# Resouro's Tiros Deposit Positions Brazil as a New Source of Titanium and Rare Earths

written by Tracy Hughes | May 20, 2025

After outlining its plans at last week's Critical Minerals Institute Summit IV in Toronto, Resouro Strategic Metals Inc. (ASX: RAU | TSXV: RSM | OTCQB: RSGOF | FSE: 8TX) has drawn fresh attention on Bay Street. The company's Tiros Titanium and Rare Earths Project in Minas Gerais, Brazil, could provide a new source of two materials—high-grade titanium feedstock and magnet-grade rare earth oxides—whose supply chains remain heavily concentrated in a handful of countries.

## Large, Shallow Resource

Tiros hosts a JORC-compliant resource of about 1.9 billion tonnes averaging roughly 0.4% total rare earth oxides (≈4,000 ppm TREO) and 12% $TiO_2$. A near-surface zone carries grades up to 0.9% TREO and 23% $TiO_2$, according to company filings. Notably, neodymium (Nd), praseodymium (Pr) and dysprosium (Dy) —elements critical to permanent magnets used in electric vehicles, wind turbines and defense systems—represent an estimated 27% of the rare-earth basket.

## Processing Approach

Resouro plans to apply a proprietary Fusion Sulphuric Acid Leach (FSAL) process that aims to extract rare earths while upgrading the deposit's anatase to chloride-grade rutile, a preferred

feedstock for pigment and aerospace titanium. Early bench tests report recoveries above 90% for key magnet metals and near-total conversion of $TiO_2$, with iron and silica by-products that could generate additional revenue. The company says the flowsheet produces no conventional tailings, a point likely to figure prominently with Brazilian regulators after past dam failures in the state.

## Project Timeline and Capital Needs

Management expects to publish a scoping study on a 200-kilogram pilot plant this summer, move to a 30-tonne pilot, and complete a pre-feasibility study by year-end. Because the FSAL circuit is modular, Resouro argues it can advance the project with significantly lower upfront capital than many hard-rock rare-earth developments, though a detailed cost estimate has yet to be released.

## Market Context

Prices for magnet-grade neodymium-praseodymium oxide have risen over the past year amid steady demand growth, while supply of chloride-grade rutile remains tight as long-running mines in Australia and Sierra Leone wind down. Whether Tiros can help fill those gaps will depend on the pilot program’s results and the company’s ability to secure financing, partners and offtake agreements.

## Valuation Snapshot

Resouro’s market capitalization sits near C$13 million. Over the past year the shares have traded between C$0.72 and C$0.13, most recently around C$0.15. Investors will be watching for the forthcoming scoping study and any strategic-partner

announcements to gauge how quickly the project can move from laboratory success to commercial production.