Dysprosium - Yttrium – Erbium

# Heavy Rare Earth (HREE) in the Northern Territory

## Discovery, Demand & Development

**Annual General Meeting**
**12.30pm**
**The Celtic Club, West Perth WA**
**Monday 26 November 2012**

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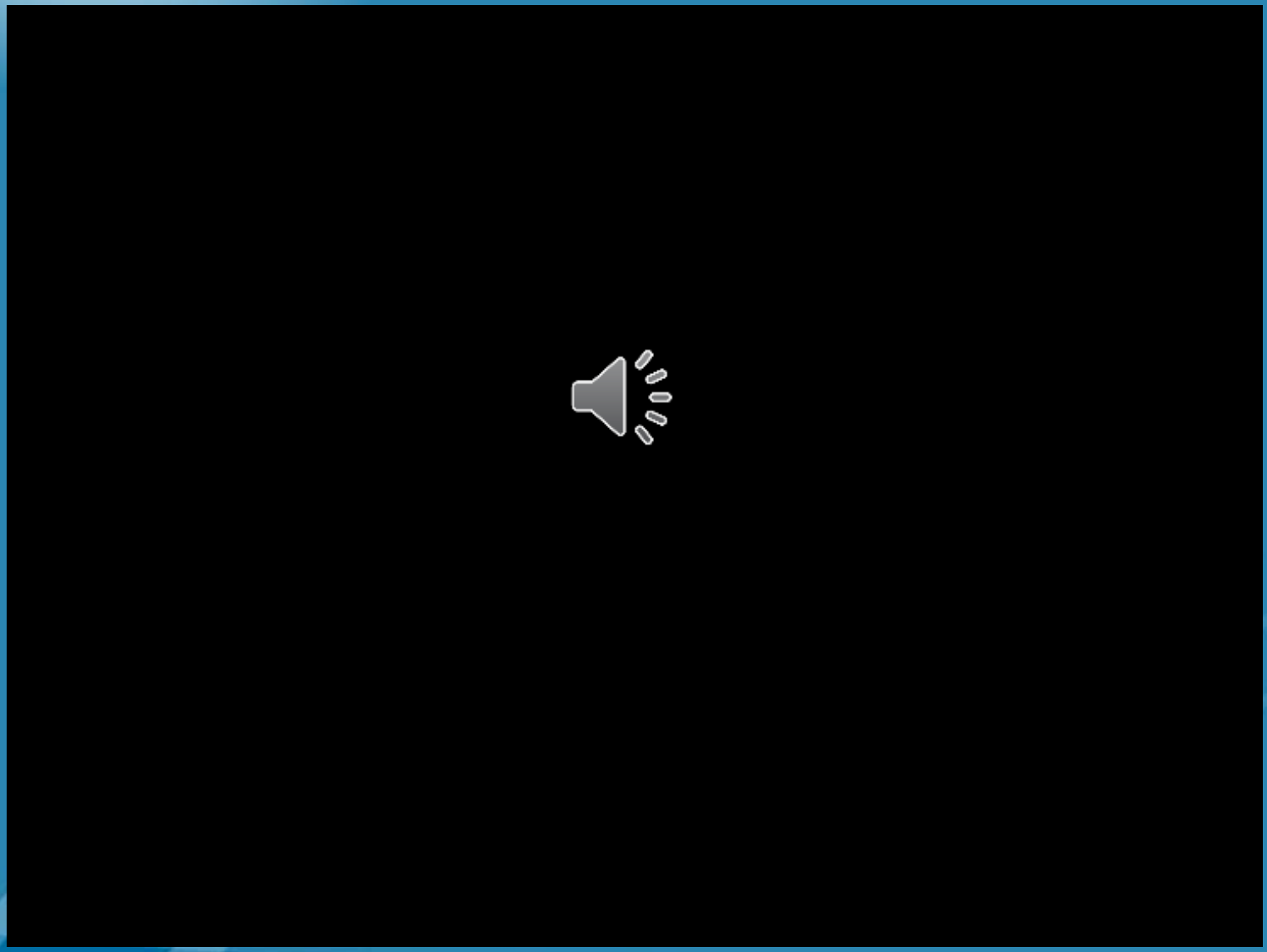
Video fly through of Stromberg Prospect (available on TUC website)



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The Company - Introduction

TUC and the HREE Market

Stromberg Deposit - New Results

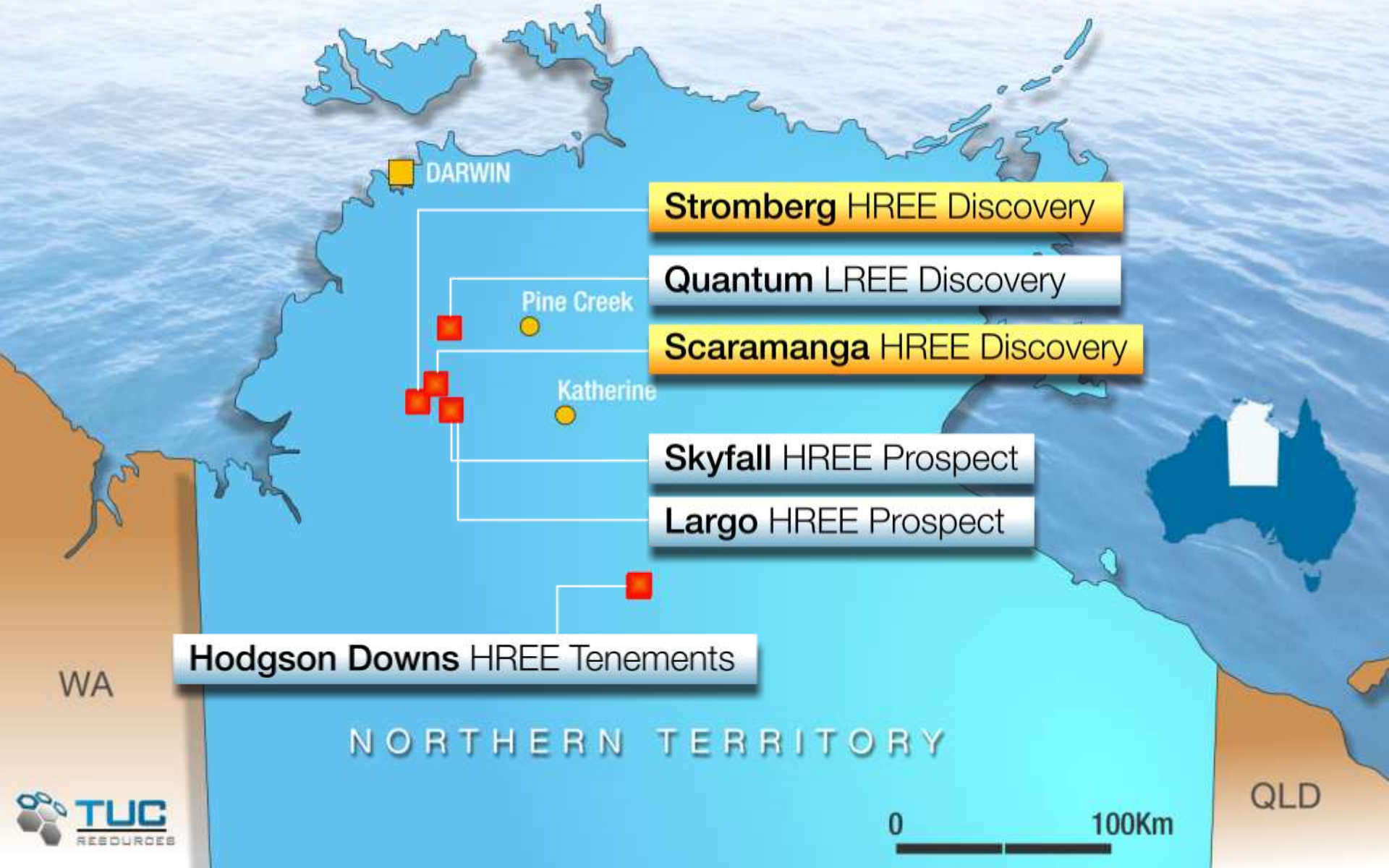
Exploration Breakthrough - Scaramanga - Stakeholders

Margin Drivers; Mining and Processing Costs and Price

Time to Market - TUC Advantage

# Major Projects

NORTHERN TERRITORY

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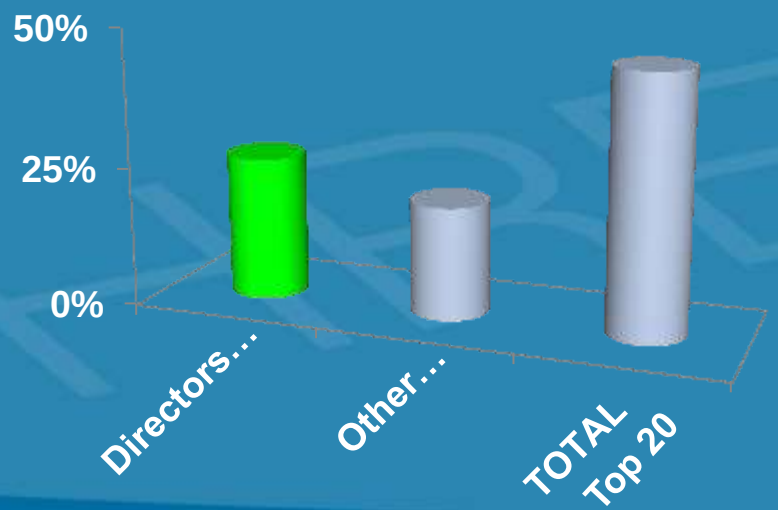
ASX:TUC

| | | |
|---|---|---|
| Shares | 125 million | A$0.065 |
| Options | 2 free for 5 Shares | A$0.20 Ex. Price |
| Market Cap | $A8 million | |
| Shareholders | +1200 | |
| Funds | +A$2 million (30 September 2012) | |

Register

As at 25 Sep 2012



By 2037, industry will need an annual supply of **Neodymium 700%** greater than is available now and more extraordinarily, **2,600%** more **Dysprosium** than the world (China) produces now.

Source: **Robert Bromby** quoting from **Cientifica**: "*Simply No Substitute*" / MIT Research, Sep 2012

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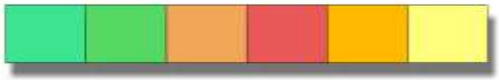
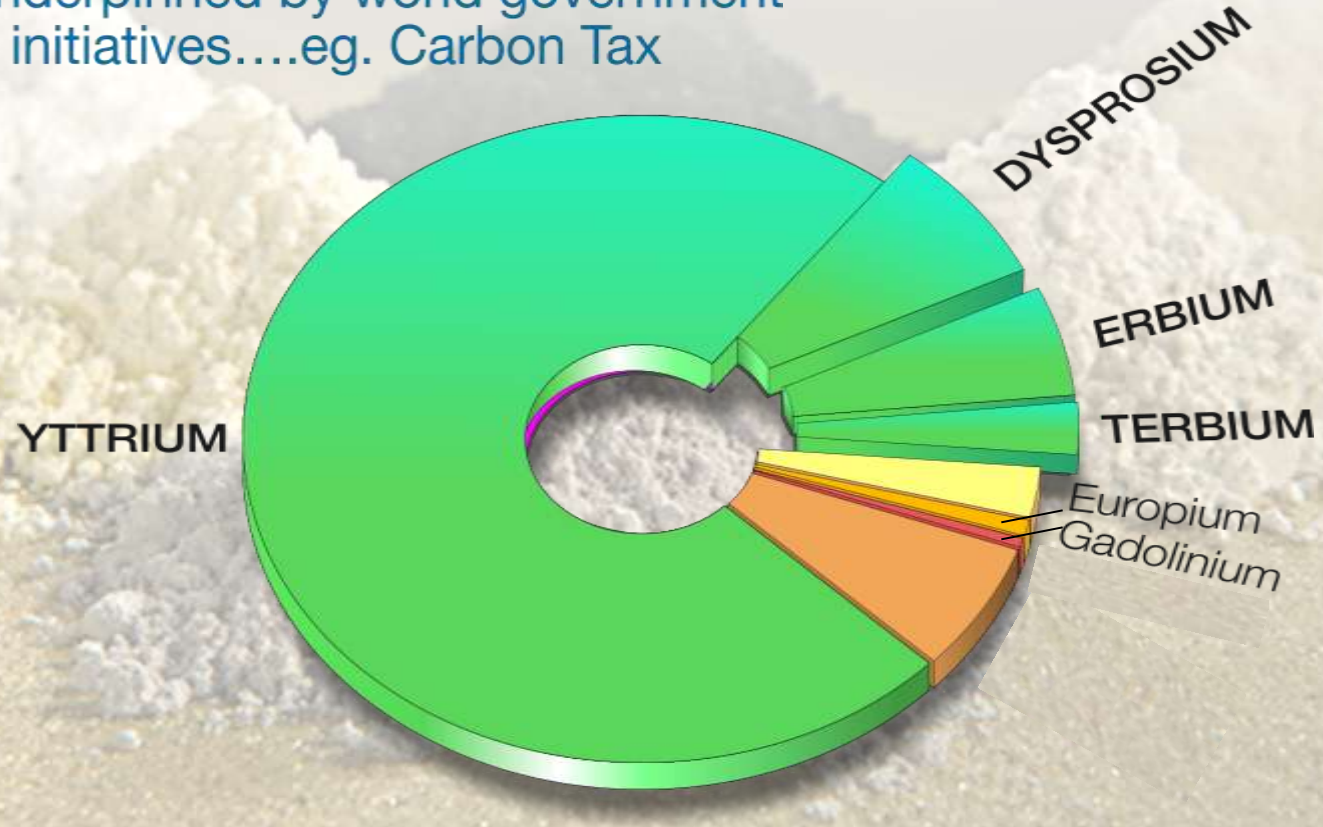
# Stromberg Deposit

Heavy REE's  Light REE's

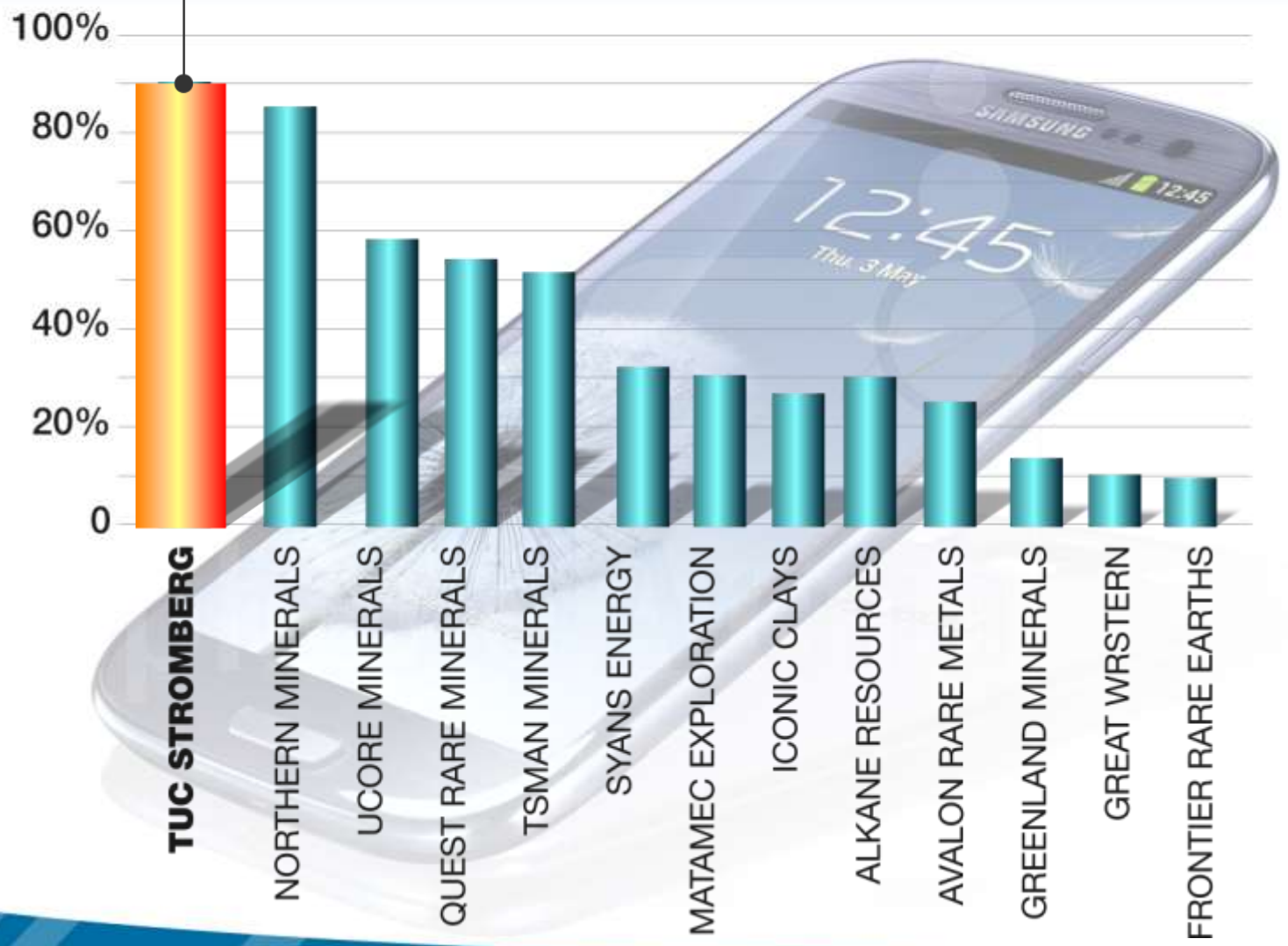
## Higher priced critical metals

Demand is underpinned by world government clean energy initiatives….eg. Carbon Tax



# Stromberg Deposit

**No. 1** in terms of HREE Distribution

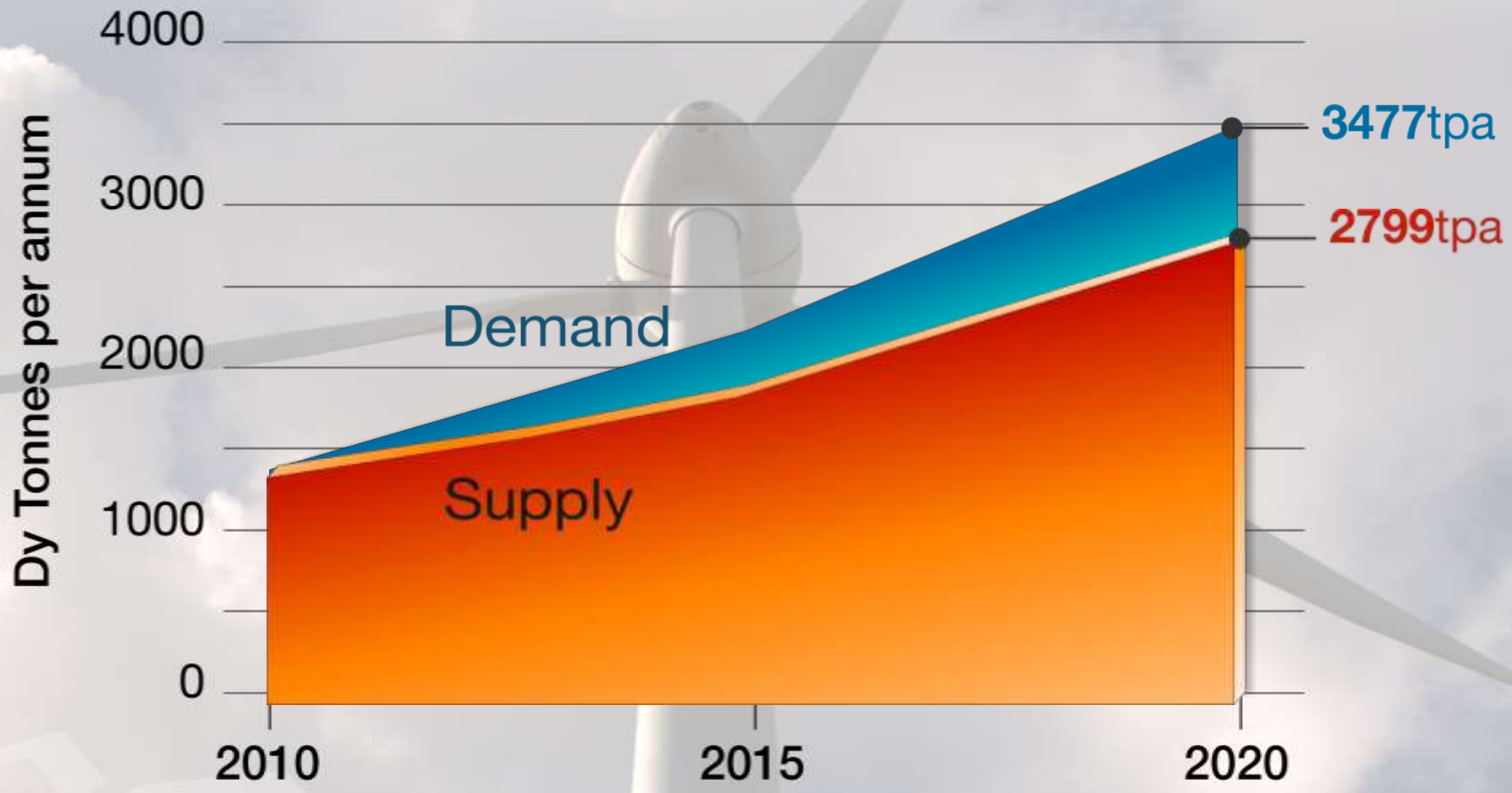


# Dysprosium (Dy)

DEMAND/SUPPLY

Dysprosium is used in high temperature high efficiency fixed magnets in electric motors and power generation

**Demand/Supply forecast to grow**

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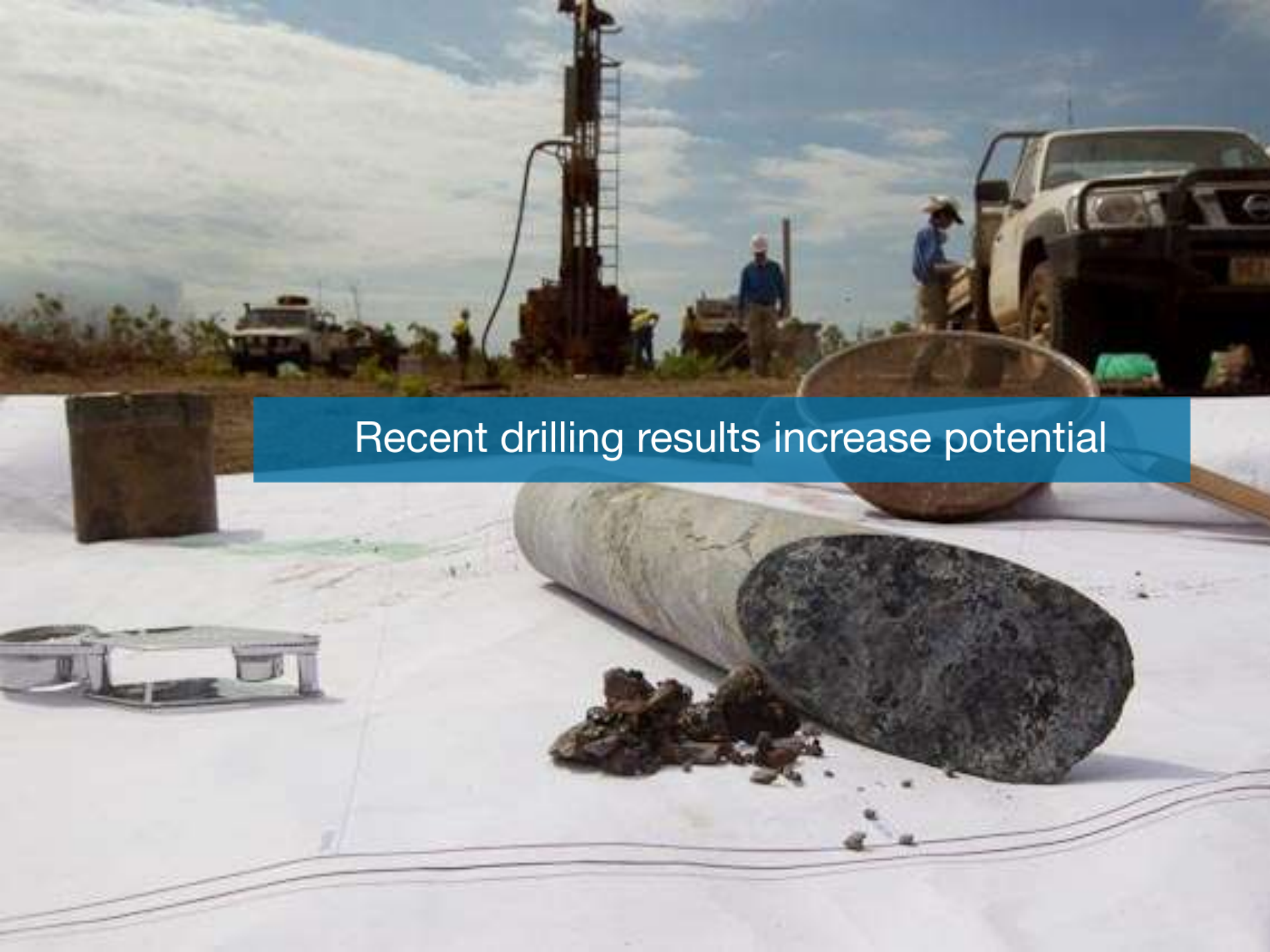
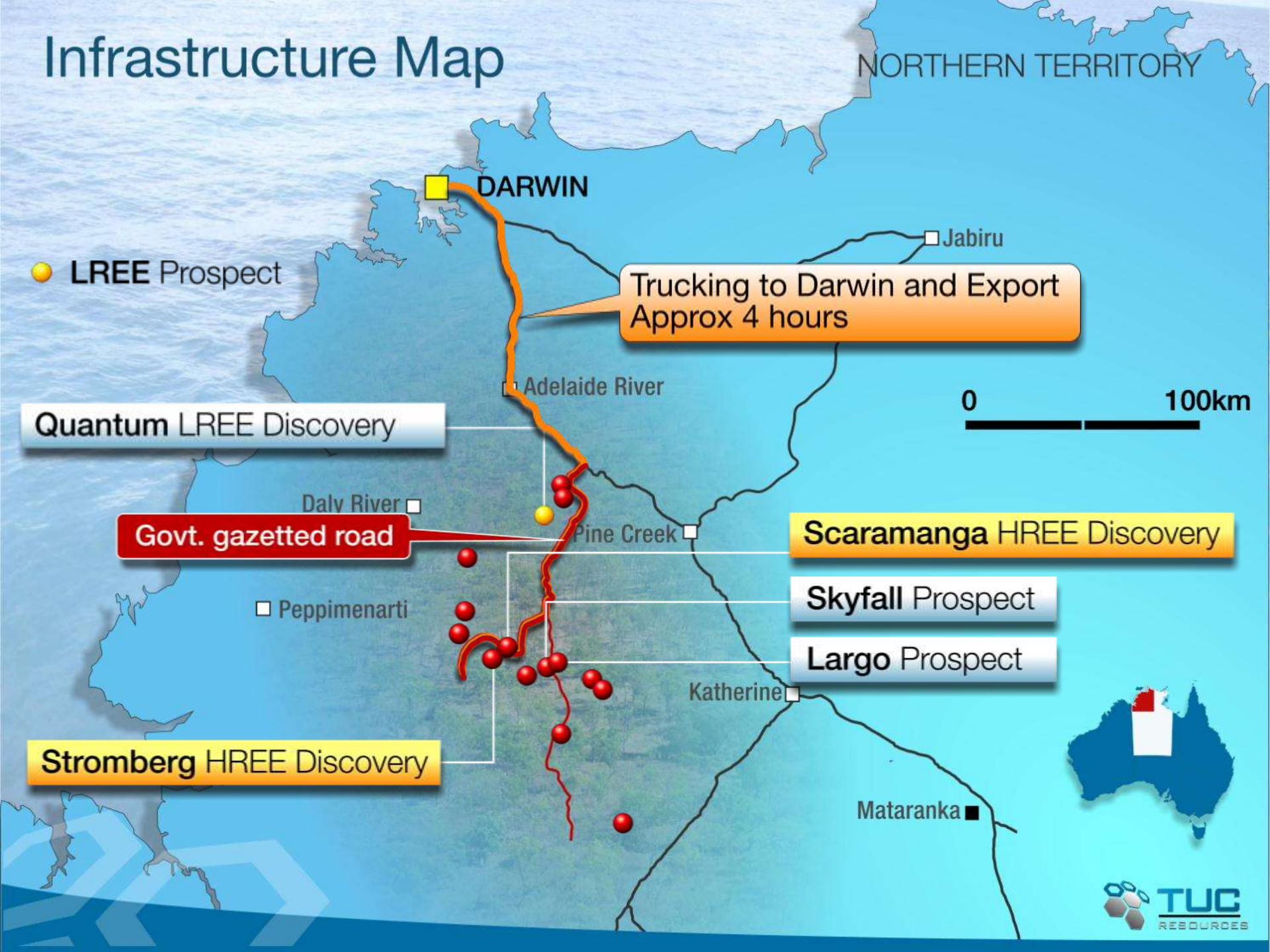
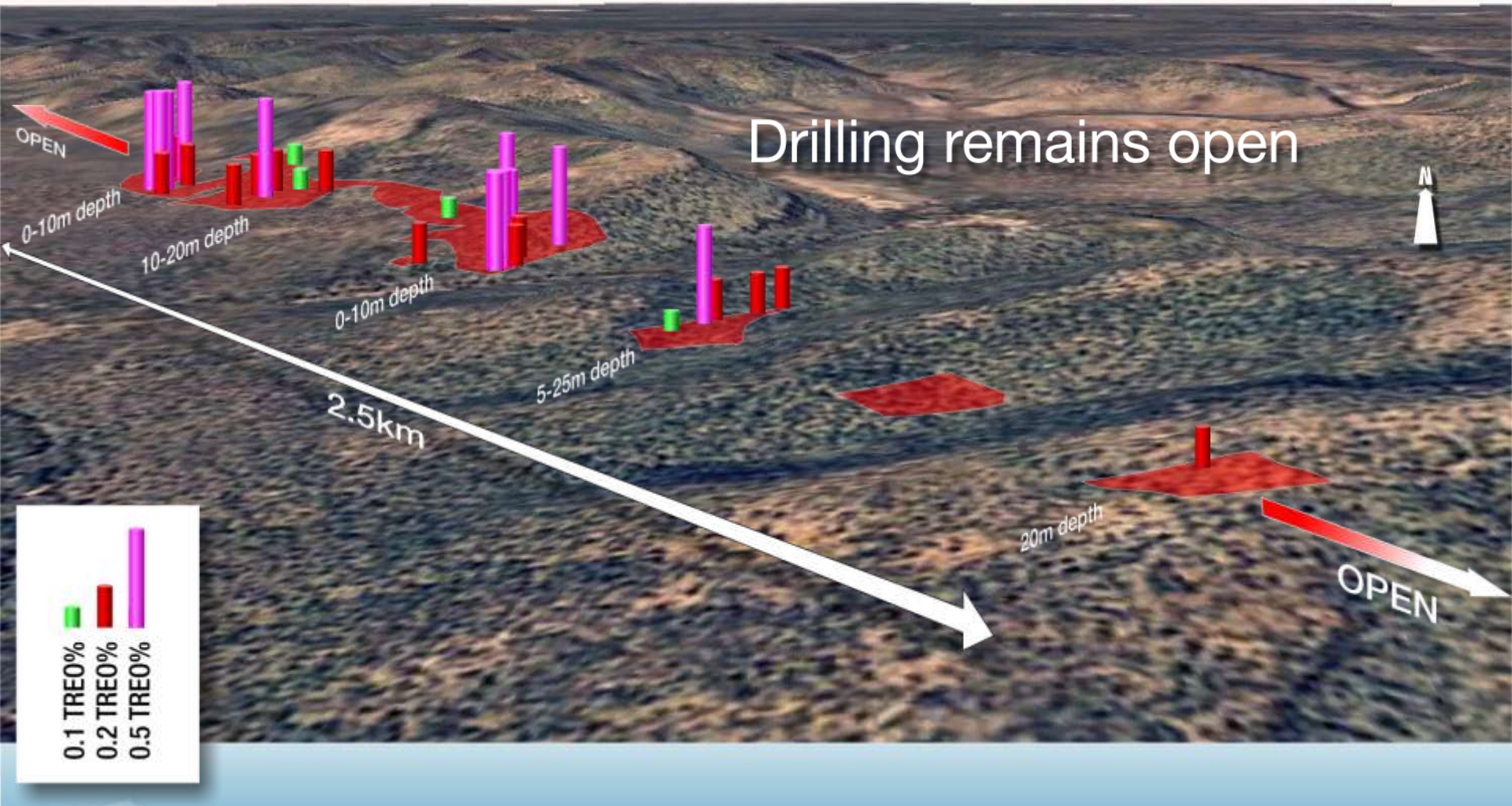

Recent drilling results increase potential

# Infrastructure Map

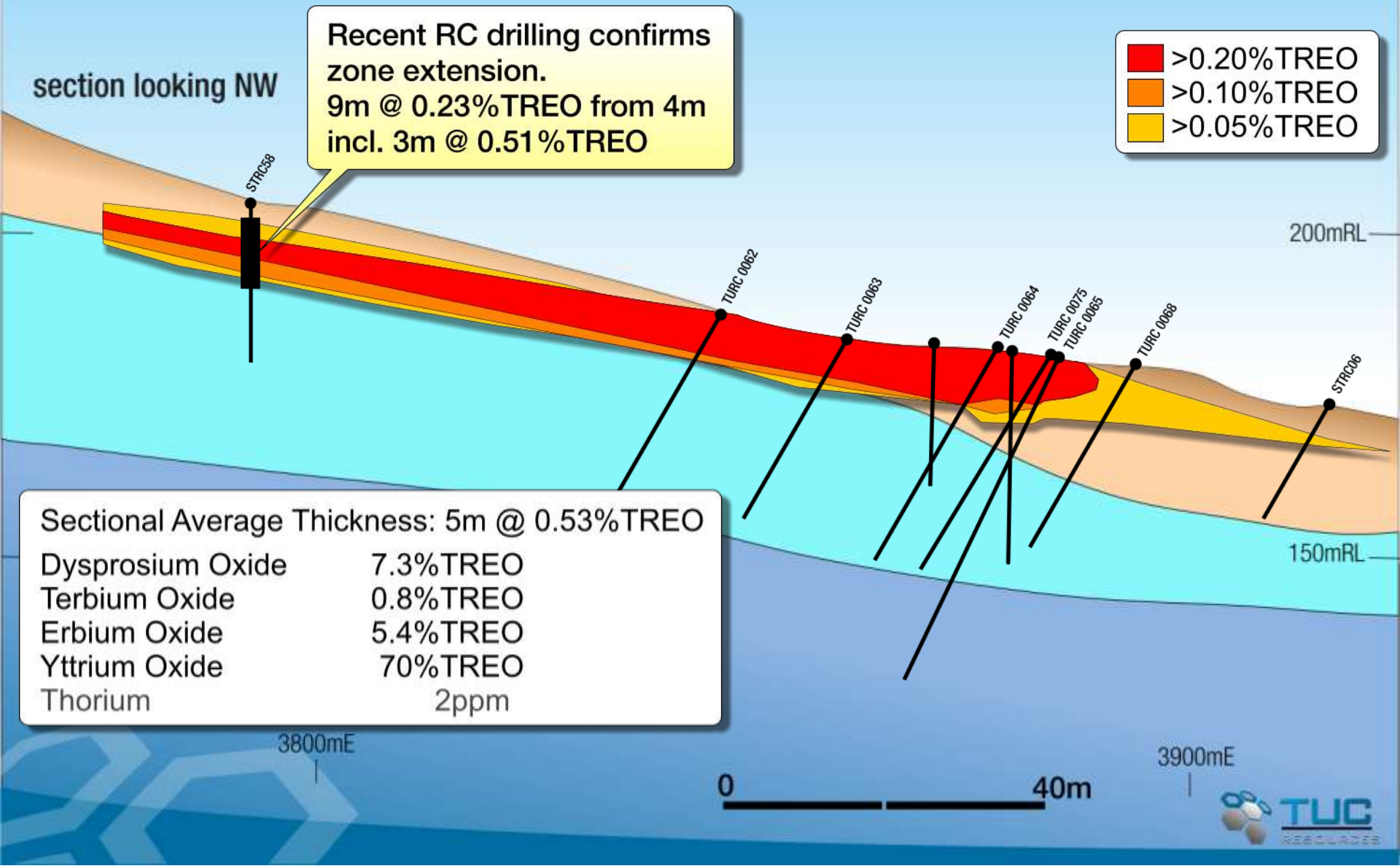


# Clear Potential from Exploration Drilling

Maximum %TREO intercepts from RC drilling



# Stromberg major stepouts substantially extend mineral inventory




Sectional Average Thickness: 5m @ 0.53%TREO

| | |
|---|---|
| Dysprosium Oxide | 7.3%TREO |
| Terbium Oxide | 0.8%TREO |
| Erbium Oxide | 5.4%TREO |
| Yttrium Oxide | 70%TREO |
| Thorium | 2ppm |

# Diamond Drilling Completed

- **Mineralisation Extended**
- **Assays Pending**
- **Providing Samples For Next Stage Metallurgy**

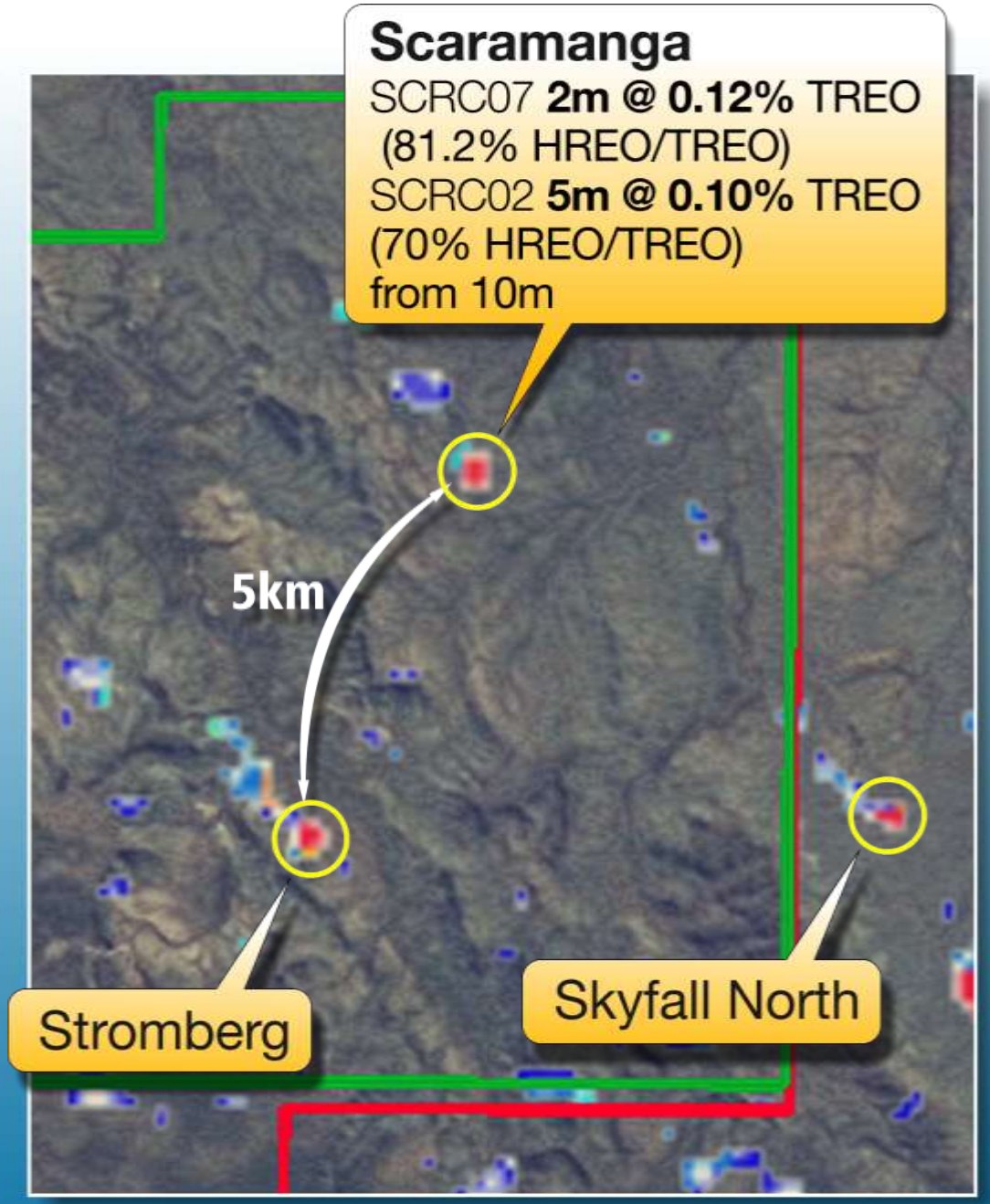

Another Discovery
Scaramanga
Exploration breakthrough
proves district potential

# Scaramanga

Significant new results

Upside within a short distance of Stromberg

Proves broader district potential

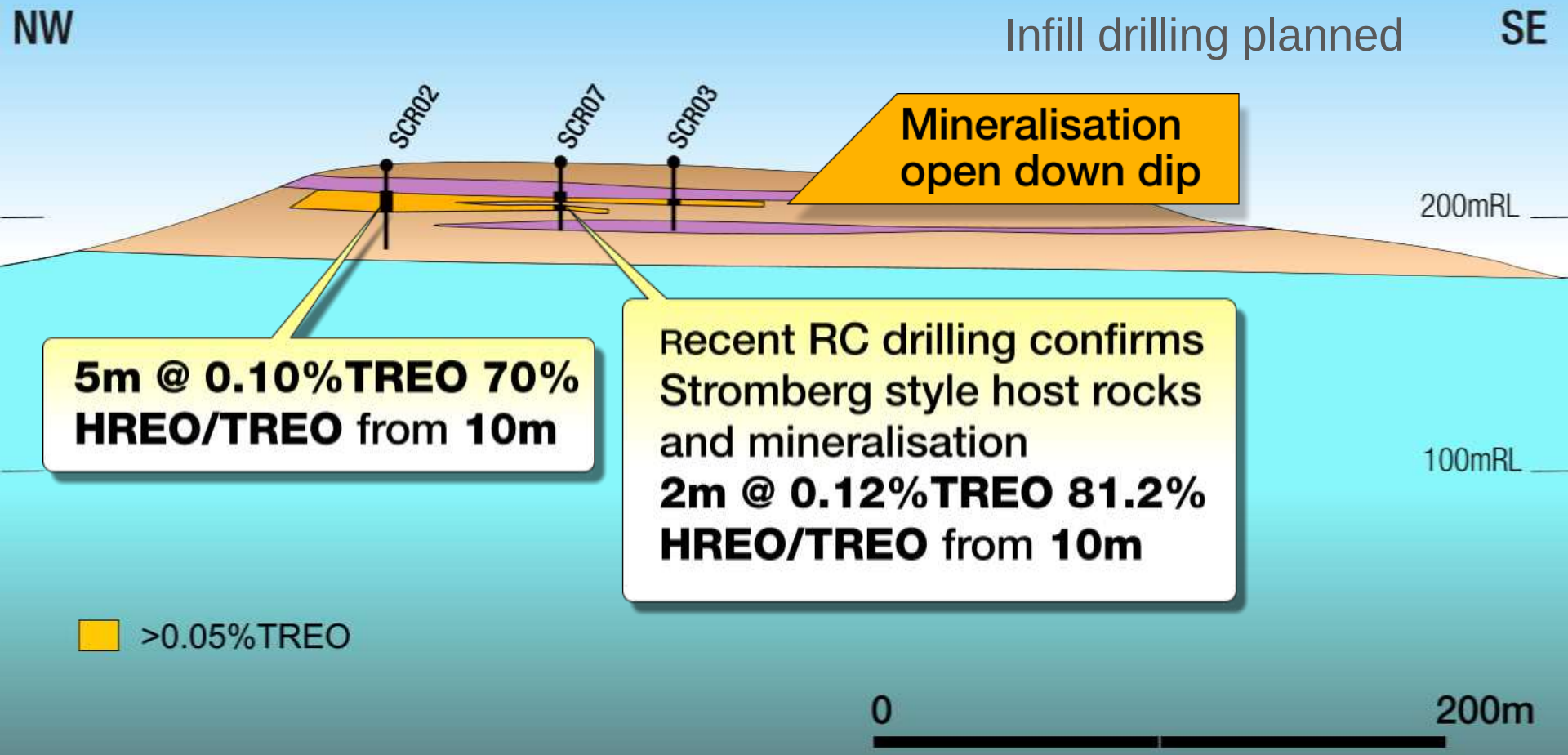


# Scaramanga Cross Section

First pass broad spaced Drilling

Two distinct near surface HREE Horizons

Infill drilling planned

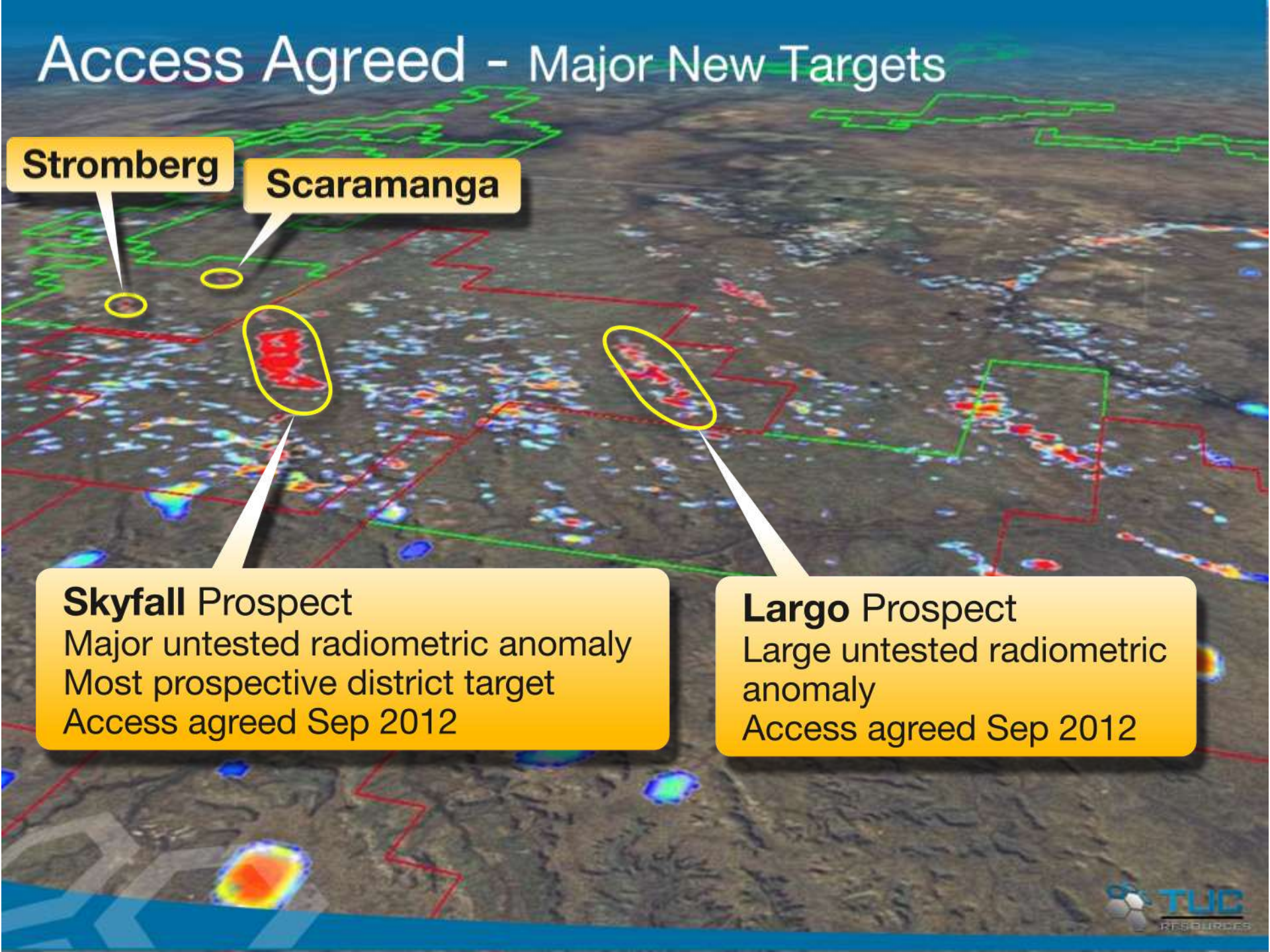


# Stakeholder Engagement

On Friday September 14 2012 Verbal Consent was given to take the highly prospective HREE tenement ELA27151 out of moratorium and for Exploration to begin

George Jebel Huddlestone; Custodian – Stromberg District

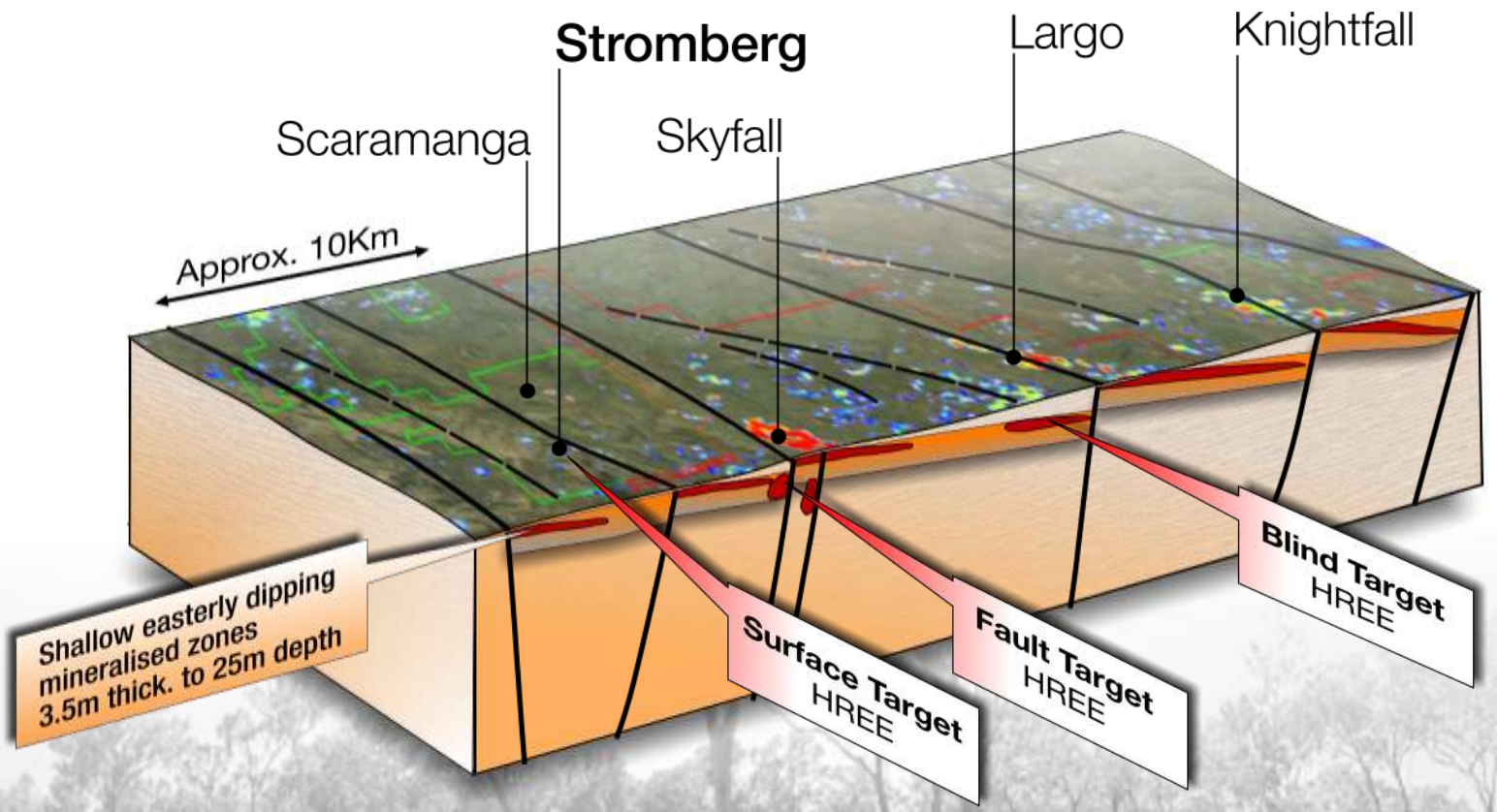
# Access Agreed - Major New Targets



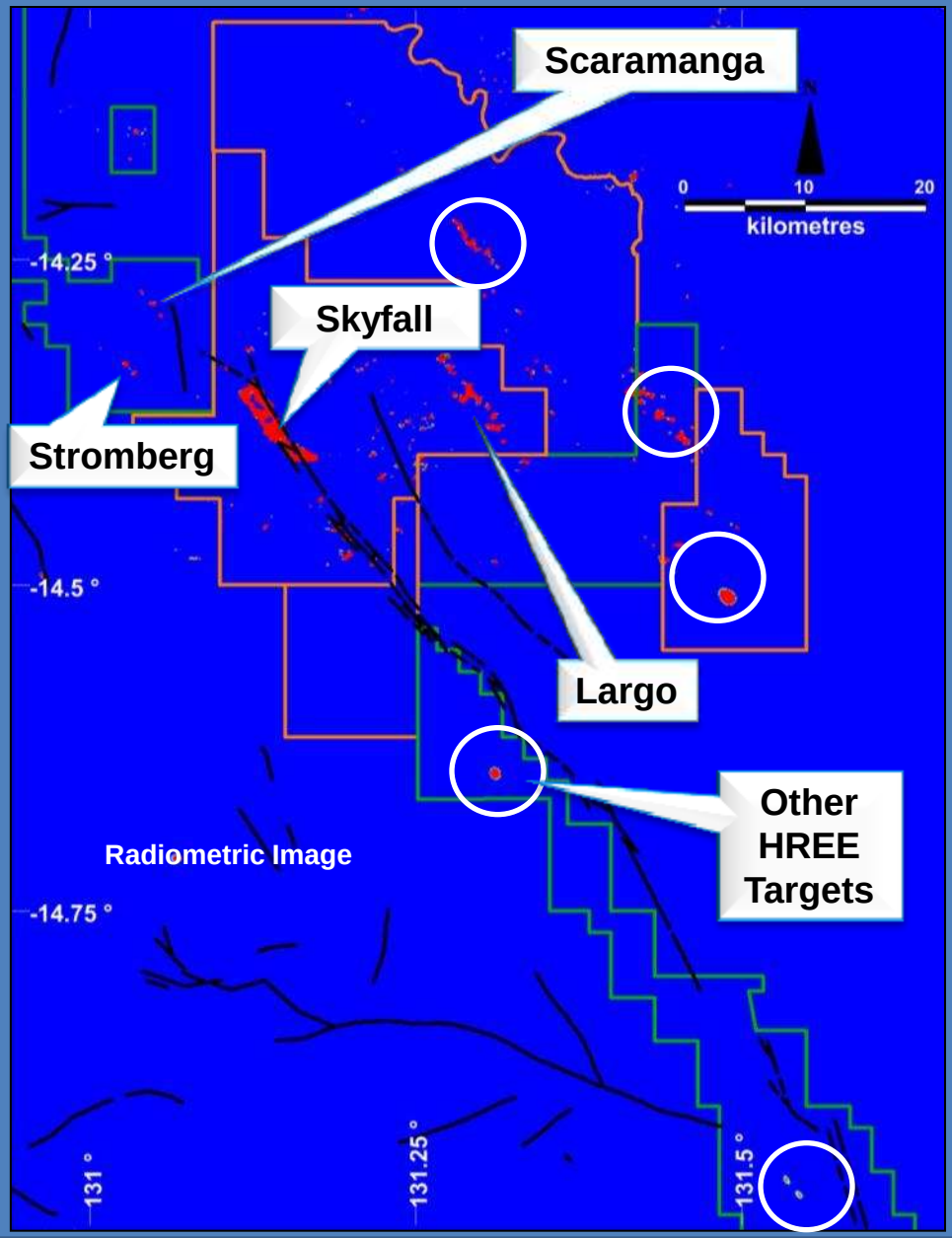
# Regional Conceptual Model

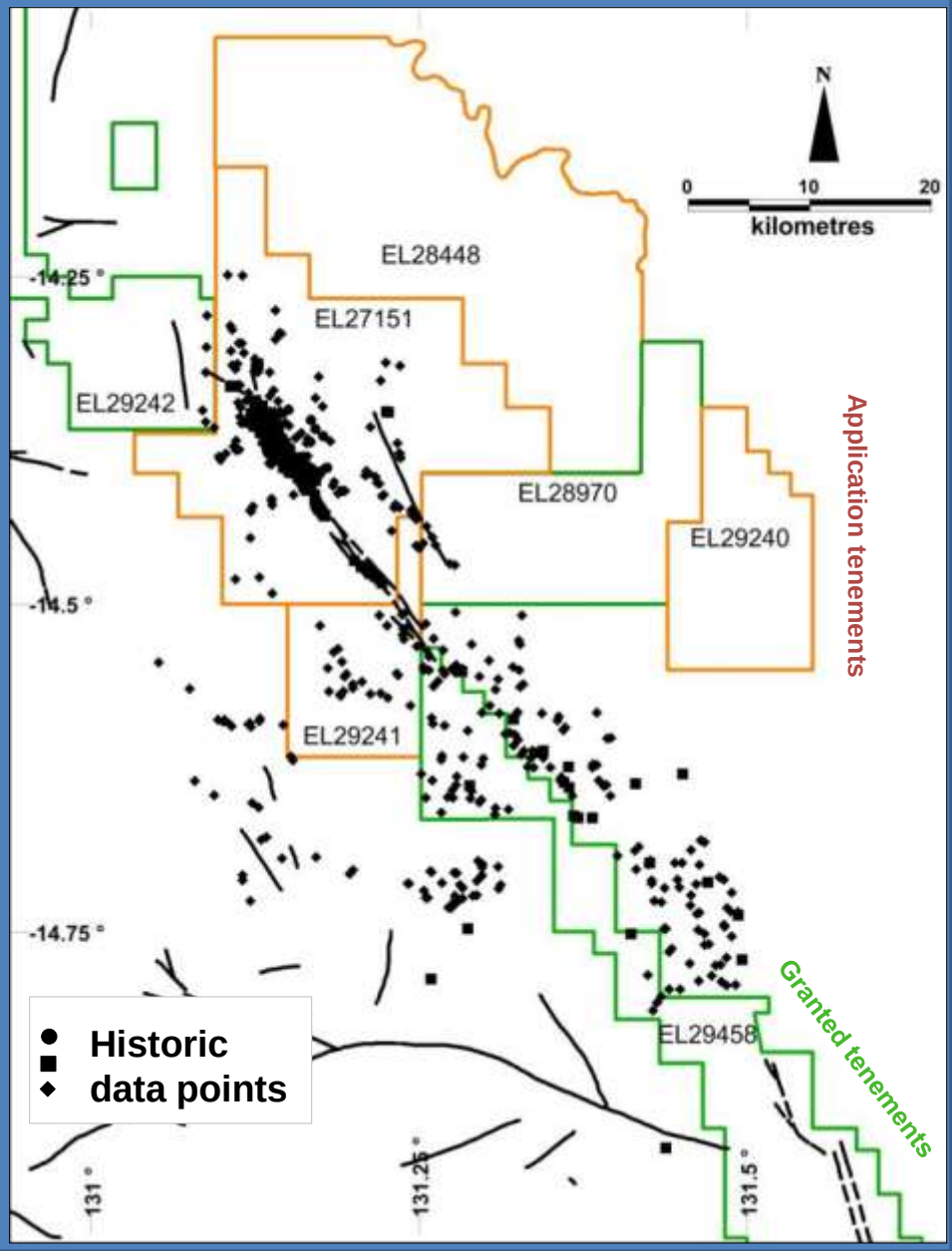
## High Discovery Potential

### Rock Types, Faults and Mineralised Systems Repeat



# Historic Data Adds Confidence in HREE Potential



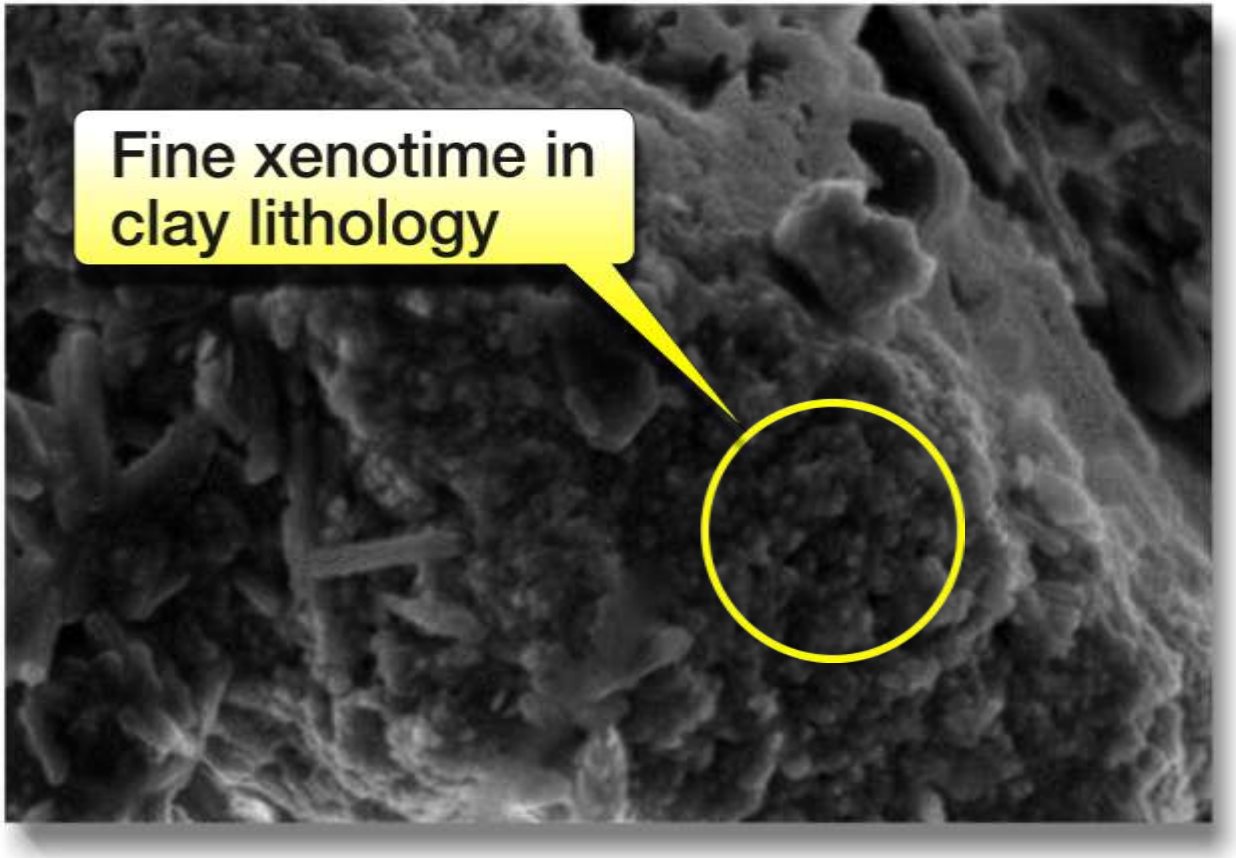



# Cost and Price Advantages

# Xenotime Mineralogy Competitive Advantage

Efficient leach of raw material

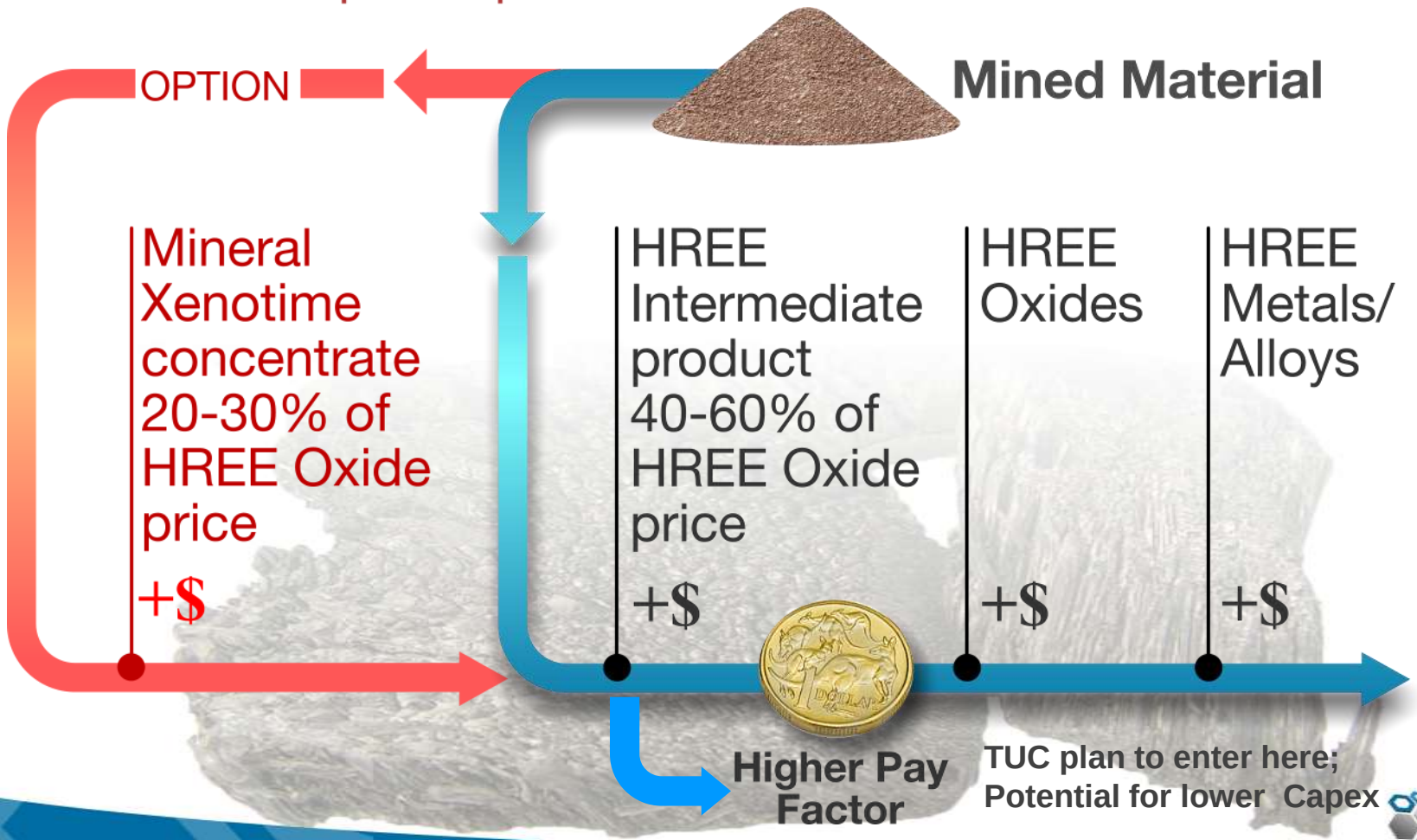
- Amenable to direct acid leach into solution
- Up to 85% recovery



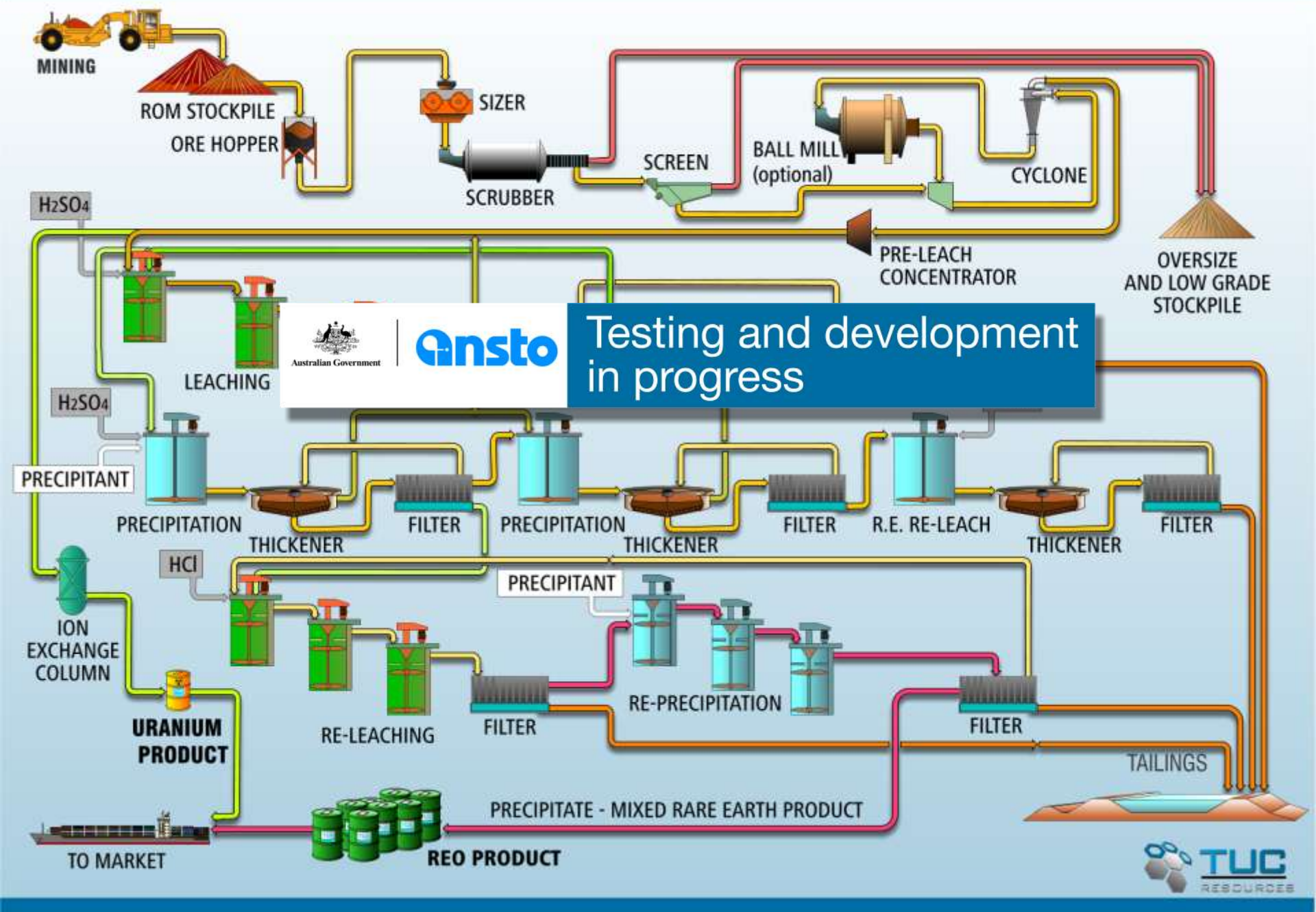
# Direct Leach Process

Entry to market at intermediate stage
- not mineral concentrate stage

Option for ~15% of Stromberg material
Quicker startup time possible

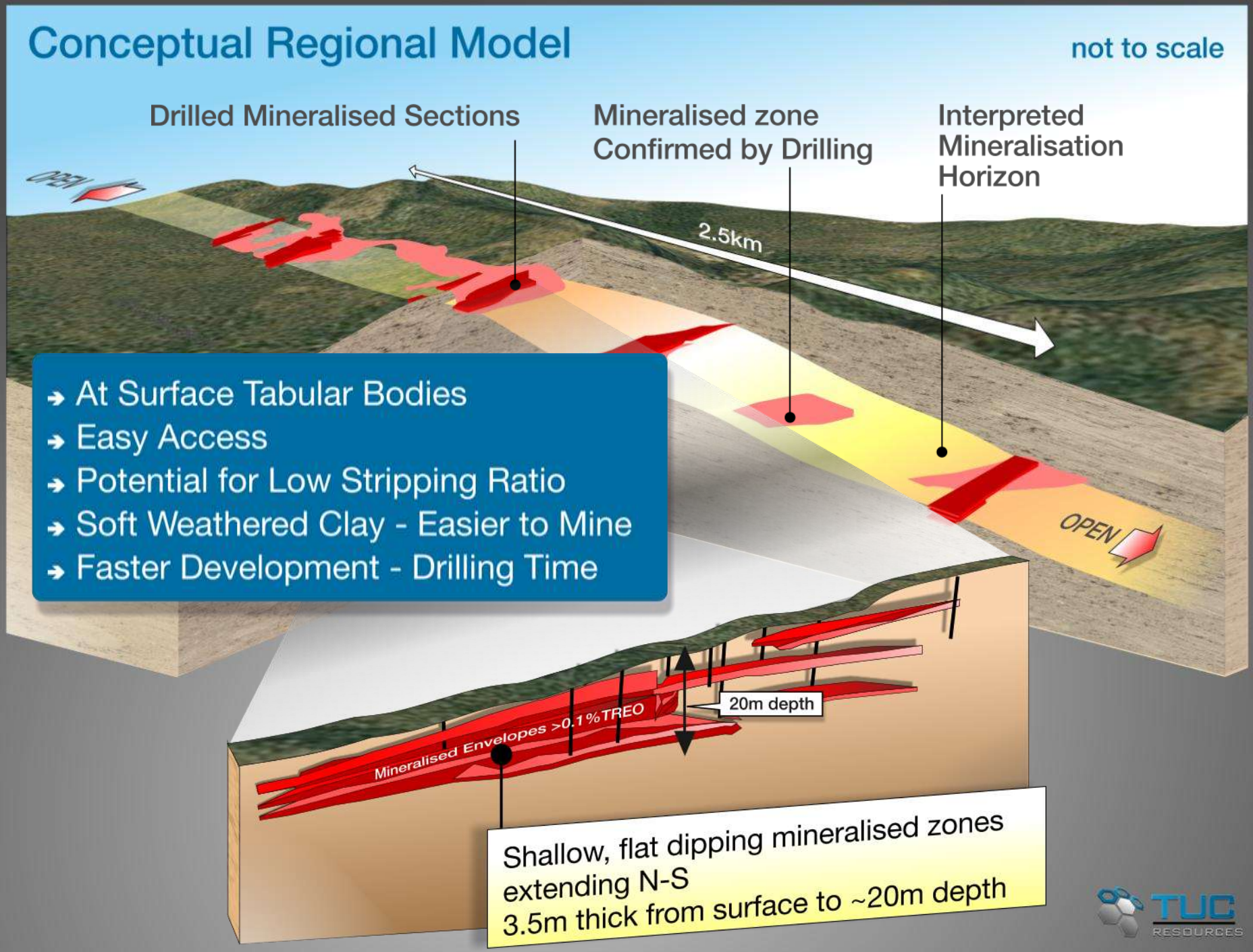


# Process Flow Sheet Prove/Improve Conceptual



# Conceptual Regional Model

not to scale

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# Potential for a Shorter Development Time and Early Mover Advantage

# Stromberg Project

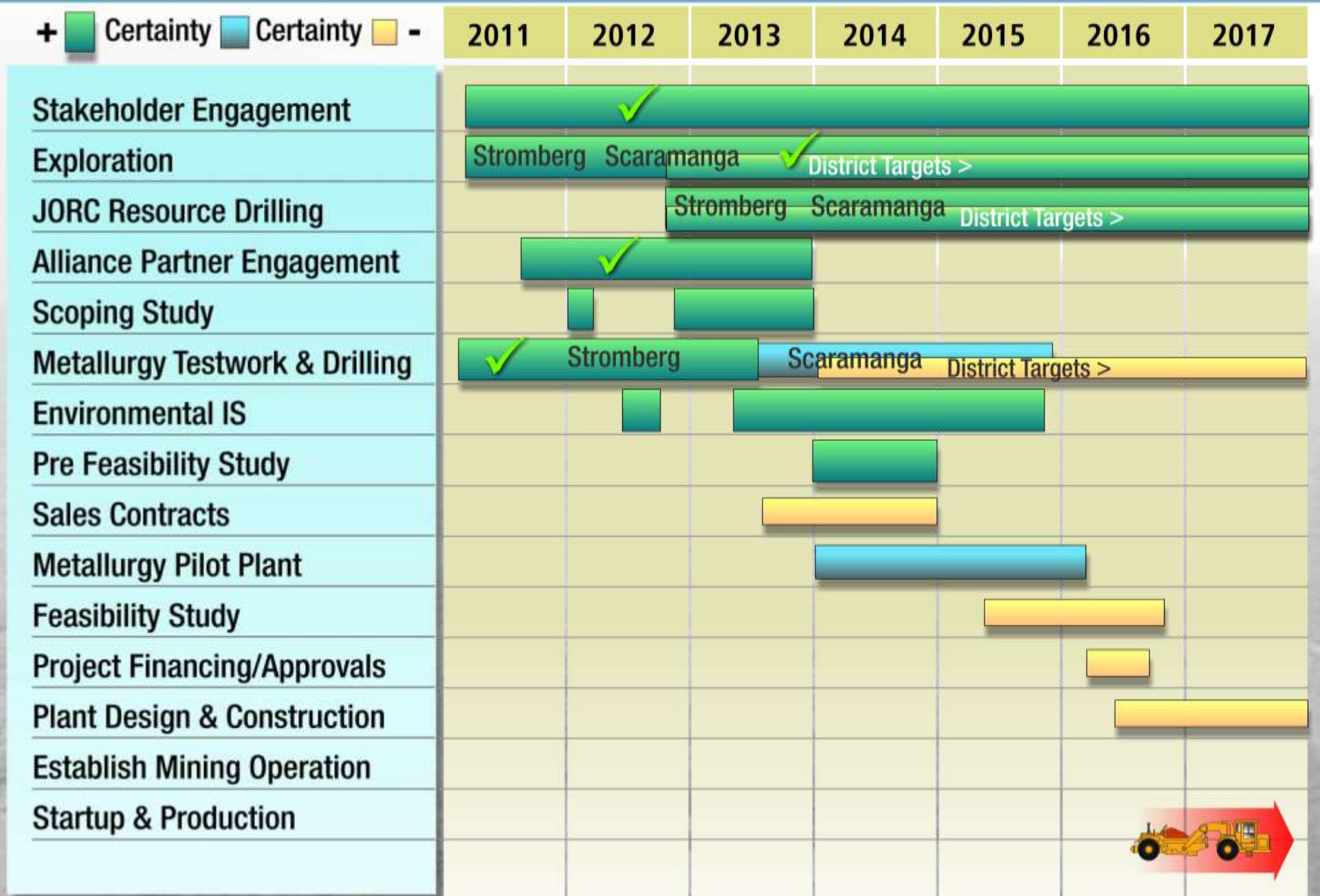
Small initial modular plant concept

Smaller startup Capex anticipated

12-30tph capacity

Source: Bateman Enginering

# Planned Stromberg Development Opportunities



# Major Rare Earth Deposits

## TUC is actively seeking an REE industry partner


**3.1** REE deposit with known reserves - million tonnes

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# Value Proposition

- Correct HREE Market space
- Large HREE exploration upside unlocked
- Apparent cost advantages
  - ➔ Mineral processing - Mining - Capex
- Potential for shorter development time
  - ➔ Early mover advantage
- Work program underway

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