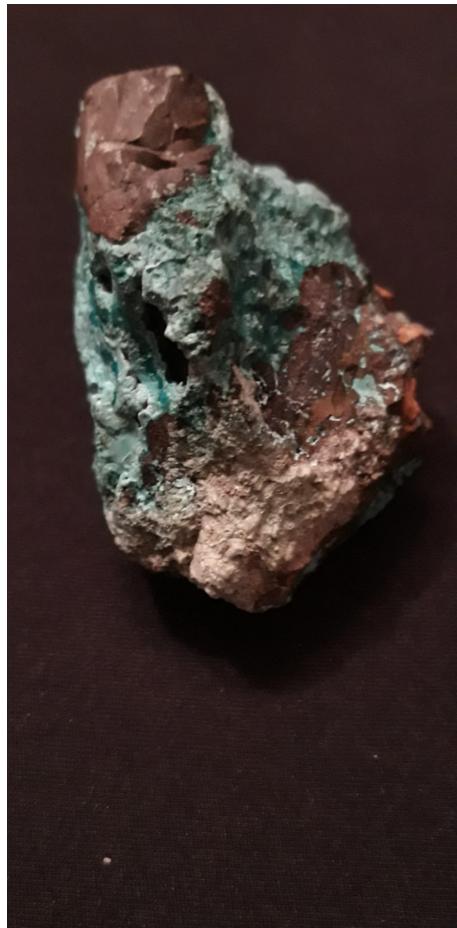


# Mineral Report

## Chrysocolla

Generated (UTC): 2026-02-22T21:25:49.423509232+00:00



## Context

<b>Audience</b>	technical geologist
<b>Purpose</b>	exploration briefing
<b>Site Context</b>	pilot drill campaign

## Physical and Chemical Snapshot

<b>Mineral Family</b>	Silicates
<b>Description</b>	Blue-green, earthy to slightly waxy copper-bearing silicate coating and filling vugs on a brown, iron-oxide-rich host rock. The massive, porous texture and turquoise-green coloration are consistent with chrysocolla commonly formed in the oxidized zone of copper deposits, sometimes intergrown with quartz/opal and minor malachite.
<b>Formula</b>	$(\text{Cu}, \text{Al})_2\text{H}_2\text{Si}_2\text{O}_5(\text{OH})_4 \cdot n\text{H}_2\text{O}$
<b>Hardness (Mohs)</b>	2.50
<b>Hardness Band</b>	soft
<b>Density (g/cm<sup>3</sup>)</b>	2.20
<b>Density Band</b>	light
<b>Crystal System</b>	Microcrystalline
<b>Color</b>	blue-green to green with brown host rock
<b>Streak</b>	White to pale blue-green
<b>Luster</b>	Dull to waxy/earthy
<b>Dominant Element</b>	O (52.0 wt%)

### Interpretive Summary

For technical geologist and the pilot drill campaign context, Chrysocolla is classified as soft with light density behavior. The chemistry is led by O (52.0 wt%), supporting exploration briefing decisions.

## Major Elements

Element	Weight %
O	52.00
Si	18.00
Cu	16.00
Fe	9.00
H	3.00
Al	2.00

## Recommendations

1. Prioritize samples of Chrysocolla where O enrichment is strongest.
2. Validate breakage and weathering rates early, as softer material can bias grade control.
3. Combine XRD with geochemistry to avoid over-reliance on density-based separation.
4. Archive this report against 'exploration briefing' objectives for reproducible decision records.

## Field Notes

Chrysocolla is compositionally variable and often mixed with quartz/opal; hardness can range ~2–4 depending on silica content. Brown areas likely limonite/goethite or iron-stained rock; green may include minor malachite. Streak typically pale blue-green to white.