

The Human Cost of the Green Transition

Indigenous communities and the Critical Minerals Rush

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Understanding the human side of mining

With a background in geology and mining engineering, I understood how minerals formed and how they were mined. What I wanted to understand was the human side: how mining affects people, how decisions are made, and what this means for Traditional Owners.

Australia has a long history of mining, alongside a history of significant impacts on Indigenous communities. I wanted to learn from their histories and lived experiences, and turn complex mining information into something practical and useful for them.

I compiled and analysed national mining data, translating it into plain-language presentations, reports and a live Web Map so the Boards could better understand what was happening on their Country and have a stronger say in decisions about it.

But the data was only part of the work. Listening with intent, building relationships, and communicating openly and honestly were just as important.



What I actually built

1) GATHER

1,013

tenements and licences analysed

Pulled together from national databases for country-specific areas, GSWA and MINEDEX data on mines, minerals, infrastructure, and tenements across Ngarluma and Yindjibarndi lands.

2) MAP

20

maps, plus a live Web Map

Shows the exact location of each project with layers for geology, licences, native title and nearby infrastructure. Built in ArcGIS for future use by the corporate boards.

3) TRANSLATE

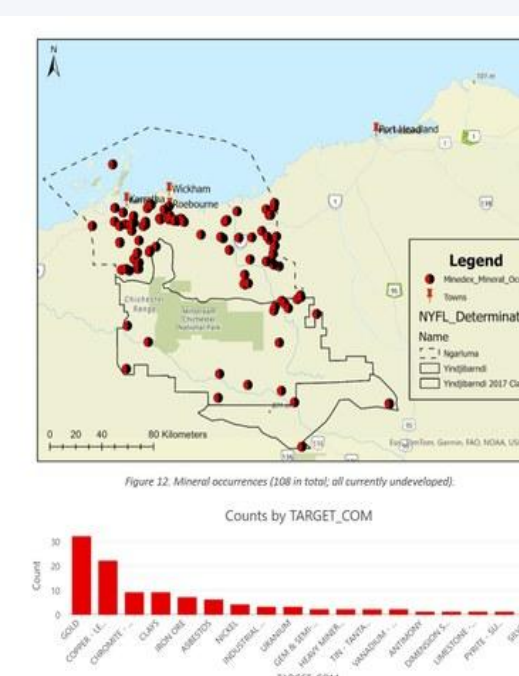
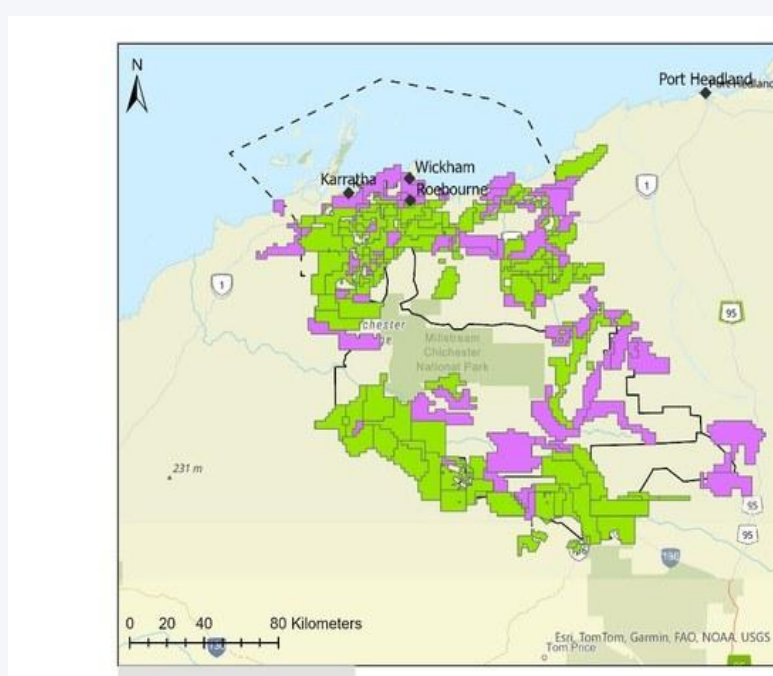
38

pages technical report in plain language

A briefing for the Ngarluma and Yindjibarndi Community Boards that compiles and explains the policy, land rights and geology along with future recommendations

What the Boards can now ask, and answer

- Who holds which tenement on our Country?
- Which mines are active, closed, or being targeted?
- What stage is each project at, and what is it worth?
- How did these minerals end up here?



SMART GOALS ALIGNMENT.

S Specific

One guide for the Ngarluma and Yindjibarndi Boards

M Measurable

38 pages, 20 maps, 1,013 tenements and licences

A Achievable

Backed by the ANU First Nations Portfolio and NYFL

R Relevant

Closes the information gap and backs FPIC

T Time-bound

4 weeks at ANU, 1 in Karratha, delivered 25 Sep 2026

Whose humanity gets protected, and whose gets ignored?

The energy transition will be paid for by someone, in land, water and sacred sites. Too often Indigenous communities are treated as terrain to navigate. Better information is one way to change who gets a say.

"Listening is a skill the mining industry failed to develop. Will we repeat that mistake, faster, in the name of climate?"

Leon Davies, CRA (now Rio Tinto), 1995

Indigenous communities are the litmus test for "Science for Humanity".

Thank you to Nick Bainton (project supervisor), John Taylor, Sean-Paul and John Burton, the ANU First Nations Portfolio, NYFL, the Rio Tinto Centre for Future Materials and the Laidlaw Foundation.



Scan to explore the live Web Map