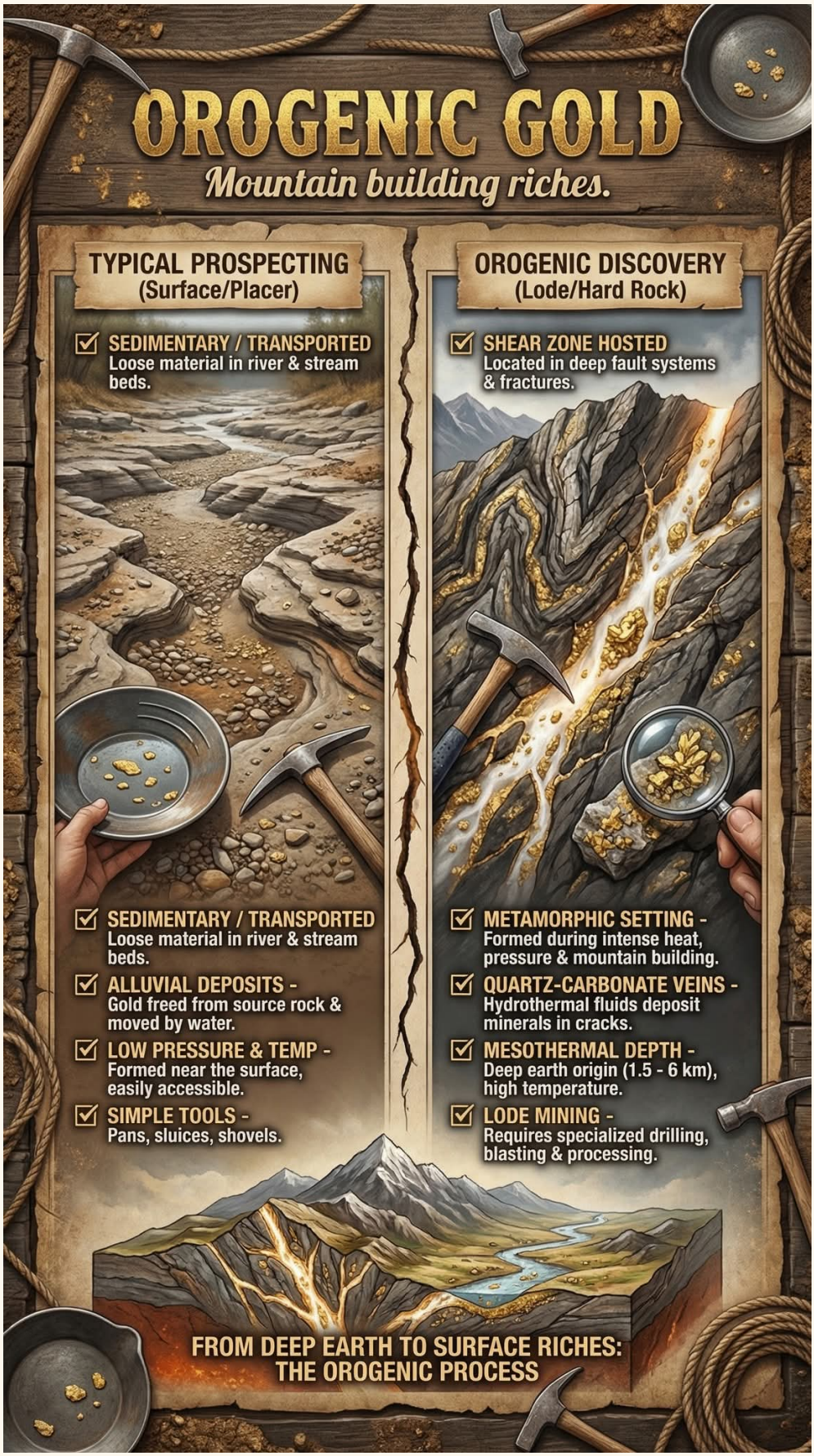


Gold hides where the heavy sand settles. In desert dry-wash environments, gold concentrates in bedrock traps wedged in deep crevices, beneath false bedrock clay layers, within caliche crusts, at inside bends of washes, and wherever black sand concentrations of magnetite and hematite accumulate.

Weathering the Vein

Heavy gold stays put while the mountain turns to dust. In residual saprolite, locate the gossan — the rusty red iron-cap indicating oxidized sulfides. Examine quartz texture for sugary 'rotten' quartz, a prime gold host. Pan the V-channels where heavy metals settle in the weathered matrix.

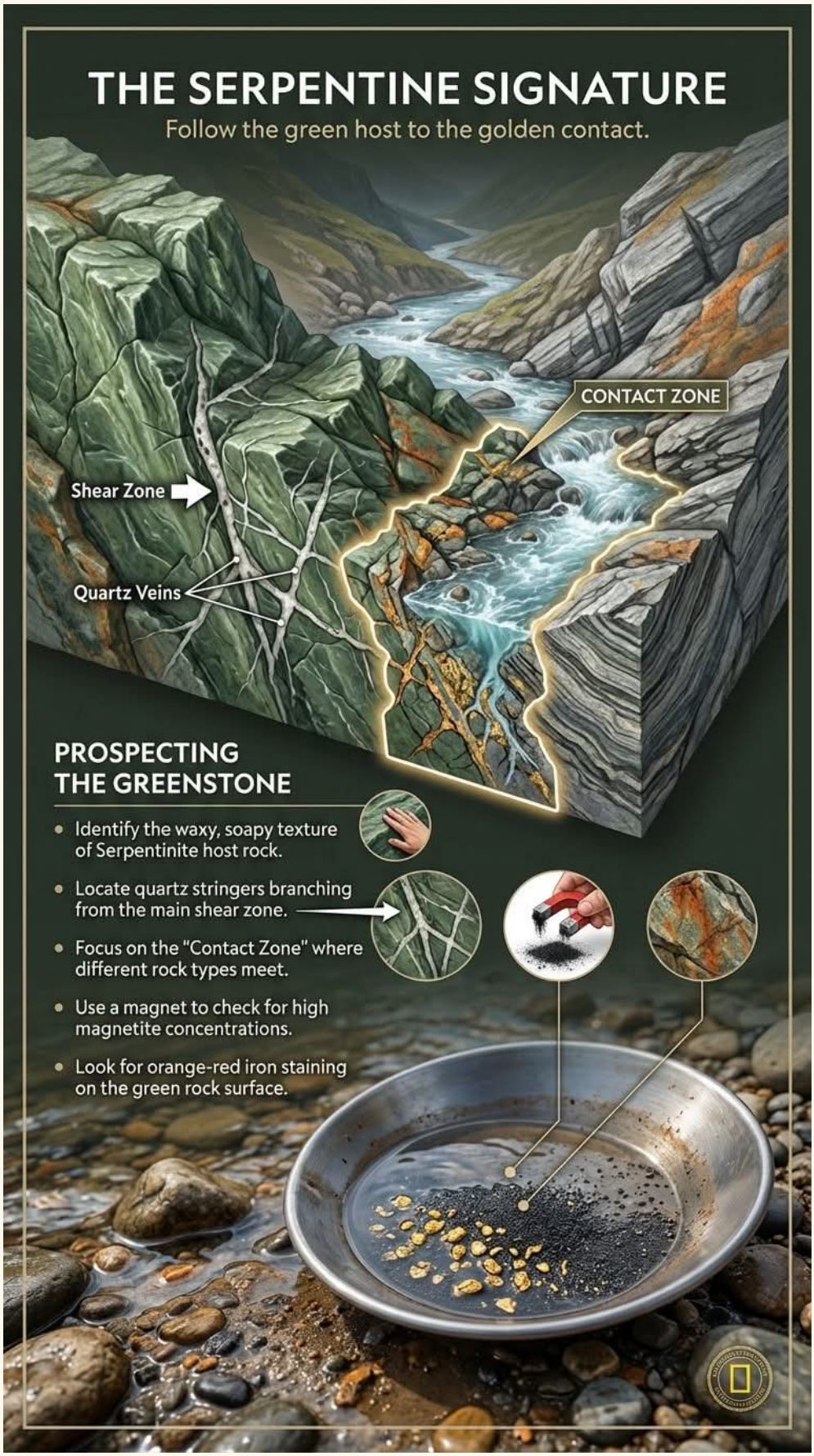
Gold Prospecting — Tellurides



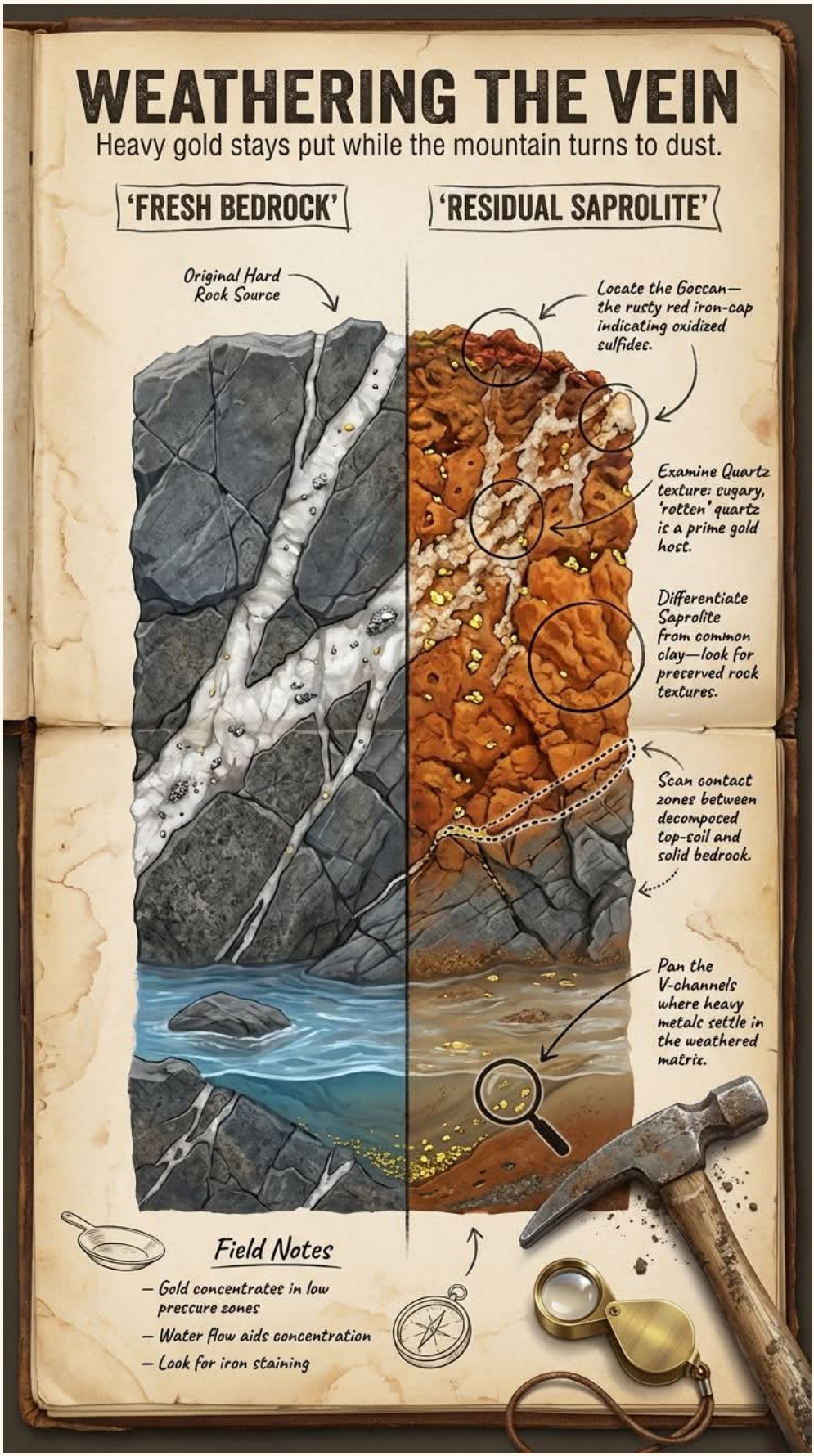
The silver-gold mix. Telluride minerals — calaverite (AuTe■), sylvanite (Au,Ag)Te■, and petzite (Ag■AuTe■) — are high-grade discovery targets associated with deep vein systems. These minerals signal some of the richest gold deposits on Earth, particularly in high-grade epithermal systems.

The Boxwork Blueprint

Empty pockets in the rock are full of hidden potential. Boxwork structures — honeycomb patterns where pyrite or chalcopyrite once lived — are key indicators of leached ore. Deep maroon or chocolate browns signal copper-rich precursors, while hard quartz walls (siliceous ribs) suggest high-temperature hydrothermal activity. Gold is chemically stable; it stays in the boxwork while trash minerals dissolve.

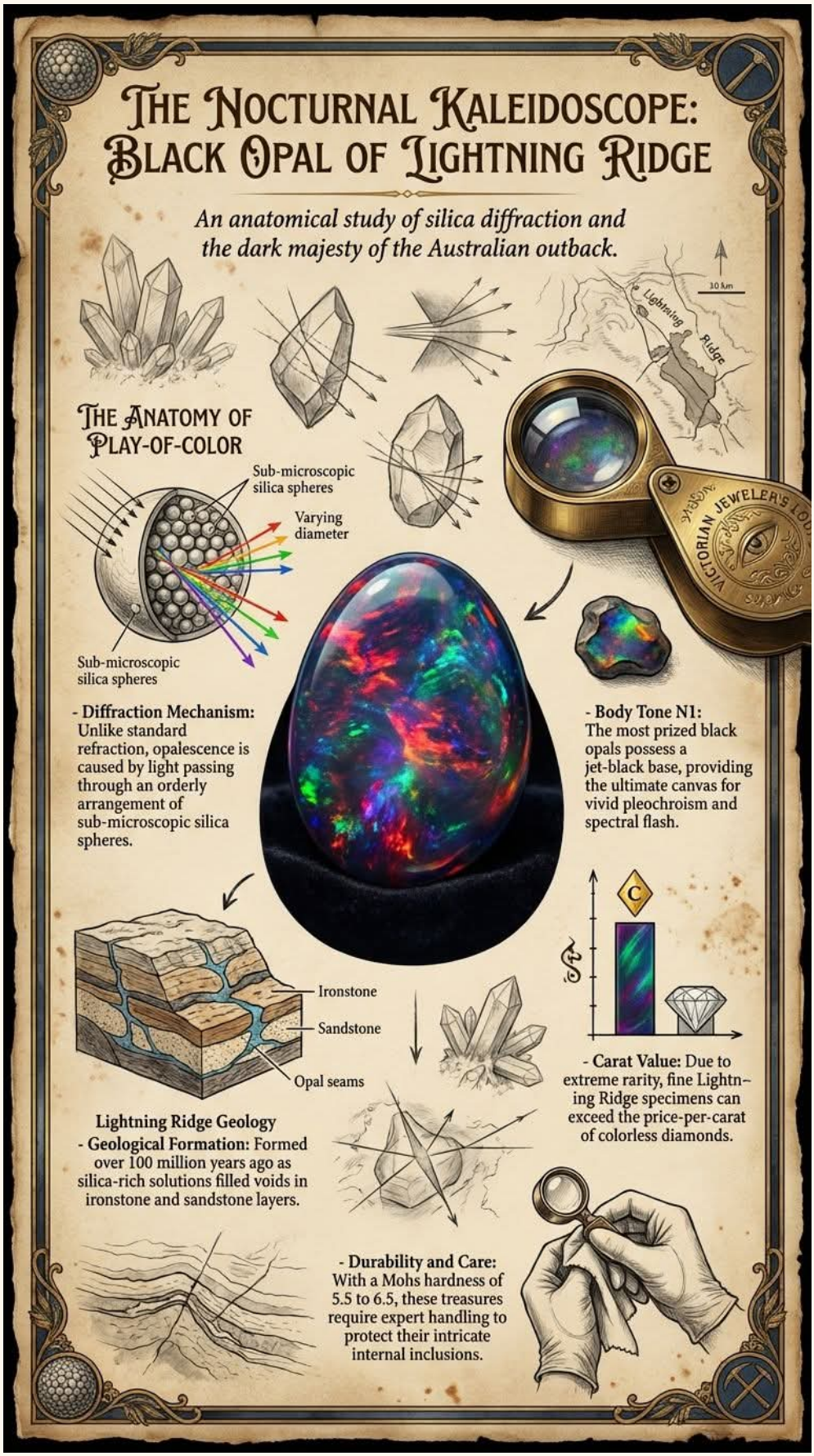


Pure white is usually light; dark and crusty is likely trusty. A sulfide indicator checklist: identify boxwork textures left by weathered minerals, search for vugs (small internal cavities where gold precipitates), focus on limonite yellow-brown staining, prioritise fractured quartz, and look for fool's gold — pyrite and arsenopyrite are the primary neighbours of real gold.



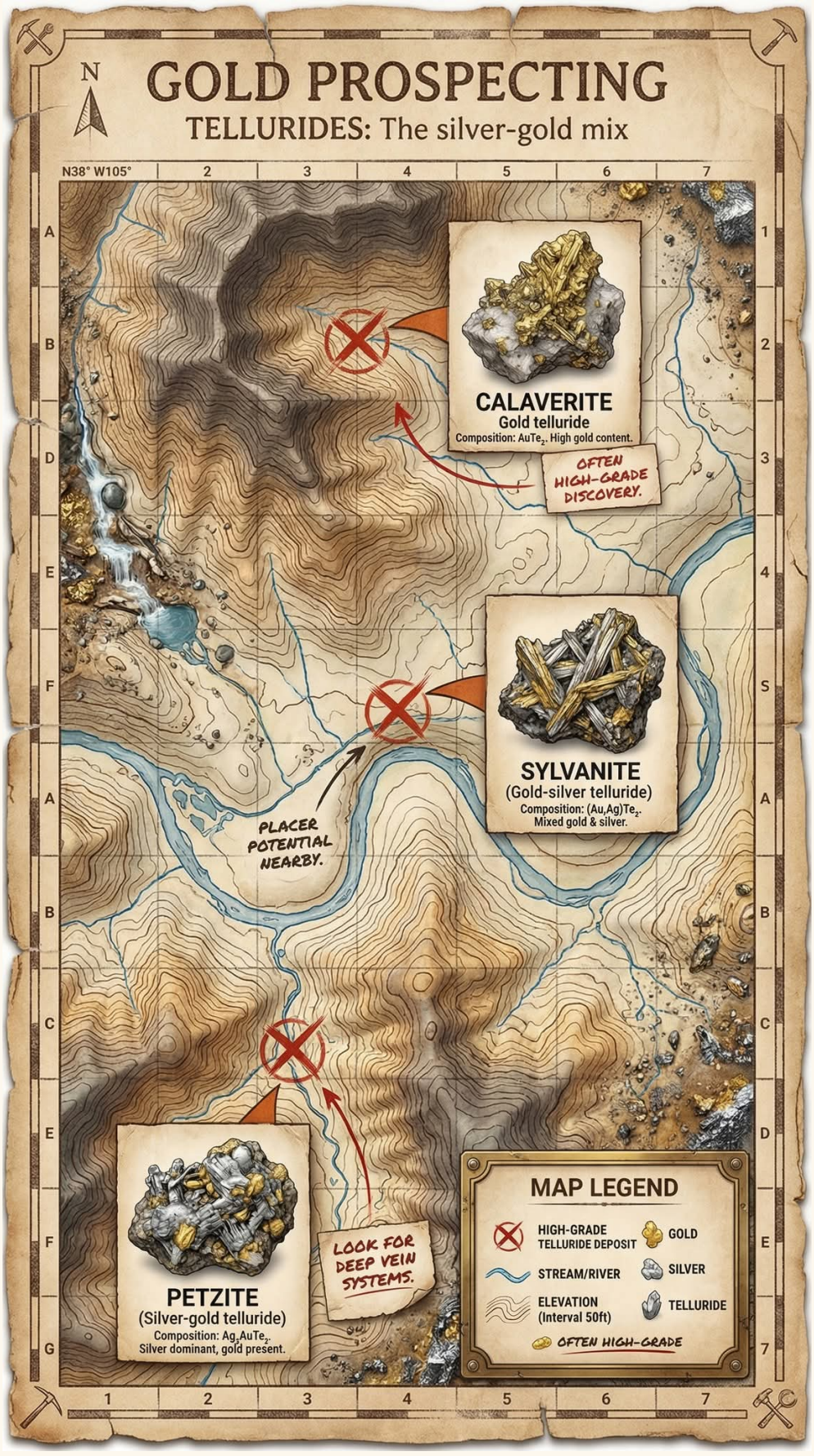
Look for the soot, not the shine. Signs of disseminated gold include jasperoid ridges (dark weather-resistant silica ribs replacing limestone), sooty sulfides (fine-grained dark coatings indicating gold-bearing pyrite), decarbonatization, arsenic indicators such as bright orange orpiment or red realgar crystals, and fault junctions where high-angle faults cross silty limestone layers.

The Nocturnal Kaleidoscope — Black Opal



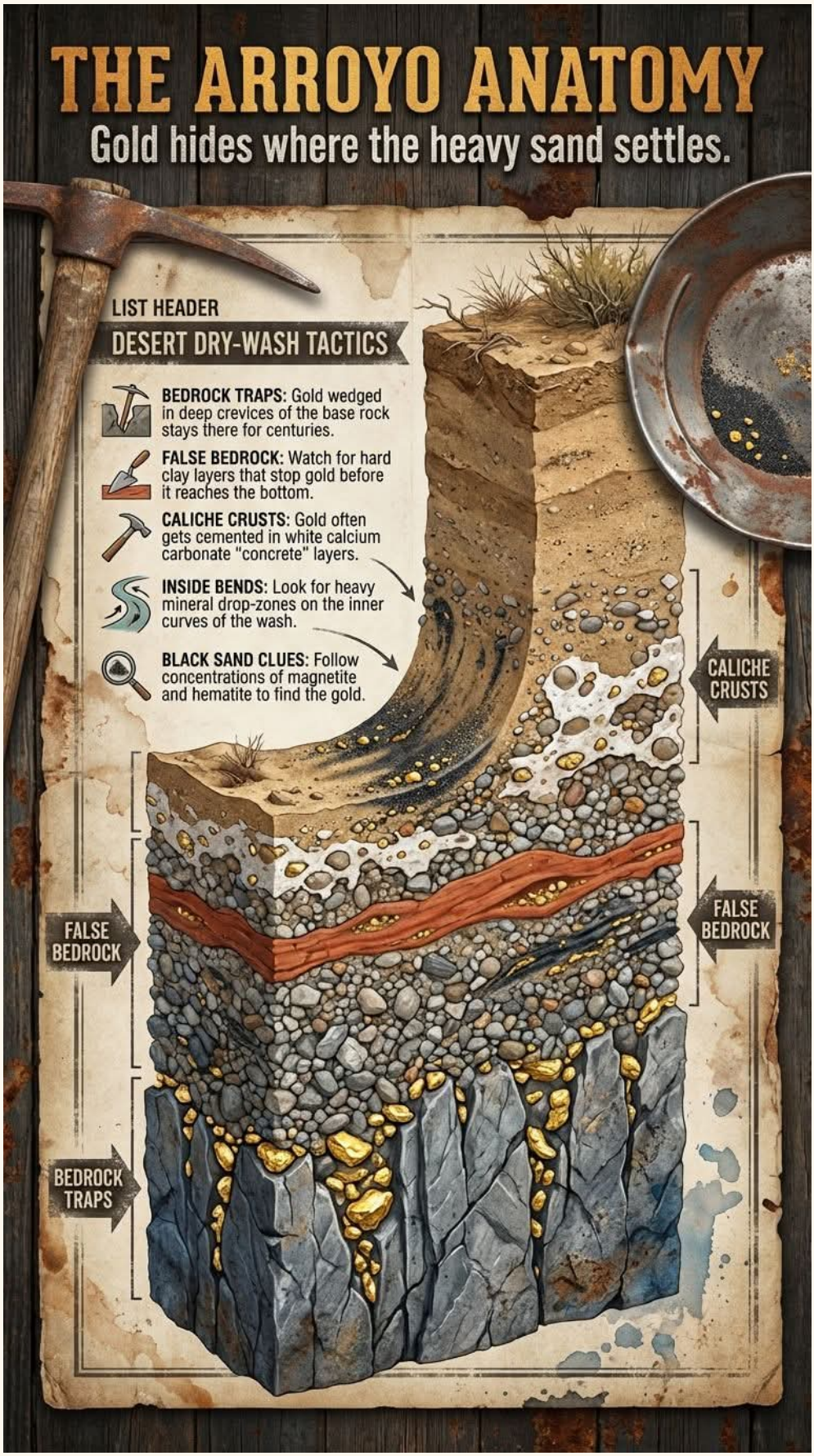
An anatomical study of the Black Opal of Lightning Ridge. Formed over 100 million years ago as silica-rich solutions filled voids in ironstone and sandstone layers, the play-of-colour results from sub-microscopic silica spheres diffracting light. Fine specimens can exceed the price-per-carat of colorless diamonds, with a Mohs hardness of 5.5 to 6.5.

Laterite Gold — Tropical Weathering



In tropical climates, intense rainfall and high temperatures chemically weather bedrock to great depths, producing a laterite profile. Gold concentrates via supergene enrichment at the base of the profile (saprolite zone). Target iron-rich lateritic soil caps and stream sediment sample locations to trace the gold enrichment zone.

Claim Staking — Securing Your Ground



Four essential steps to protect your discovery: (1) Research available land using official government maps and mineral databases; (2) Mark boundaries properly with durable posts; (3) File with authorities at the appropriate recording office within the required timeframe; (4) Pay annual maintenance fees or complete required assessment work to keep the claim valid.

GOLD PROSPECTING

A Complete Field Guide for Prospectors

■ Find Gold with Confidence ■

"Read the rocks — gold whispers through geology."

"Follow black sand, iron staining, and quartz veins."

"Always sample before you dig deep."

"Respect the land and know the law."

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