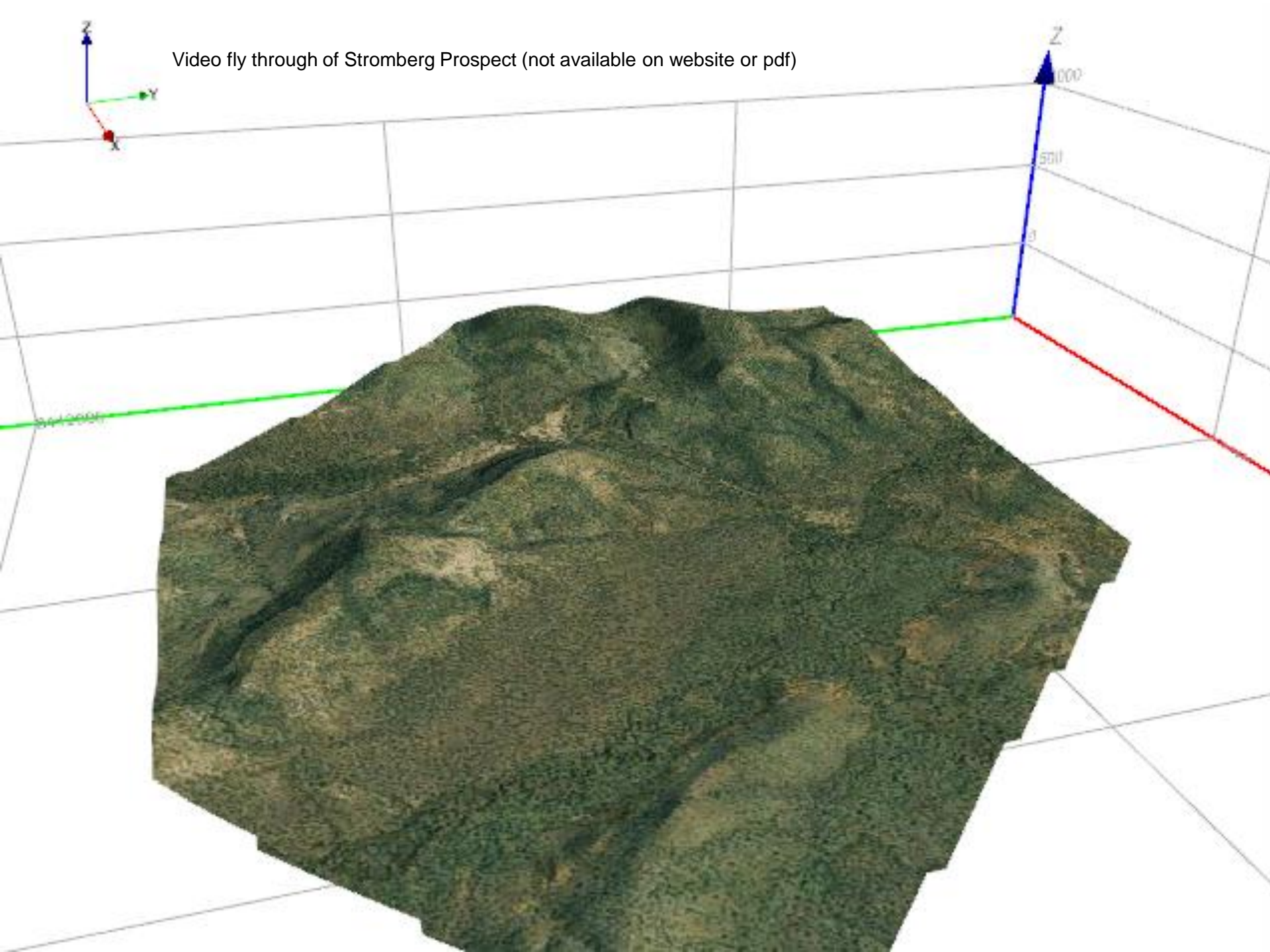




Heavy Rare Earth (HREE) Discovery in the Northern Territory

**IAN BAMBOROUGH, Managing Director
TUC Resources Investor Update
Australian Uranium and Rare Earth Conference
Fremantle Western Australia 19 July 2012**

Video fly through of Stromberg Prospect (not available on website or pdf)



Contents

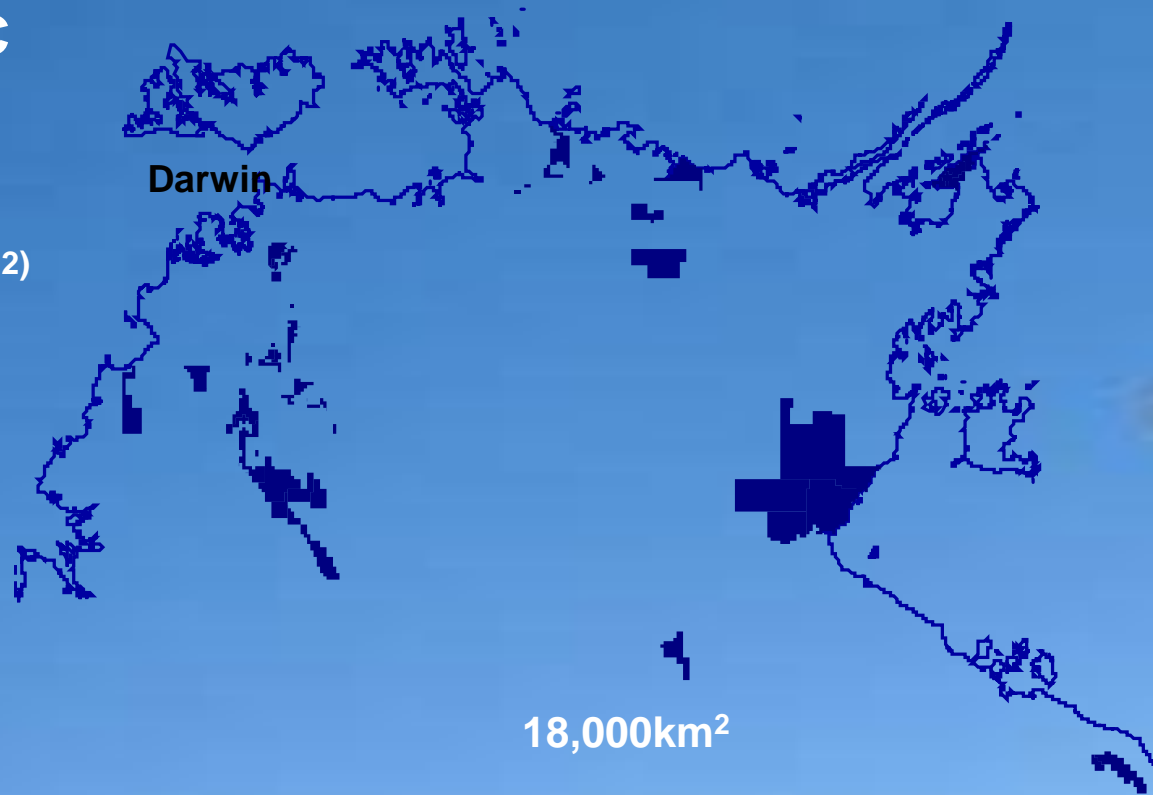


- **The Company – A Brief Introduction**
- **Value Proposition – HREE Market**
- **Stromberg Deposit – Potential Market Impact**
- **Large HREE Exploration Upside**
- **Margin Drivers; Mining / Processing Costs and Price**
- **Time to Market – TUC/Stromberg Advantages**
- **Strategy – Activities – Goals 2012**
- **A Reason to Invest**

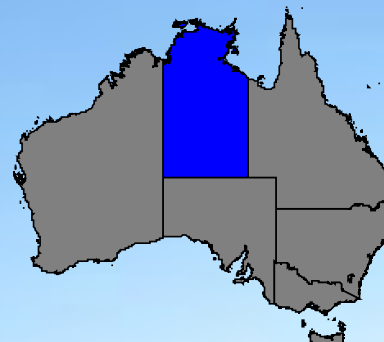
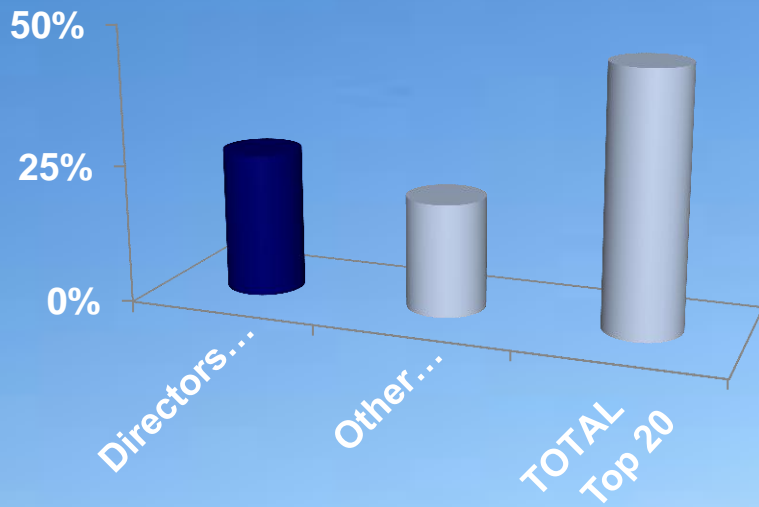
The Company

Company Position; ASX TUC

- 124.4M Shares at A\$0.115
Market Cap. A\$14.4M (18 July 2012)
- Funds +\$2.9M (31 March 2012)
- +1200 Shareholders



Top 20 Share Register



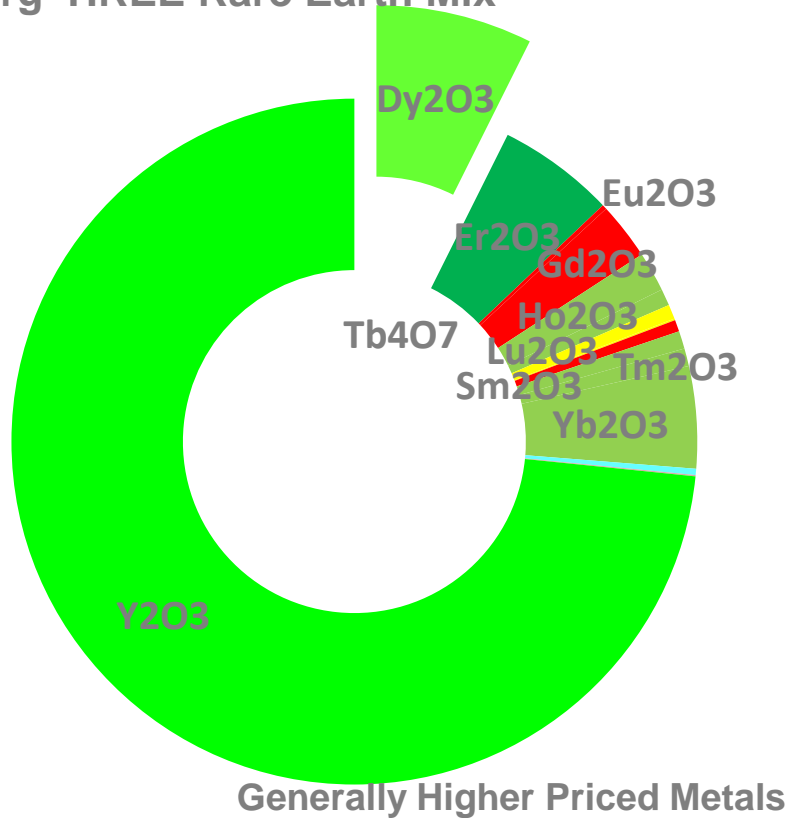
HREE Market

Product - Light vs. Heavy Rare Earths

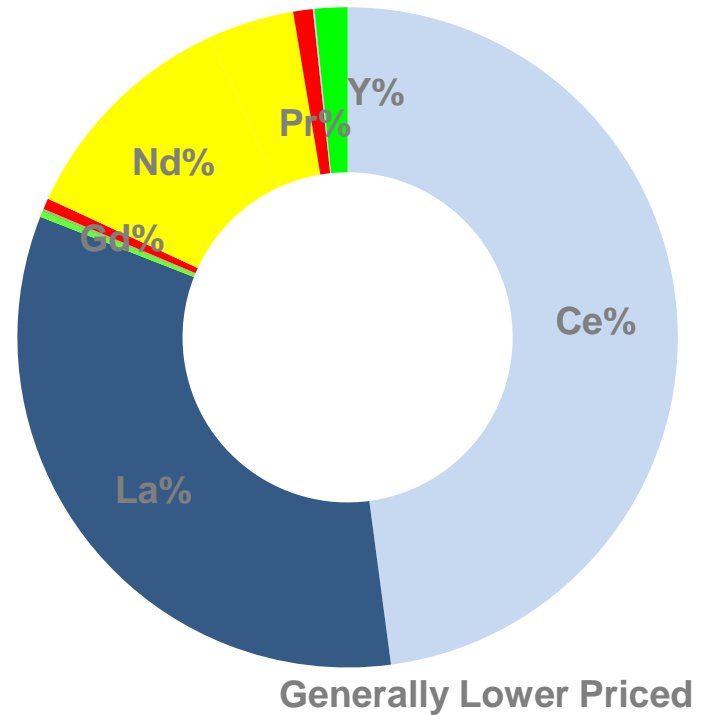


85% HREE/TREE (Distribution)

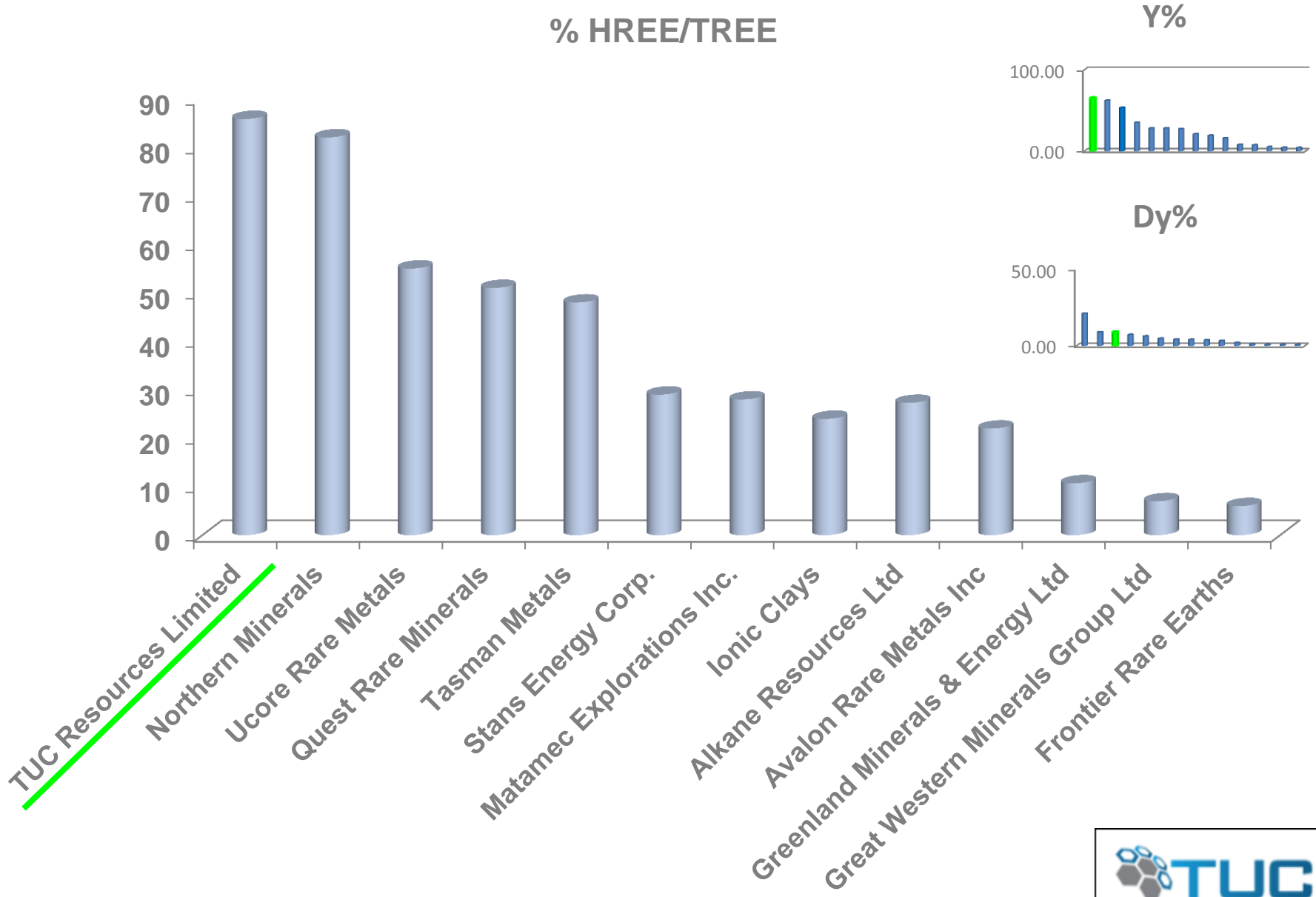
Stromberg HREE Rare Earth Mix



Typical Light REE Mix Similar to Mt Weld - Lynas



TUC's Stromberg holds a #1 Position in terms of HREE Distribution



HREE's are used in the growing Clean Efficient Energy Markets

Dysprosium in High Temperature High Efficiency Fixed Magnets in Electric Motors and Power Generation



DEMAND IS UNDERPINNED BY WORLD GOVERNMENT INITIATIVES....
Eg. Carbon Tax



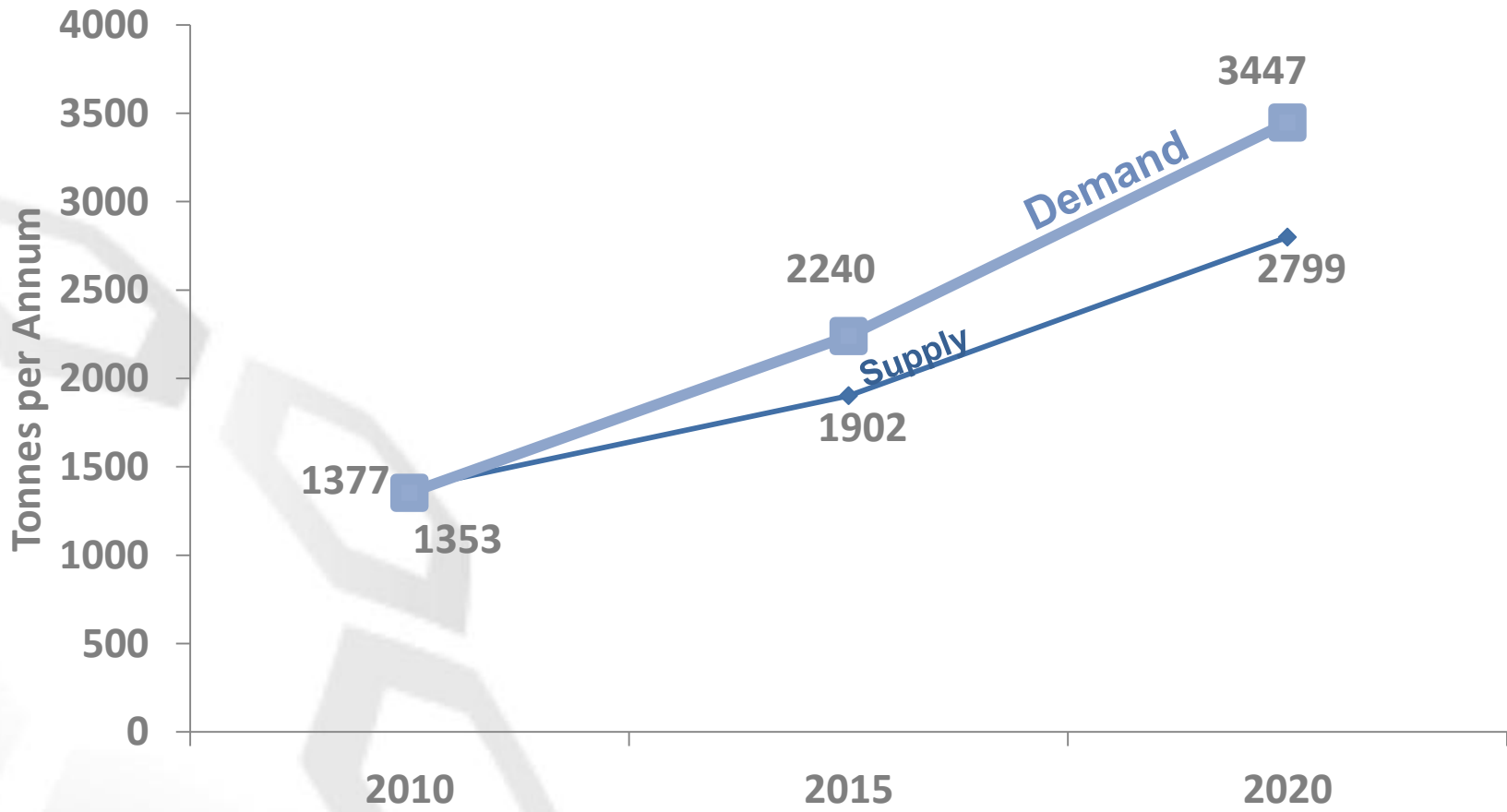
Yttrium and Erbium in Low Energy Lighting; Lighting Phosphors



Europium for Red Colouring in Video Screens

Demand Supply Gap Forecast to Grow

Dysprosium Oxide



Source: IMCOA – Öko-Institut; Jan 2012

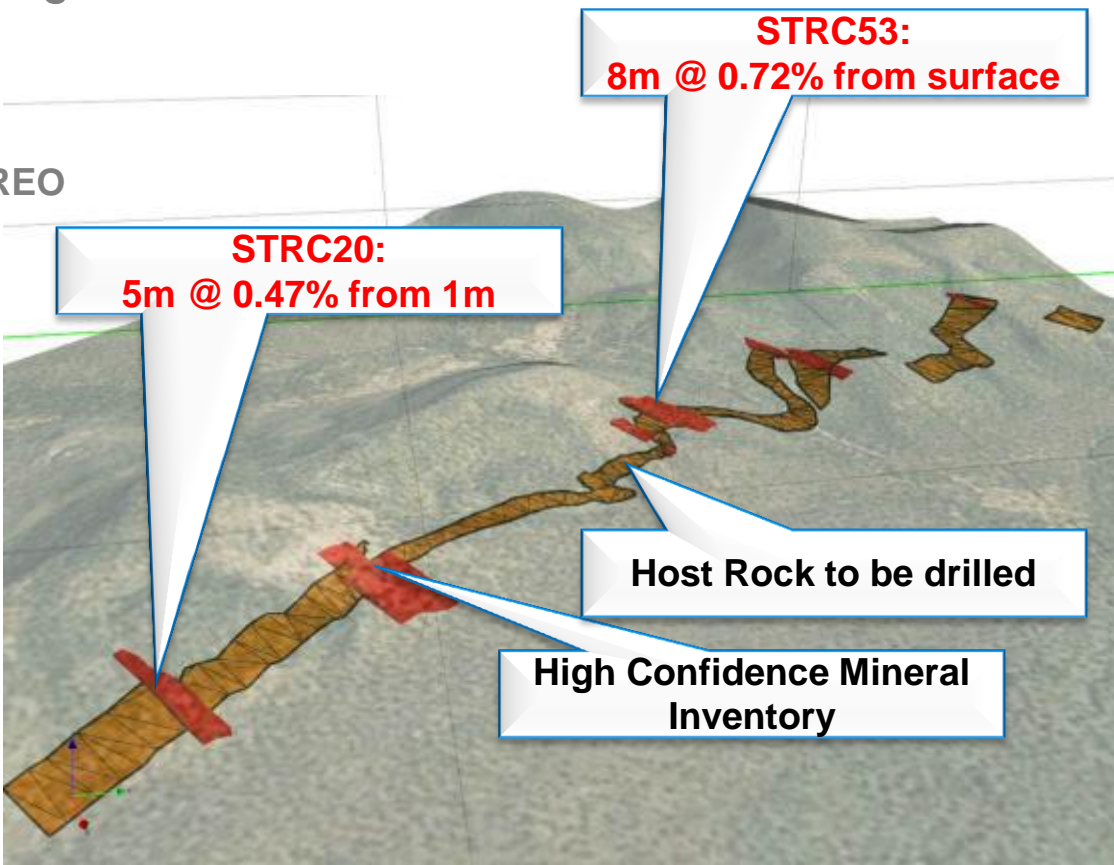


Stromberg HREE Prospect; Potential Market Impact

Clear Potential from Exploration Drilling

- 2.3km Strike Length
- Six Robust Drilling Cross Sections
- 3.3m average thickness >0.1% TREO
- 0.45% TREO all intersections >0.2%/TREO
- Dysprosium Oxide 7.5%/TREO
- Terbium Oxide ~1%/TREO
- Yttrium Oxide 65%/TREO
- Only 2ppm Thorium per 1% TREO

Stromberg
Potential Impact
 Initial 0.6 - 1.5Mt at between 0.33% TREO
 and 0.45% TREO Exploration Target Case





The potential quantity and grade is conceptual in nature, there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a JORC Mineral Resource

✓ Correct HREE Market Space

✓ Potential for Strong Market Impact+.....

Large HREE Exploration Upside

Control of a New HREE District

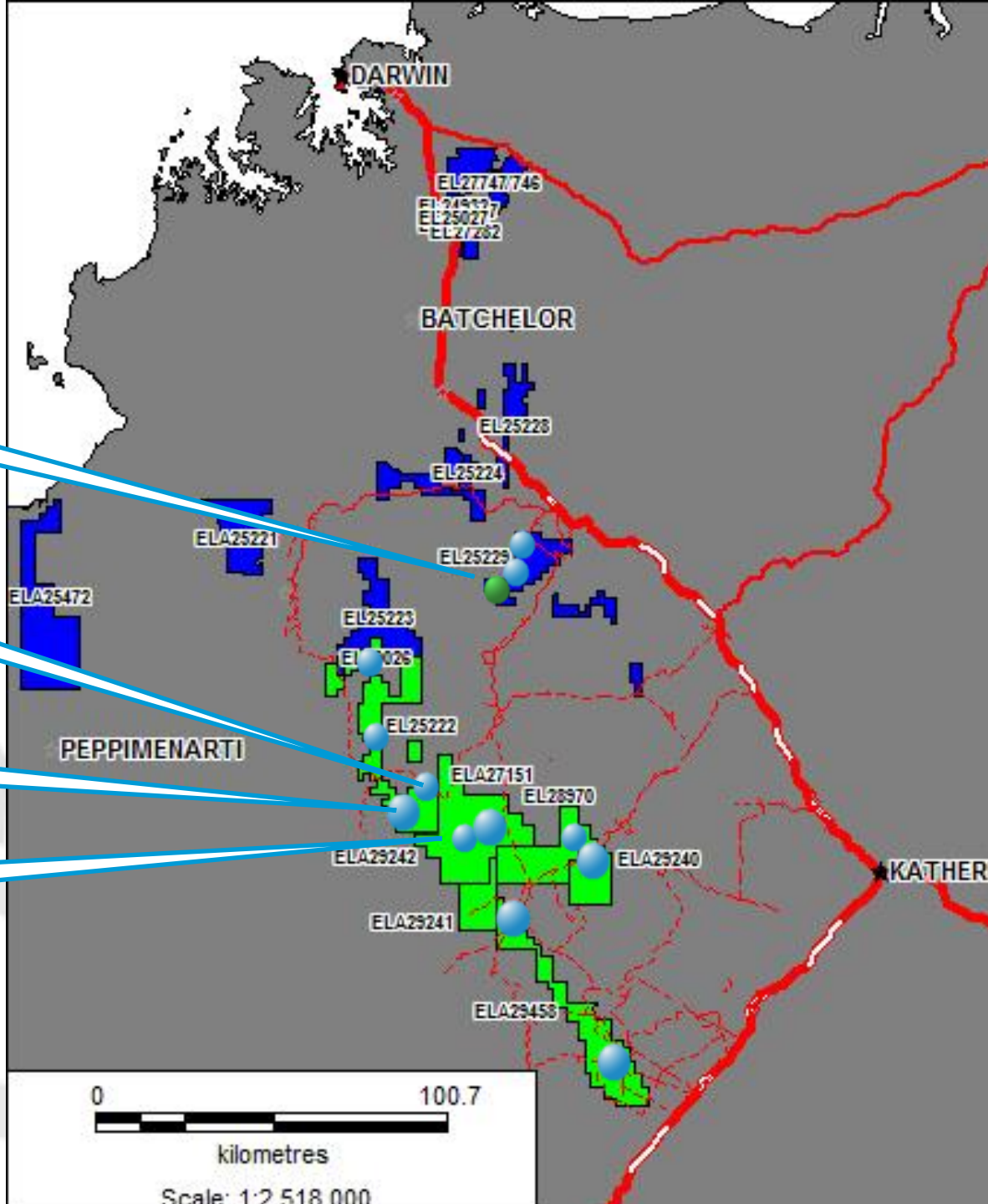
-  = HREE Prospects
-  = LREE Prospect

Quantum LREE Discovery

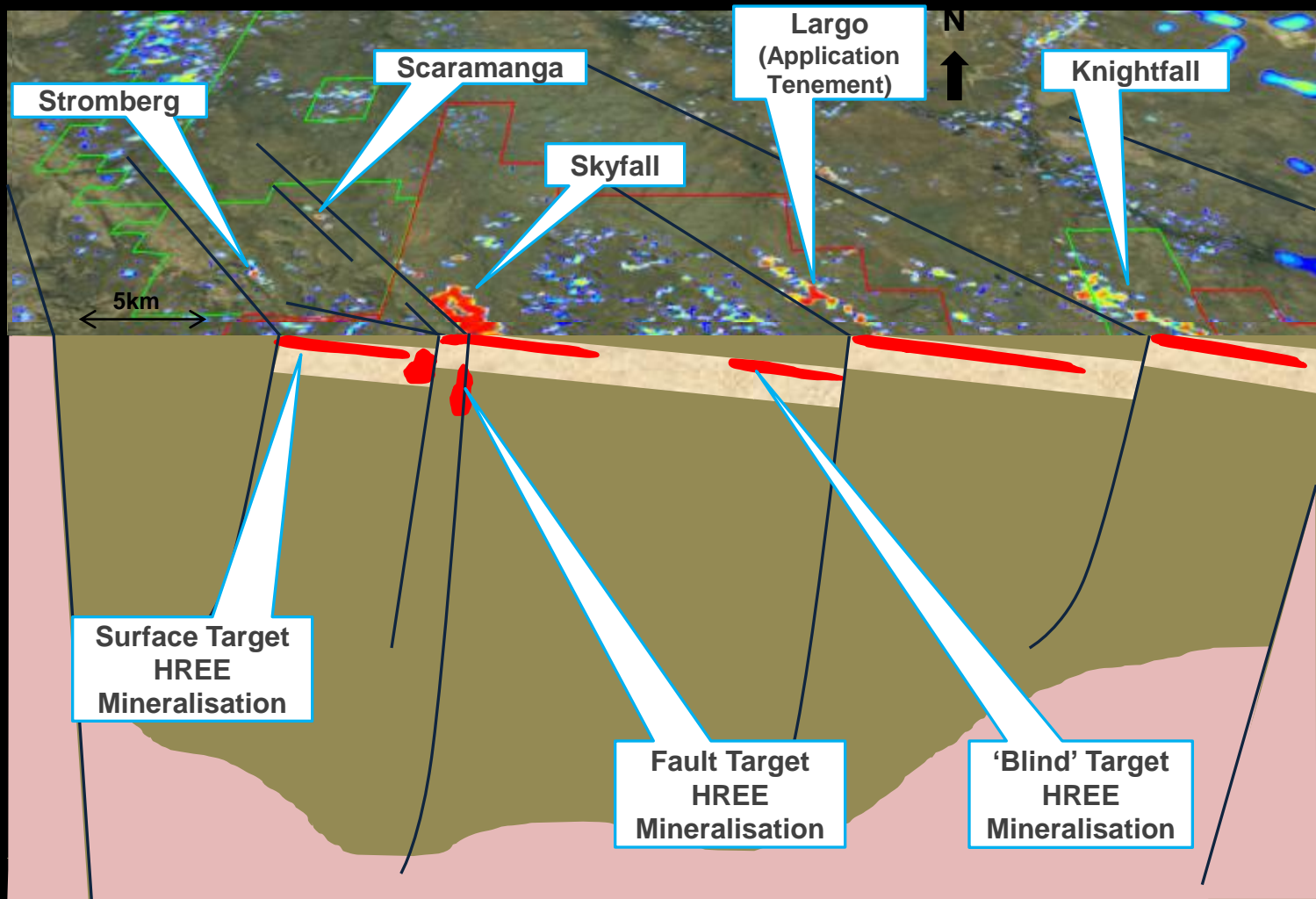
Scaramanga HREE Prospect

Stromberg HREE Discovery

Skyfall



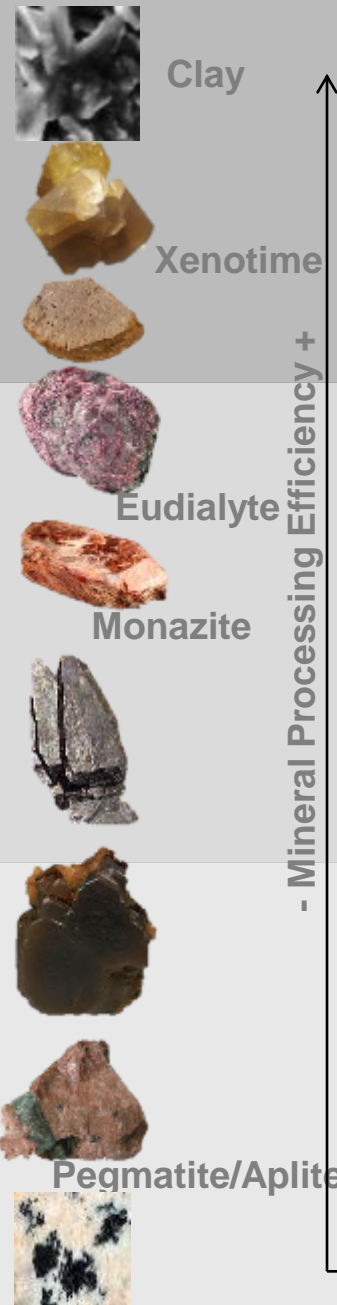
Large Exploration Potential - Rocks , Faults and Mineralised Systems Repeat



- ✓ **Correct HREE Market Space**
- ✓ **Potential for Strong Market Impact**
- ✓ **Large HREE Exploration Upside +.....**

Cost Advantages Mineral Processing

Mineralogy Matters; Stromberg – A Xenotime Deposit in Clay – A Strong Combination



- Mineral Processing Efficiency +

South China Clays

TUC Resources Limited

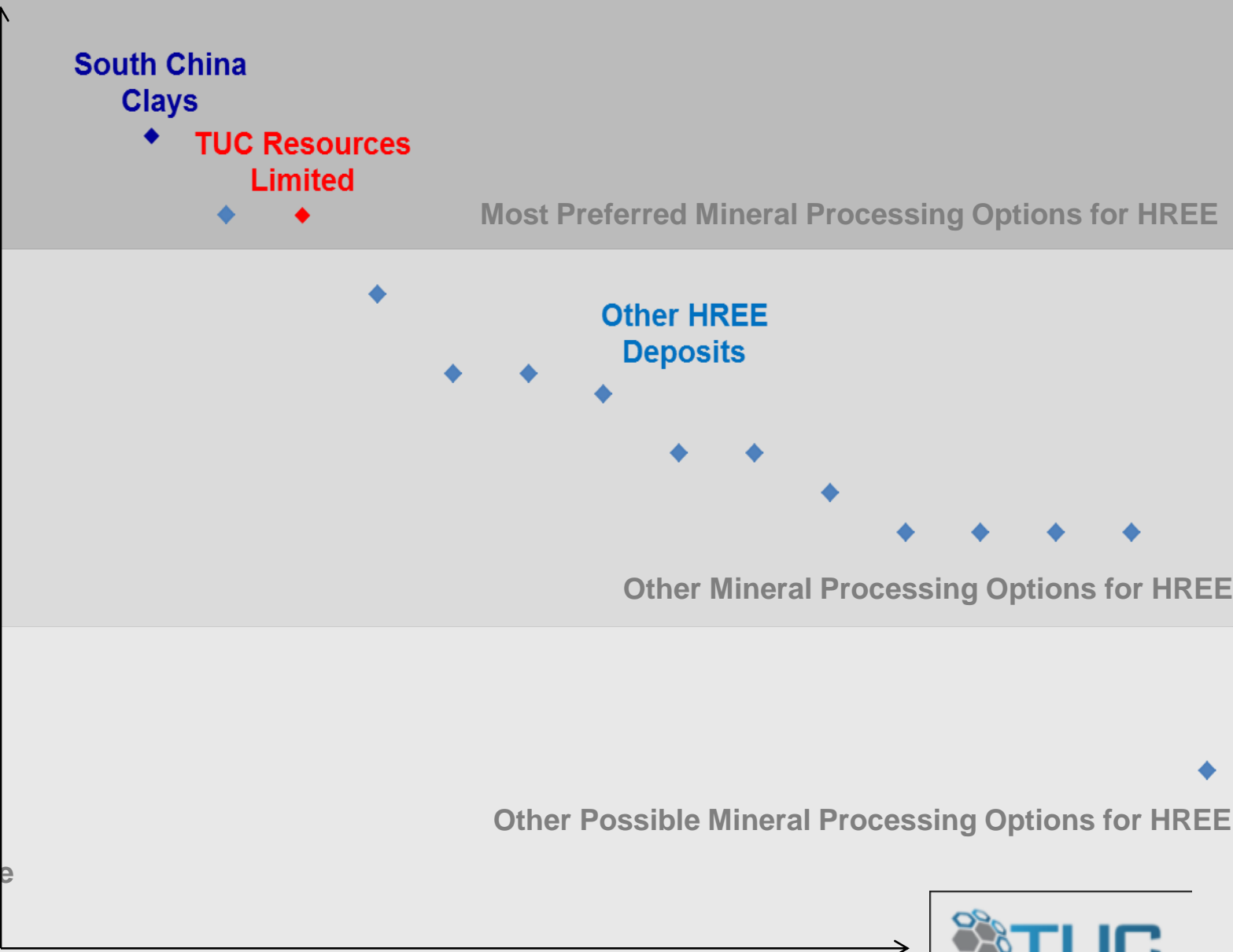
Most Preferred Mineral Processing Options for HREE

Other HREE Deposits

Other Mineral Processing Options for HREE

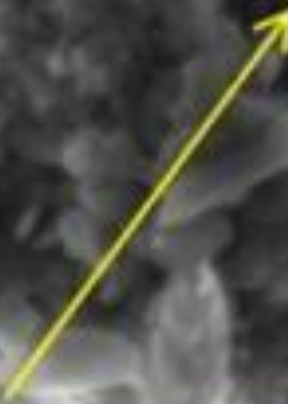
Other Possible Mineral Processing Options for HREE

Deposits



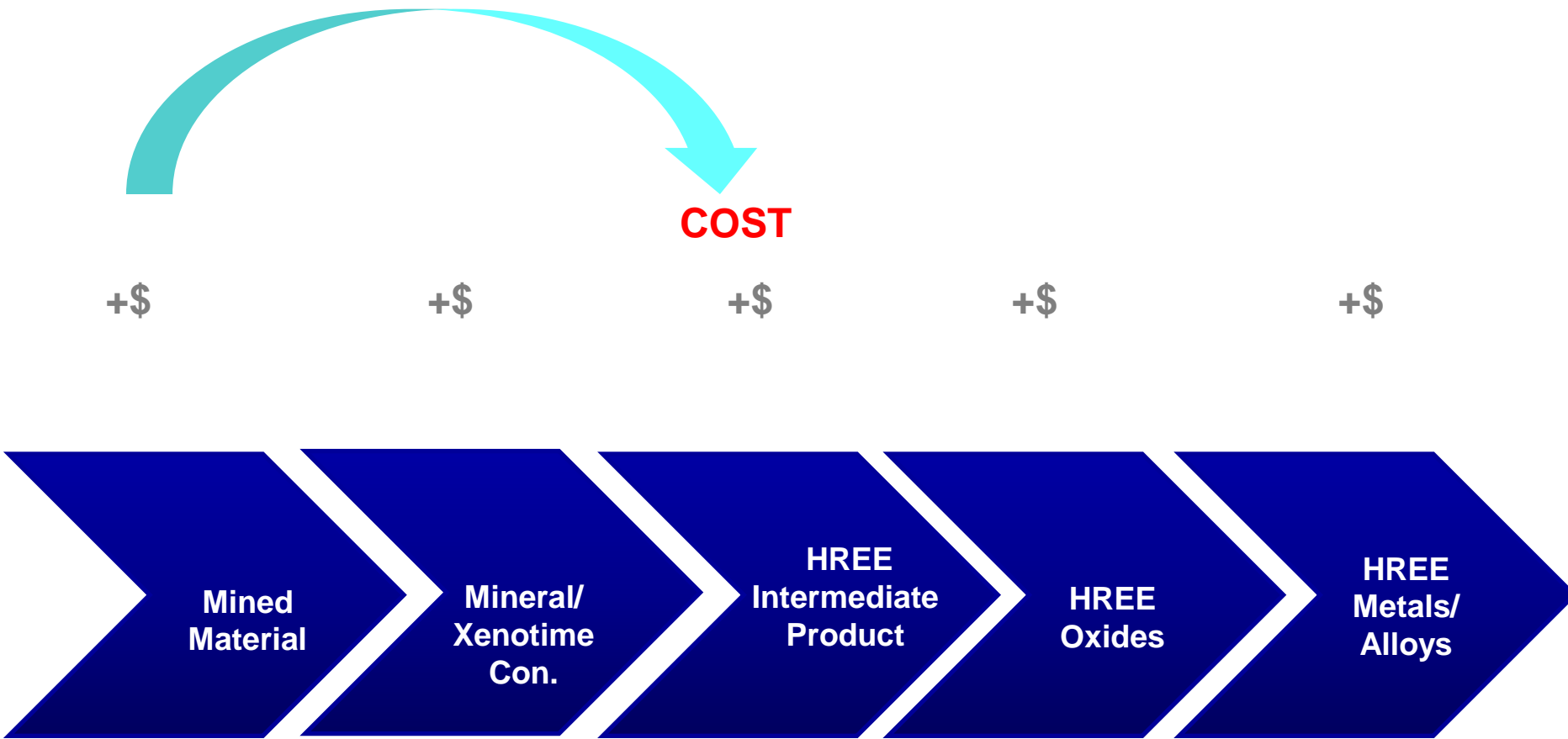
Efficient Leach of Raw Material.....up to 85% Recovery

Free Fine Xenotime in Clay means Stromberg Material Is More Amenable to Direct Acid Leach putting HREE's Straight into Solution



235600 100 nm concentration of xenotime in kaolin/halloysite

Direct Leach Scenario Potentially Allows TUC to Leapfrog a Processing Stage



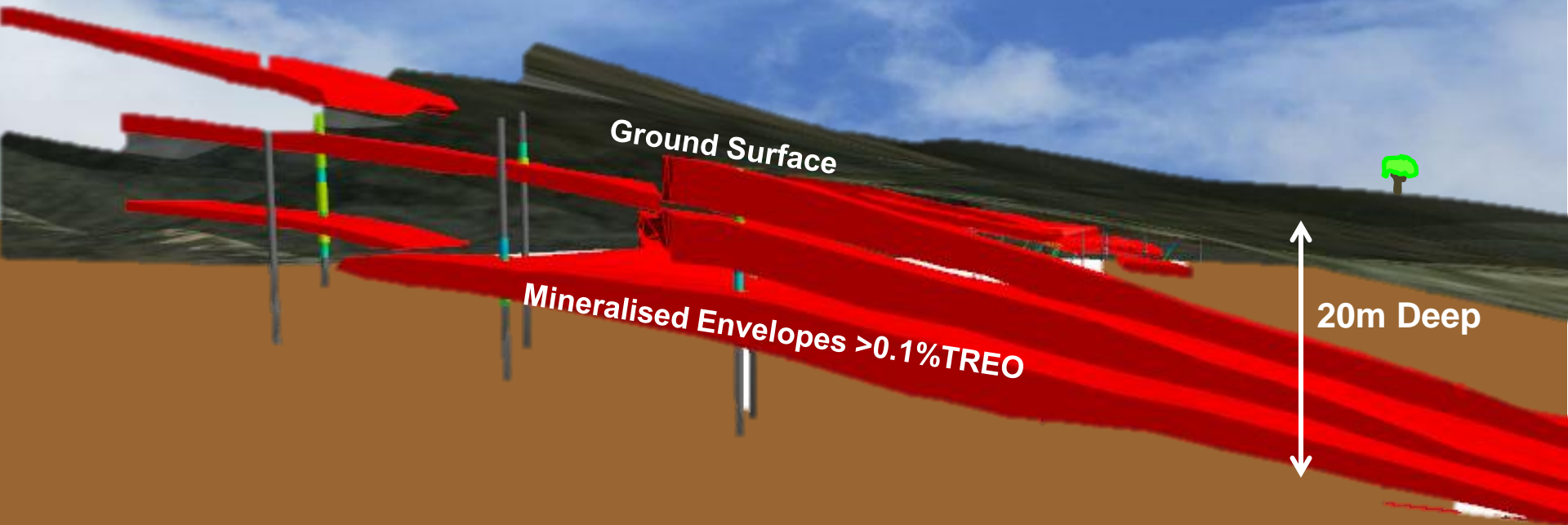
- Allows TUC to anticipate a lower opex and capex scenario



- ✓ **Correct HREE Market Space**
- ✓ **Potential for Strong Market Impact**
- ✓ **Large HREE Exploration Upside**
- ✓ **Cost Advantages – Mineral Processing +....**

Cost Advantages – Mining and Capex

Mining Cost Advantages



- At Surface Tabular Bodies – Easy Access and Potential for Low Stripping Ratio
- Soft Weathered Clay – Easier to Mine or Dig

Initial Target Exploration Size at Stromberg allows TUC to Anticipate A Small Modular Plant Concept to Minimise Start Up Capex

12-30tph Mill Capacity



Photo Courtesy of Bateman Engineering

Stromberg - Potential for Lower Quartile Costs

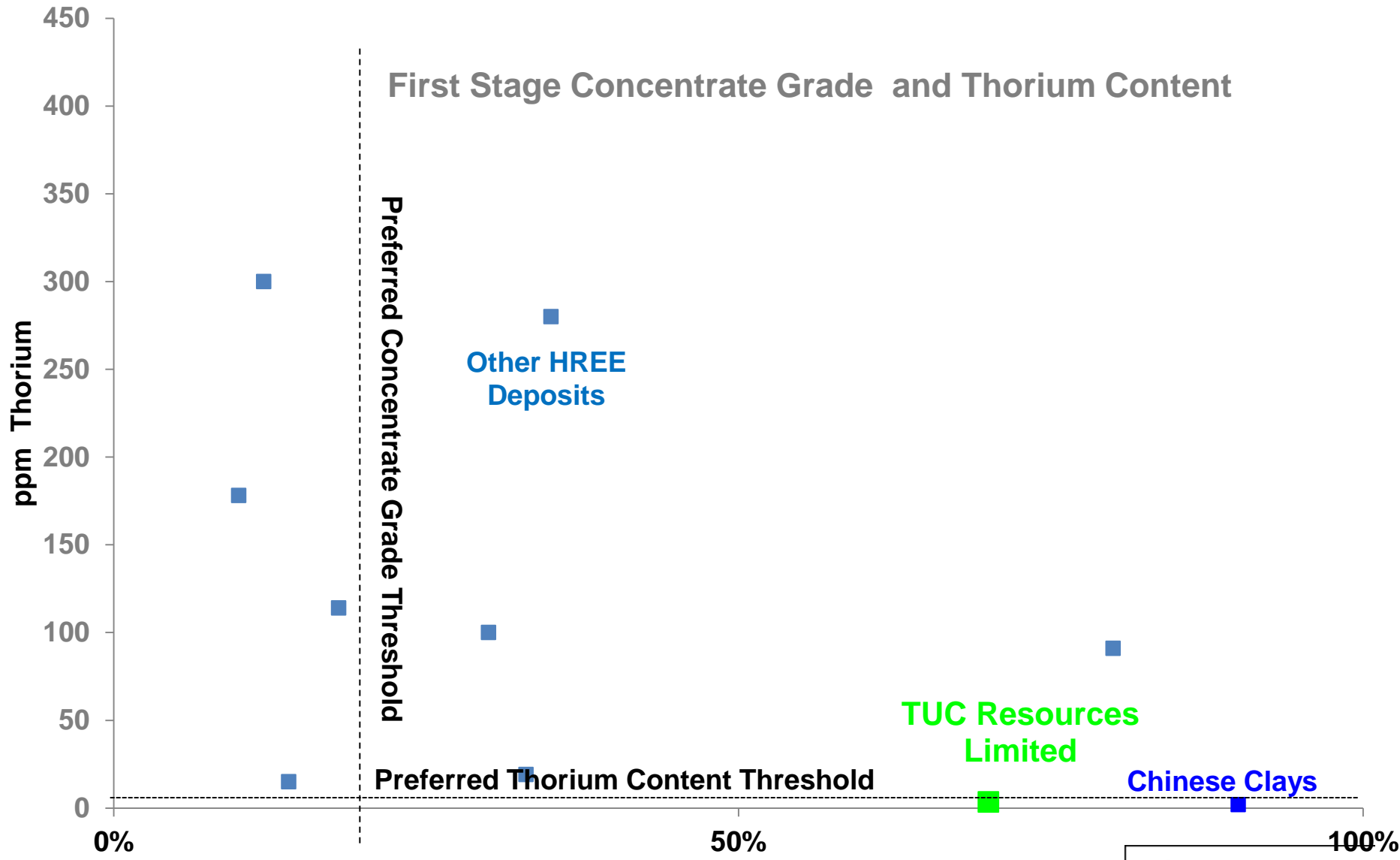
Start Up Capex vs. Relative Strip (mining cost)



- ✓ **Correct HREE Market Space**
- ✓ **Potential for Strong Market Impact**
- ✓ **Large HREE Exploration Upside**
- ✓ **Cost Advantages – Mineral Processing**
- ✓ **Cost Advantages – Mining and Capex +....**

Price Advantage

TUC's Stromberg has Other Price Advantages ; Potential Con. Grade and Low Deleterious Elements



Comparing physical separation deposits with direct leach deposits.

Likely First Stage Concentrate Grade



Assumes Comparable Solution and Precipitation Grade for TUC Material

Efficient Leach of Raw Material
Potentially Provides Direct route to
Competitive price position on
intermediate /carbonate product.

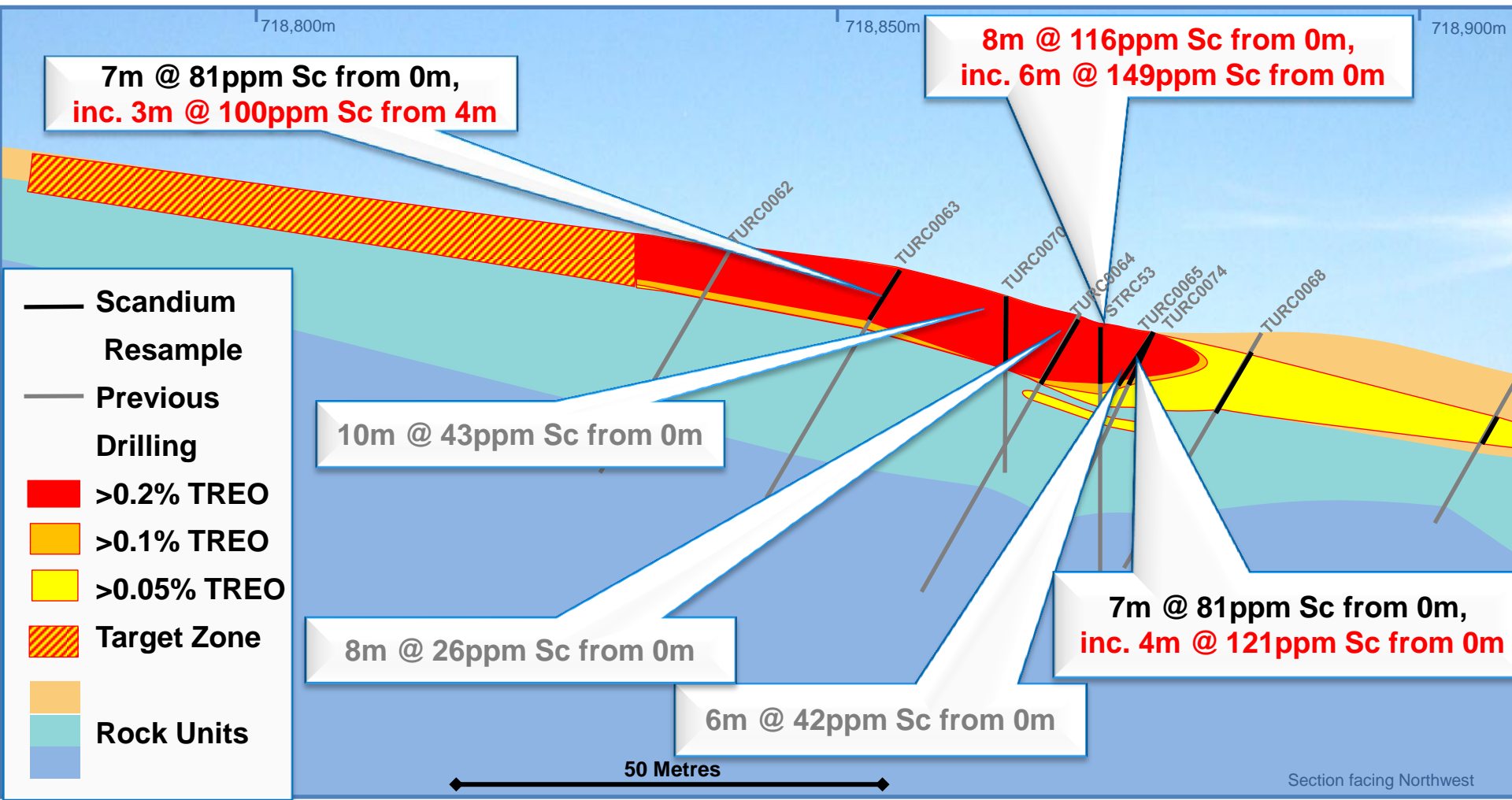
Testing of Conceptual Flow Sheet in
Progress.

Mixed Heavy Rare Earth Carbonate



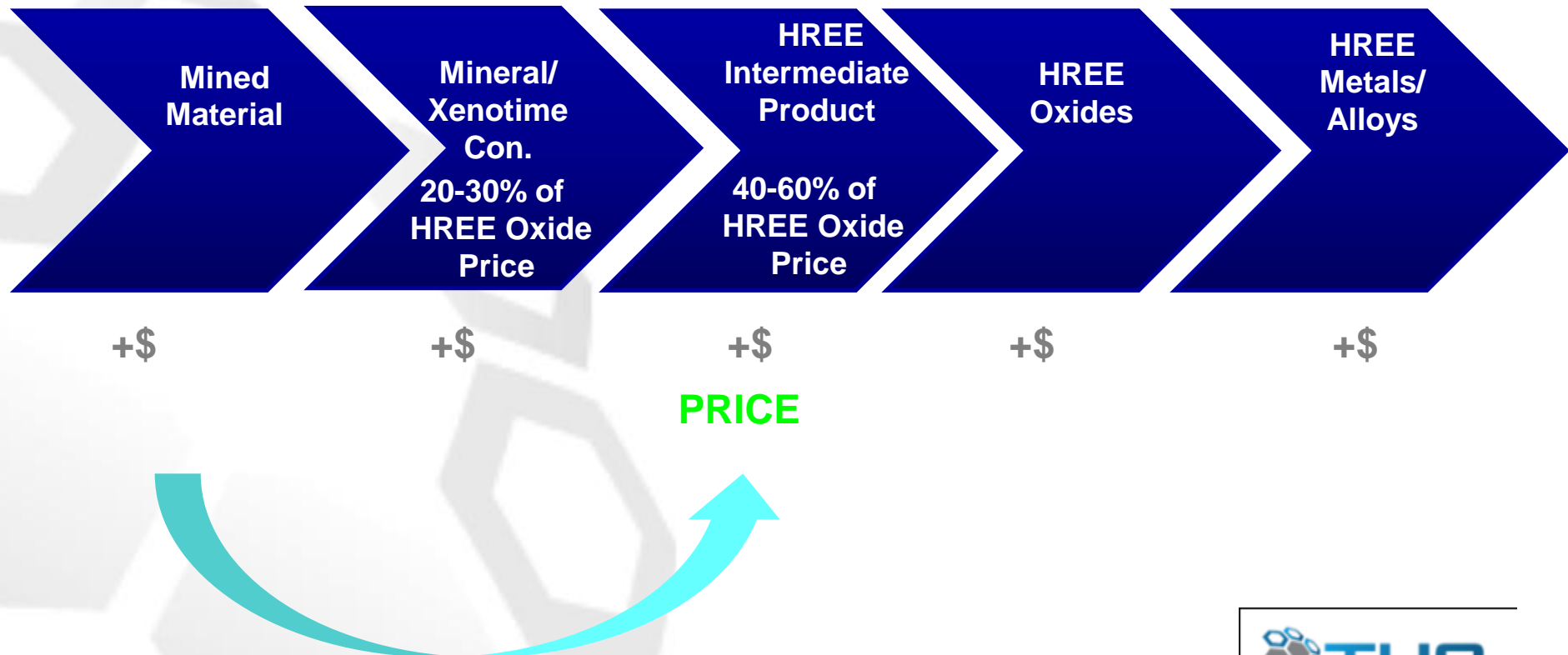
Other Metals at Stromberg - Scandium

- New Scandium resample results are very significant; scandium is a rare earth associate used in alloys;
- Best Result from 6 holes resampled to date STRC53, 8m @ 116ppm Sc inc. 6m @ 149ppm Sc from 0m



Direct Leach Scenario Allows TUC to Anticipate receiving a Higher Pay Factor

- TUC aims to Enter Market at Intermediate Stage - Not mineral Concentrate Stage

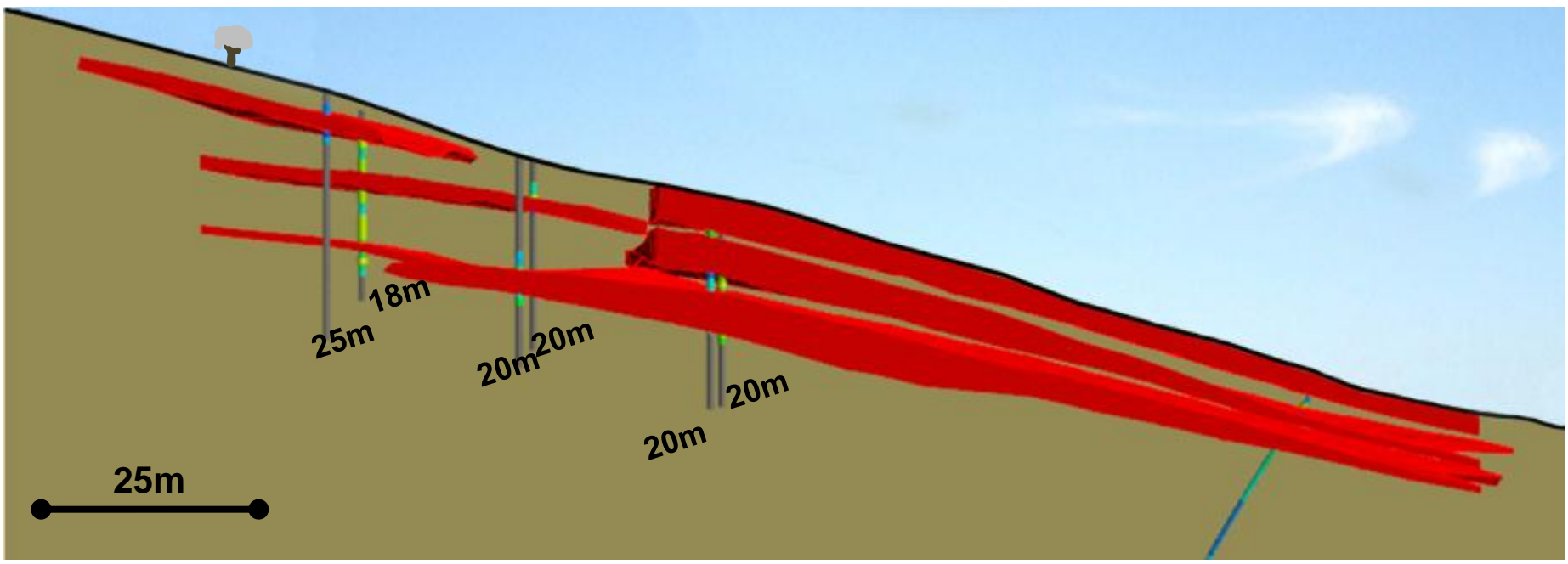


- ✓ **Correct HREE Market Space**
- ✓ **Potential for Strong Market Impact**
- ✓ **Large HREE Exploration Upside**
- ✓ **Cost Advantages – Mineral Processing**
- ✓ **Cost Advantages – Mining and Capex**
- ✓ **Price Advantage – Potential for Higher Value Mixed Rare Earth Intermediate Product +.....**

**Potential for Shorter Development Time –
Early Mover Advantage**

Development Time Advantages – Shallow Drill Holes

- Potential for Quicker Resource Development



- ✓ **Correct HREE Market Space**
- ✓ **Potential for Strong Market Impact**
- ✓ **Large HREE Exploration Upside**
- ✓ **Cost Advantages – Mineral Processing**
- ✓ **Cost Advantages – Mining and Capex**
- ✓ **Price Advantage – Potential for Higher Value Mixed Rare Earth Intermediate Product**
- ✓ **Potential for Shorter Development Time – Early Mover Advantage +...**

Strategy – Activities – Goals 2012

Secure Cornerstone REE Value Chain Partner



Advanced Discussions in Progress

Prove/Improve Process Flow Sheet

Testing
In Progress



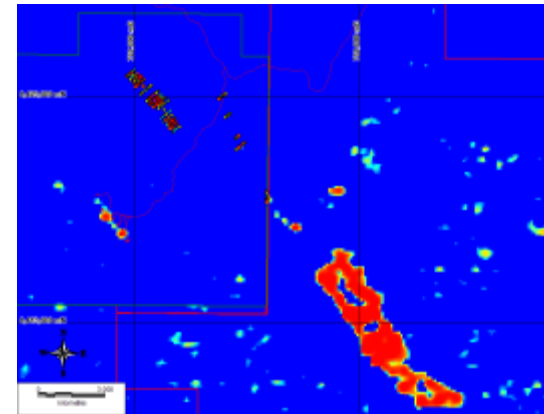
Precipitate A Mixed Rare Earth Carbonate

Stakeholder Engagement



Develop Access to Large Exploration Upside in
Aboriginal Freehold Land Tenements

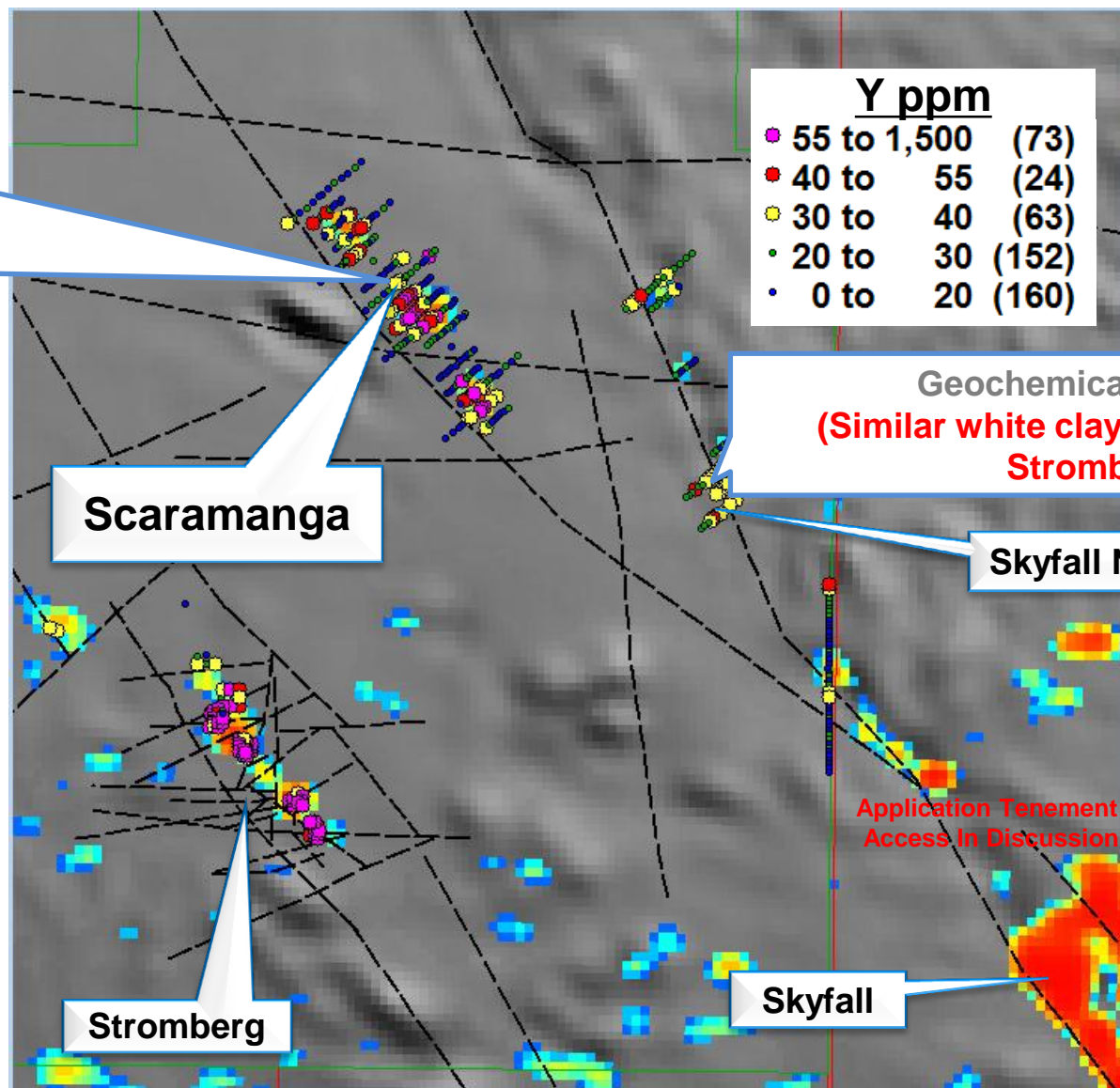
Validate Exploration Upside



Geochemistry Programs
in Progress
Drilling Planned



Recent Geochemistry Results Confirm Mineralised Extensions 5km NE



**Planned First Stage Exploration Drilling – July to September 2012,
1000m-2000m RC (~40-60 holes)**

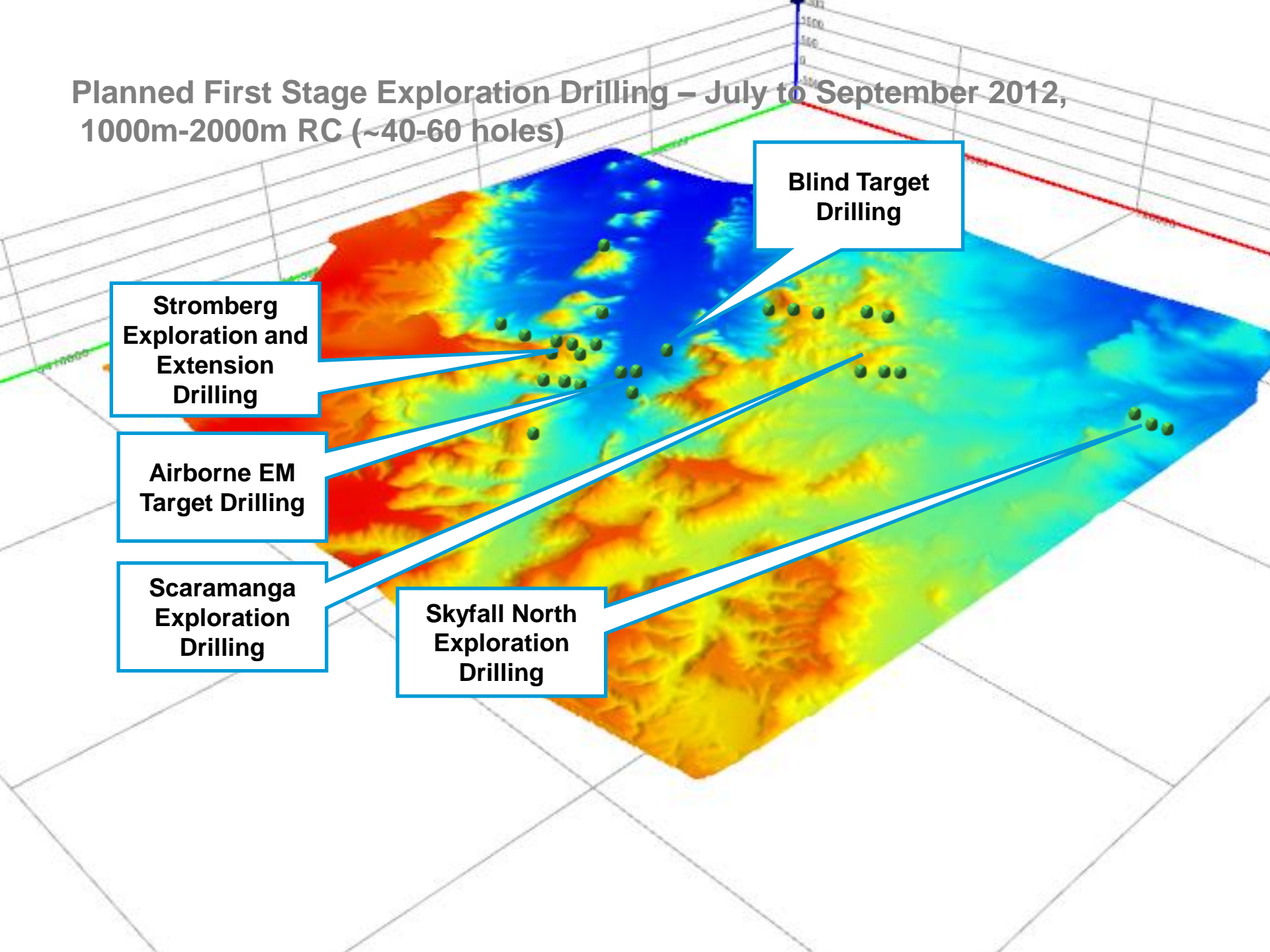
**Stromberg
Exploration and
Extension
Drilling**

**Airborne EM
Target Drilling**

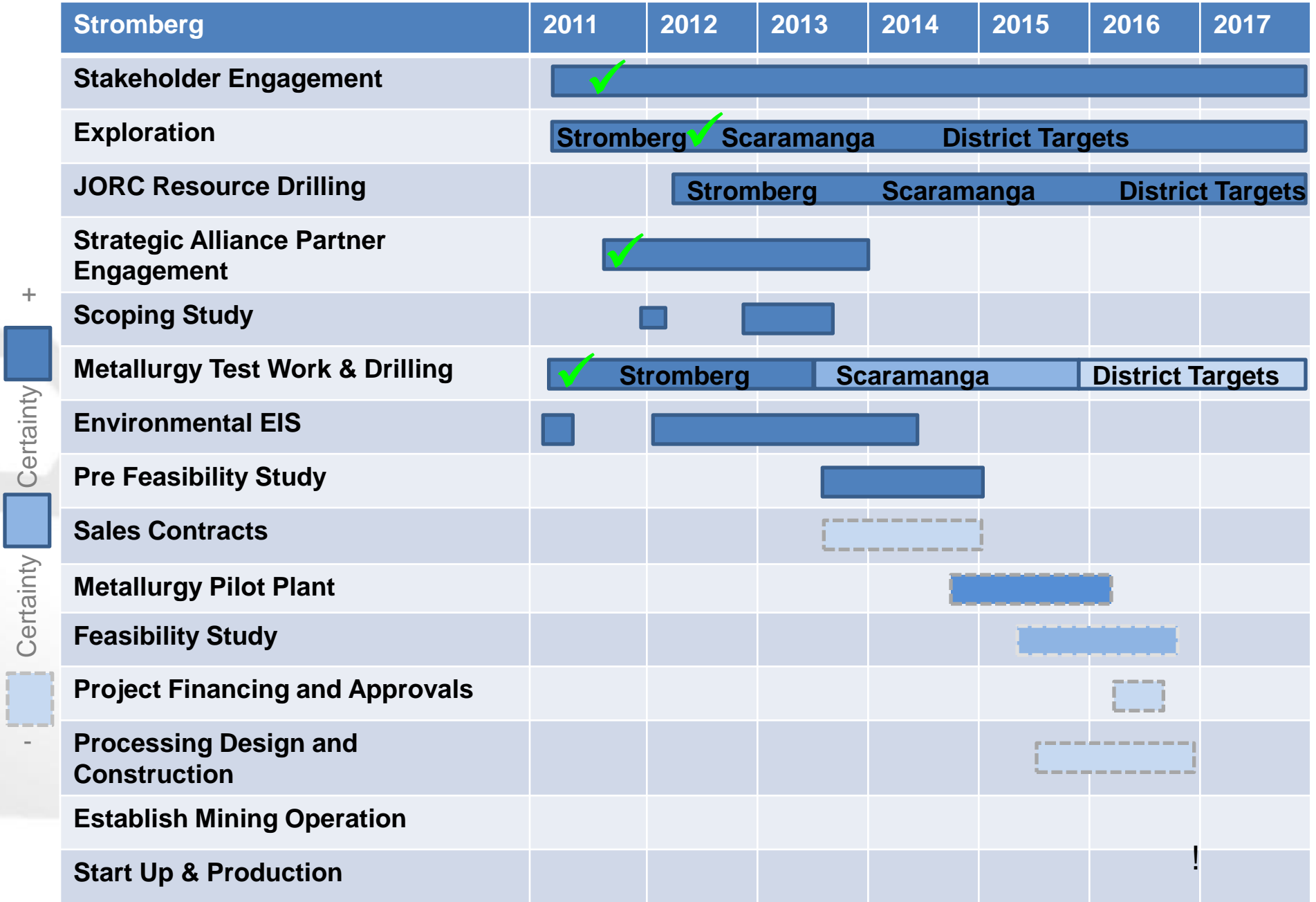
**Scaramanga
Exploration
Drilling**

**Skyfall North
Exploration
Drilling**

**Blind Target
Drilling**



Planned Stromberg Development Schedule – Parallel Opportunities



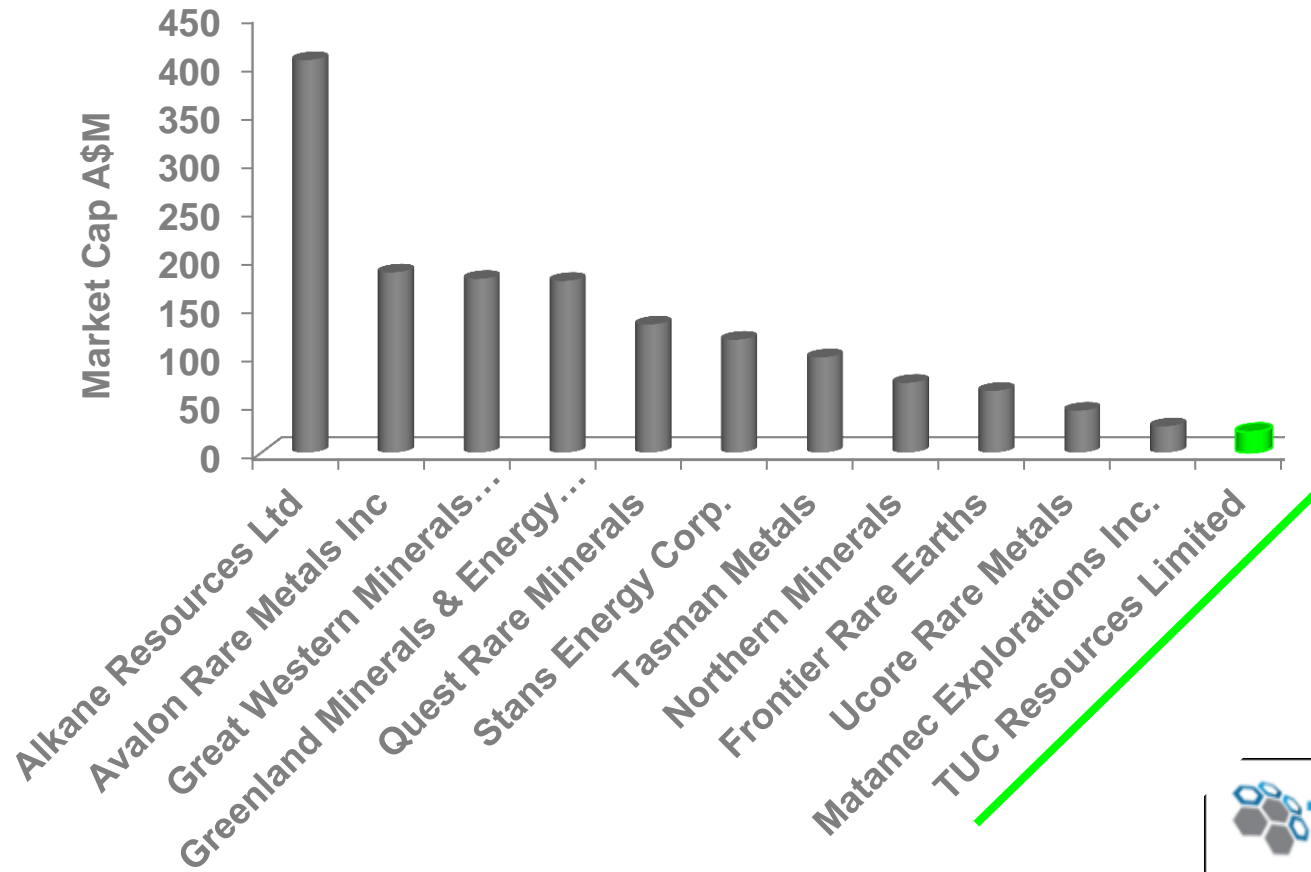
+

Certainty

Certainty

-

- ✓ Correct HREE Market Space
- ✓ Potential for Strong Market Impact
- ✓ Large HREE Exploration Upside
- ✓ Cost Advantages – Mineral Processing
- ✓ Cost Advantages – Mining and Capex
- ✓ Price Advantage – Potential for Higher Value Mixed Rare Earth Intermediate Product
- ✓ Potential for Shorter Development Time – Early Mover Advantage
- ✓ Aggressive Exploration Program Underway



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