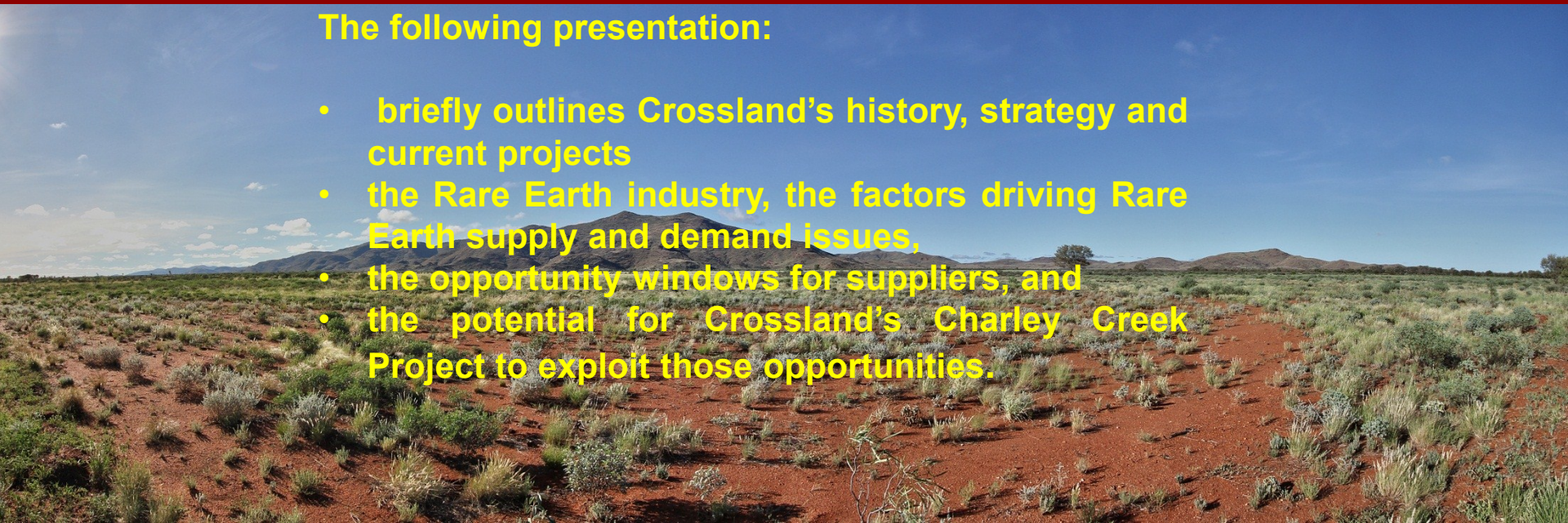
CROSSLAND URANIUM MINES LTD
(ASX: CUX)

Featuring
Charley Creek, Northern Territory
- a rapidly developing Rare Earth Resource



The following presentation:

- briefly outlines Crossland's history, strategy and current projects
- the Rare Earth industry, the factors driving Rare Earth supply and demand issues,
- the opportunity windows for suppliers, and
- the potential for Crossland's Charley Creek Project to exploit those opportunities.

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JORC Statement: The review of exploration activities and results contained in this presentation are based on information compiled by Geoffrey S Eupene FAusIMM(CP), a Fellow of the Australasian Institute of Mining and Metallurgy. He is a director of the Company and a full time employee of Eupene Exploration Enterprises Pty Ltd. He has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration, and to the activity which he is undertaking to qualify as a Competent Person as defined in the December 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Geoffrey S Eupene has consented to the inclusion in this report of the matters based on this information in the form and context in which it appears.

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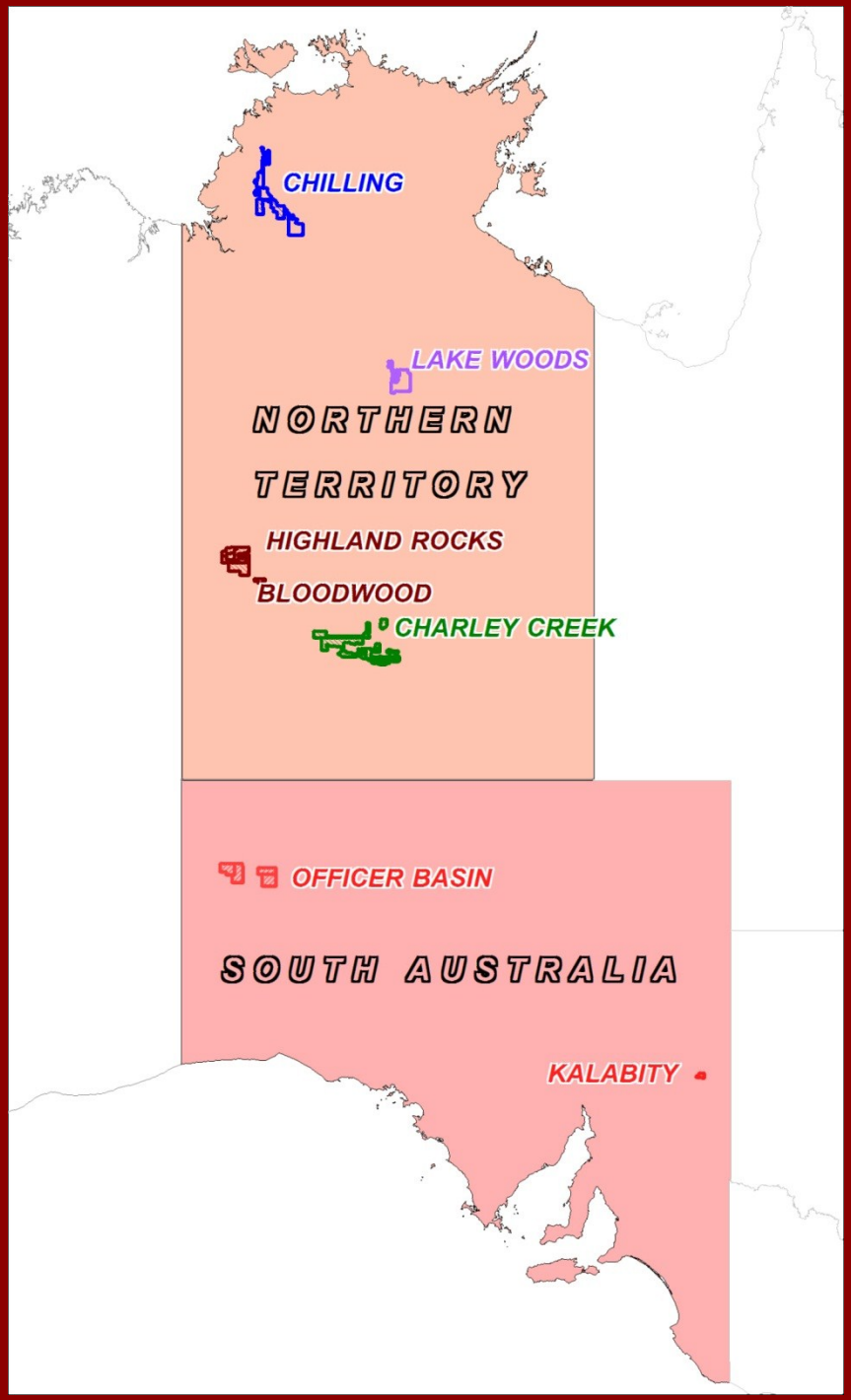
Crossland Uranium Mines Ltd

- Listed on ASX April 2007
- Experienced, well qualified team
- A lot of NT, and uranium, experience
- Projects mostly internally generated, so low acquisition costs
- Initial uranium focus: with an evolved importance of REE and base metals
- Charley Creek Alluvial REE Project under definition since Late 2010.
- Crossland's immediate focus is to confirm the viability of developing its alluvial REE resources in Charley Creek and getting them quickly to production.

Our Projects

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CURRENT ACTIVE PROJECTS:
• CHILLING U/ BASE METALS PROJECT
• CHARLEY CREEK REE/ U PROJECT
Today, I will focus on
the Charley Creek REE project

Rare Earths (REE): a very short introduction

-Rare Earth Elements impact almost every aspect of modern life. A third of all metals are Rare Earths.
-"[Rare earth] will do for China what oil did for Saudi Arabia." -Deng Xiaoping

Rare Earths: a very quick introduction (thanks to REEhandbook.com)

Eu Gd

La

Tb Dy

Ce

Ho Er

Pr

Tm Yb

Nd

Lu Y

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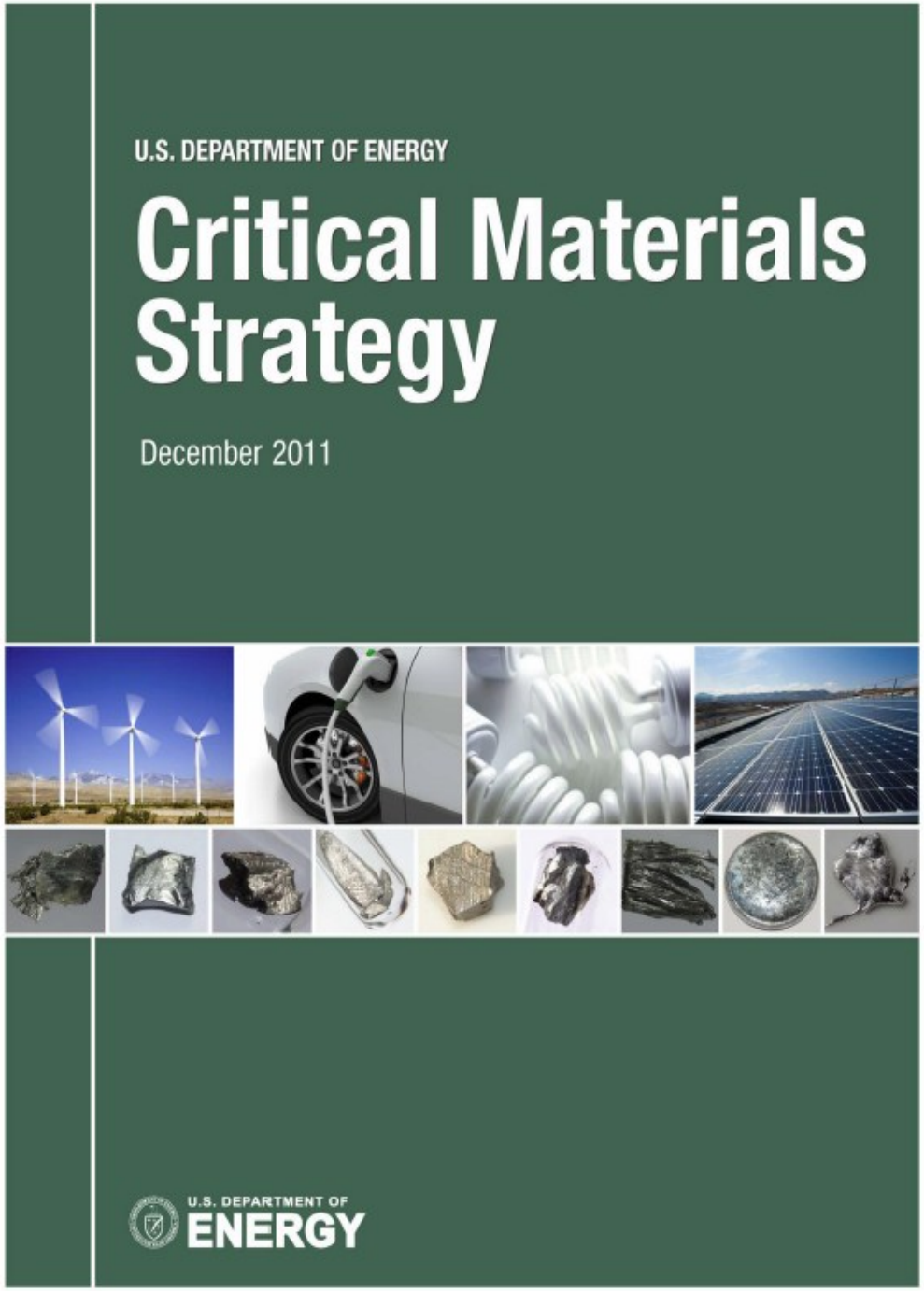
The Rare Earth Elements (REE) are 17 individual metals with ever- evolving uses, demand, and value.

This Dec 2011 report from US Dept of Energy, *Critical Minerals Strategy*, (a recent update on their 2010 report) is a good starting point to understand more about REE and why they are important. It is available at:
http://energy.gov/sites/prod/files/DOE_CMS2011_FINAL_Full.pdf

Another excellent source of technical information on REE is :

http://www.reehandbook.com/intro.html

Currently the REE are of major strategic importance for powerful magnets (electric motors and generators), and in phosphors.



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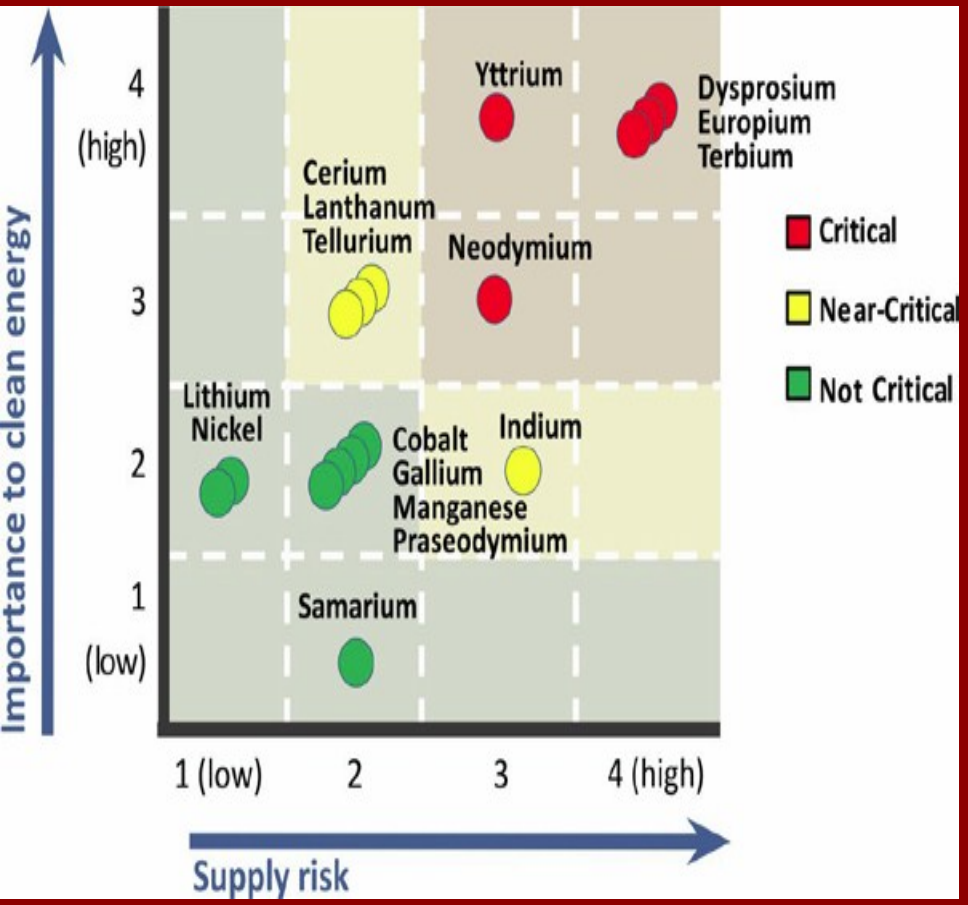
Key Conclusions of USDoE Dec 2011 Report (abbreviated):

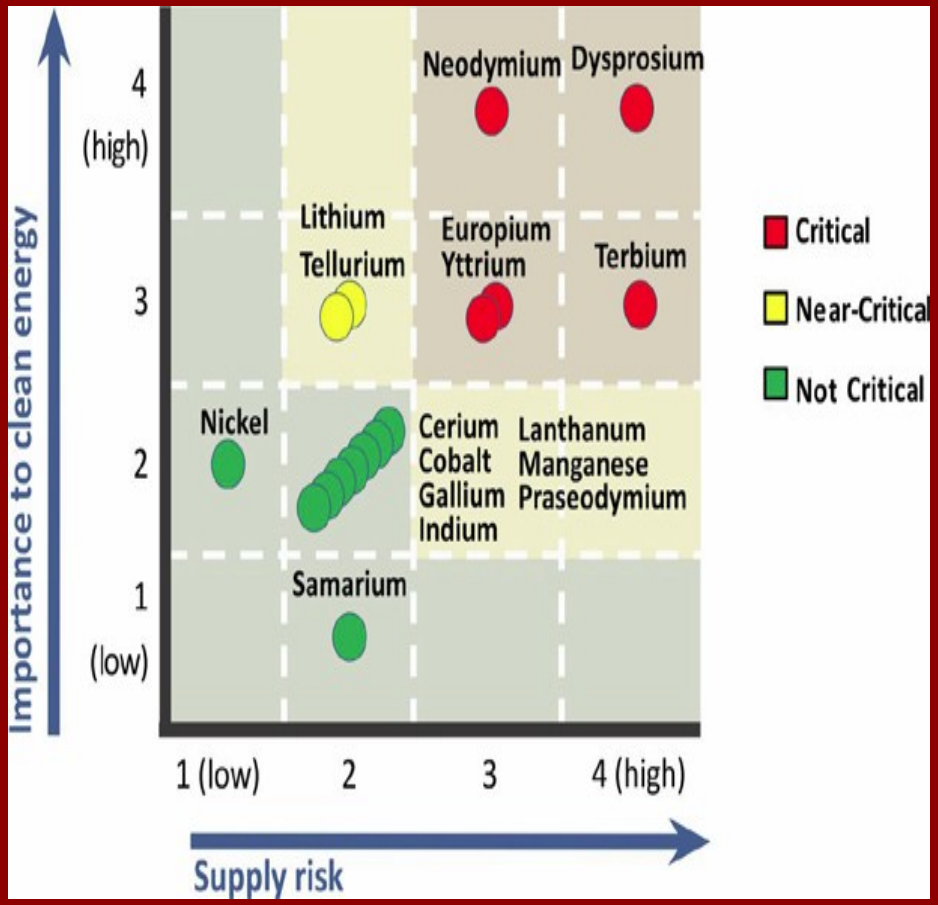



- Several clean energy technologies—including wind turbines, electric vehicles, photovoltaic cells and fluorescent lighting—use materials at risk of supply disruptions in the short term. Those risks will generally decrease in the medium and long term as production increases.
- Supply challenges for five rare earth metals (dysprosium (**Dy**), neodymium (**Nd**), terbium (**Tb**), europium (**Eu**) and yttrium (**Y**)) may affect clean energy technology deployment in the years ahead.
- Clean energy technologies currently constitute a minority of global consumption of critical materials. As clean energy technologies are deployed more widely in the decades ahead, their share of global consumption of critical materials will likely grow.
- For this purpose, "criticality" is a measure that combines **importance to the clean energy** economy and **risk of supply disruption**.

REE SUPPLY CRITICALITY

(from USDoE *Critical Materials Strategy*, Dec 2011)





Short Term (0-5 yrs) Criticality:

Dy, Tb, Y, (Heavy REE)
Eu (Medium REE)
Nd (Light REE)
In

Medium Term (5-15yrs) Criticality:

Dy, Tb, Y (Heavy REE)
Eu (Med REE)
Nd (Light REE)

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SUPPLY ISSUES

According to the USDoE report,
Rare earth metals are widely distributed.

- China holds around 36% of the REE reserves,
- Russia and others in the CIS hold 19%,
- the U.S. holds around 13%, and
- Australia has 5%, with
- the remaining 27% across many countries.

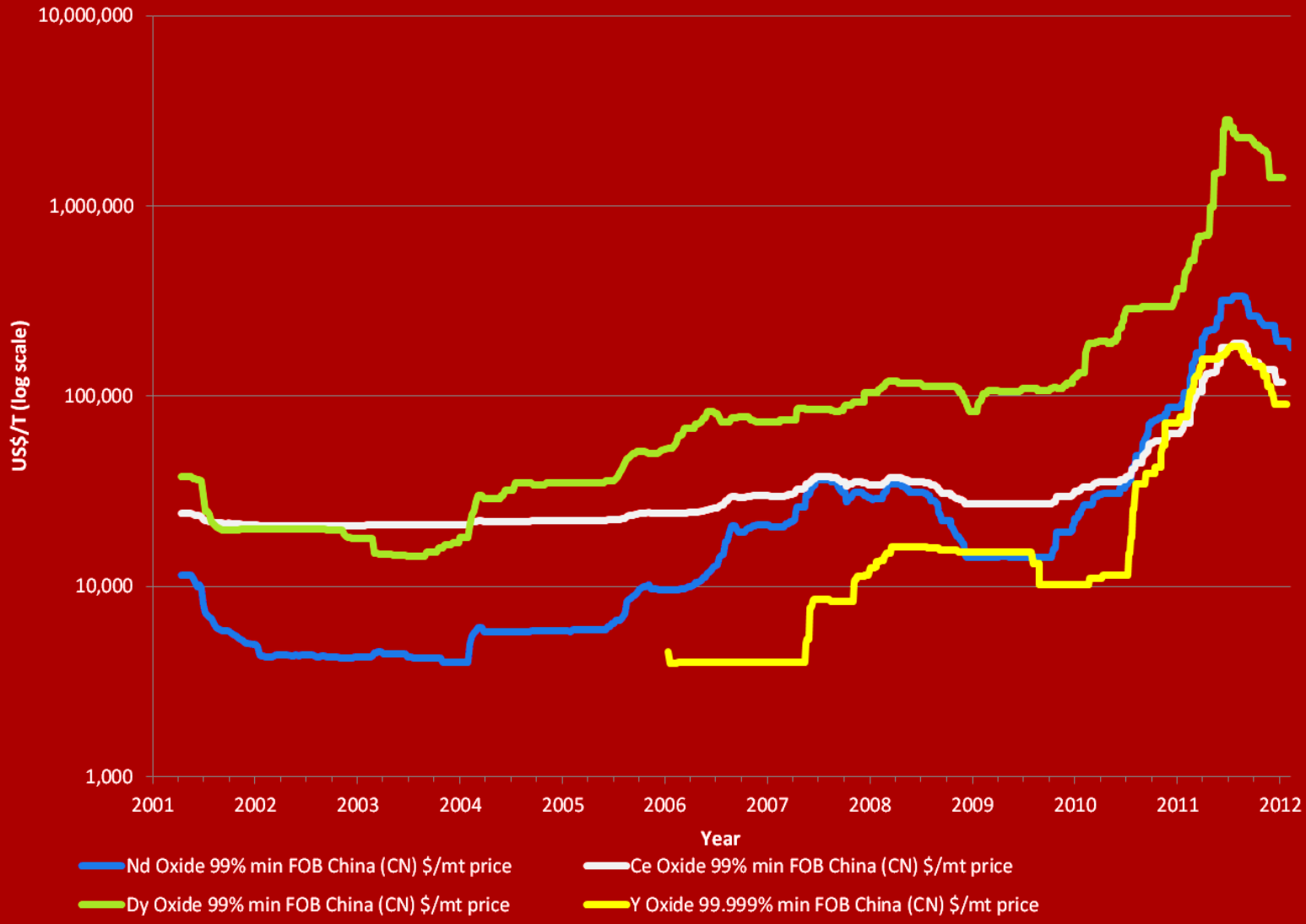
Comment: These shares could change quite quickly, given the relatively small tonnage of high value resources involved, and lack of historic exploration effort for them.

CURRENTLY:

- China produces almost all REE
- Exports have been restricted in recent years…. prices vary from 10s of dollars per Kg for Light REE to thousands of dollars per Kg for some of the Heavy REE
- Prices have rapidly increased as China attempts to secure relocation of advanced REE processing facilities to China, as well as to clean up the local industry…

"Back yard" Chinese REE refinery

SELECTED REE HISTORIC PRICE TRENDS (Chinese Export Prices): Source: Metal Pages, 8 Feb 2012.



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MINERALOGY

- The light rare earths (**LREE** -atomic numbers 57–61), such as La and **Nd**, and medium rare earths (**MREE** -atomic numbers 62–64), such as **Eu**, are found mainly in **bastnäsite** and **monazite**.

- Heavy rare earths (**HREE** -atomic numbers 65–71), such as **Tb** and **Dy**, along with **Y** (atomic number 39), are somewhat **more scarce** and typically concentrated in **ionic adsorption clay** found in south eastern China, and **xenotime**

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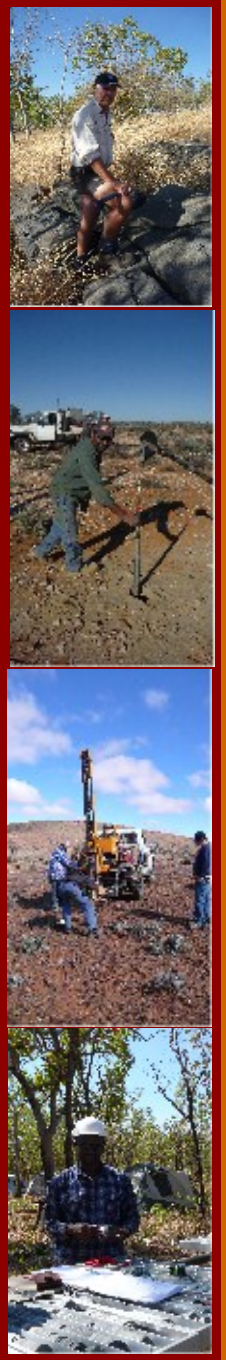
- Comment: Crossland's REE mix contains a good spread of REE, including significant **HREE**, and the mineralogy is monazite and xenotime. Most of the HREE are in xenotime.



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MINERAL ECONOMICS of REE

- There are three primary criteria that determine the economic feasibility of a potential rare earth mine:
  - The rare earth content (mix) of each deposit is essential to estimating the deposit's profitability, as are
  - tonnage,
  - grade and
  - the cost of refining the rare earth mineral, highly dependent on mineralogy.
- A mine may be viable (and therefore attractive to investors) if:
  - a low-grade ore occurred with large tonnage and familiar mineralogy or
  - a high-grade ore occurred with familiar mineralogy and moderate reserve tonnage.
- Globally, the four principal high-yield REE-bearing minerals are. bastnäsite, monazite, xenotime and ion adsorption clays. The following slide summarises the output from current producers:

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PRESENT REE SUPPLIERS (USDoE Report 2010, p.30)




Table 3-2. Rare Earths Types and Contents of Major Contributing Source Minerals Supplying REEs to the Global Market (Percentage of Total Rare Earth Oxides)[21]

Designated Critical by USDoE

TYPE	LOCATION(S)	LIGHT				MEDIUM			HEAVY							
		Lanthanum (La)	Cerium (Ce)	Praseodymium (Pr)	Neodymium (Nd)	Samarium (Sm)	Europium (Eu)	Gadolinium (Gd)	Terbium (Tb)	Dysprosium (Dy)	Holmium (Ho)	Erbium (Er)	Thulium (Tm)	Ytterbium (Yb)	Lutetium(Lu)	Yttrium(Y)
Currently active:																
Bastnäsite	Bayan Obo, Inner Mongolia	23.0	50.0	6.2	18.5	0.8	0.2	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Xenotime	Lahat, Perak, Malaysia	1.2	3.1	0.5	1.6	1.1	0.0	3.5	0.9	8.3	2.0	6.4	1.1	6.8	1.0	61.0
Rare earth laterite	Xunwu, Jiangxi Province, China	43.4	2.4	9.0	31.7	3.9	0.5	3.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	8.0
Ion adsorption clays	Longnan, Jiangxi Province, China	1.8	0.4	0.7	3.0	2.8	0.1	6.9	1.3	6.7	1.6	4.9	0.7	2.5	0.4	65.0
Loparite	Lovozerskaya, Russia	28	57.5	3.8	8.8	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Various	India	23	46	5	20	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Various	Brazil	N.A.														

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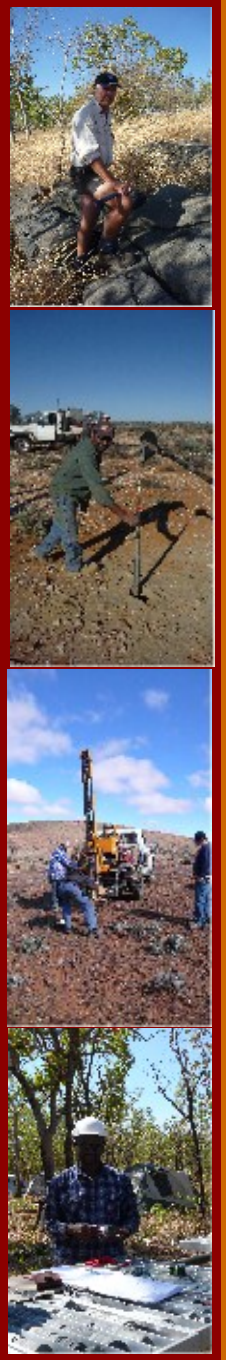
REE distribution from current suppliers:

- According to the USDoE table, only the ion adsorption clays of Jiangxi Province, and the Lahat Malaysia xenotime by-products from tin mining have significant proportions of the heavy REE and Y.
- The largest portion of Eu comes from the Laterite deposits of Jiangxi.
- Supplies from the Chinese deposits are being restricted, and the Malaysian production capacity is quite small.
- Of the REE in critical supply category, only Nd is widely distributed among the other producers.
- We should look at likely new supplies in the next 5 year timeframe to see if the shortfall from Chinese source is likely to be overcome by new developments:



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OBSERVATIONS:




- While production from the well- advanced projects of Molycorp (Mountain Pass, California) and Lynas (Mount Weld WA) will help to ease the supply criticality of **Nd**, and **Eu** in the case of Mount Weld, neither of these two projects will contribute much to the criticality of supply of the Heavy REE
- It is only projects that are not yet committed that can contribute much to the supply of the critical HREE identified in the DoE report: **Tb, Dy**, and **Y**.
- The next slide demonstrates how the REE distribution in monazite / xenotime concentrate produced from CUX's test work from CUX's Cockroach Alluvial deposit, compares with the other advanced projects. Testwork under way at present will produce higher REE content marketable products of monazite and xenotime, as well as other saleable products such as zircon.

NEAR- TERM POTENTIAL REE SUPPLIERS (USDoE 2010 Report, p.31; CUX 25Nov 2011 result on Cockroach Non- mag. Concentrate.)

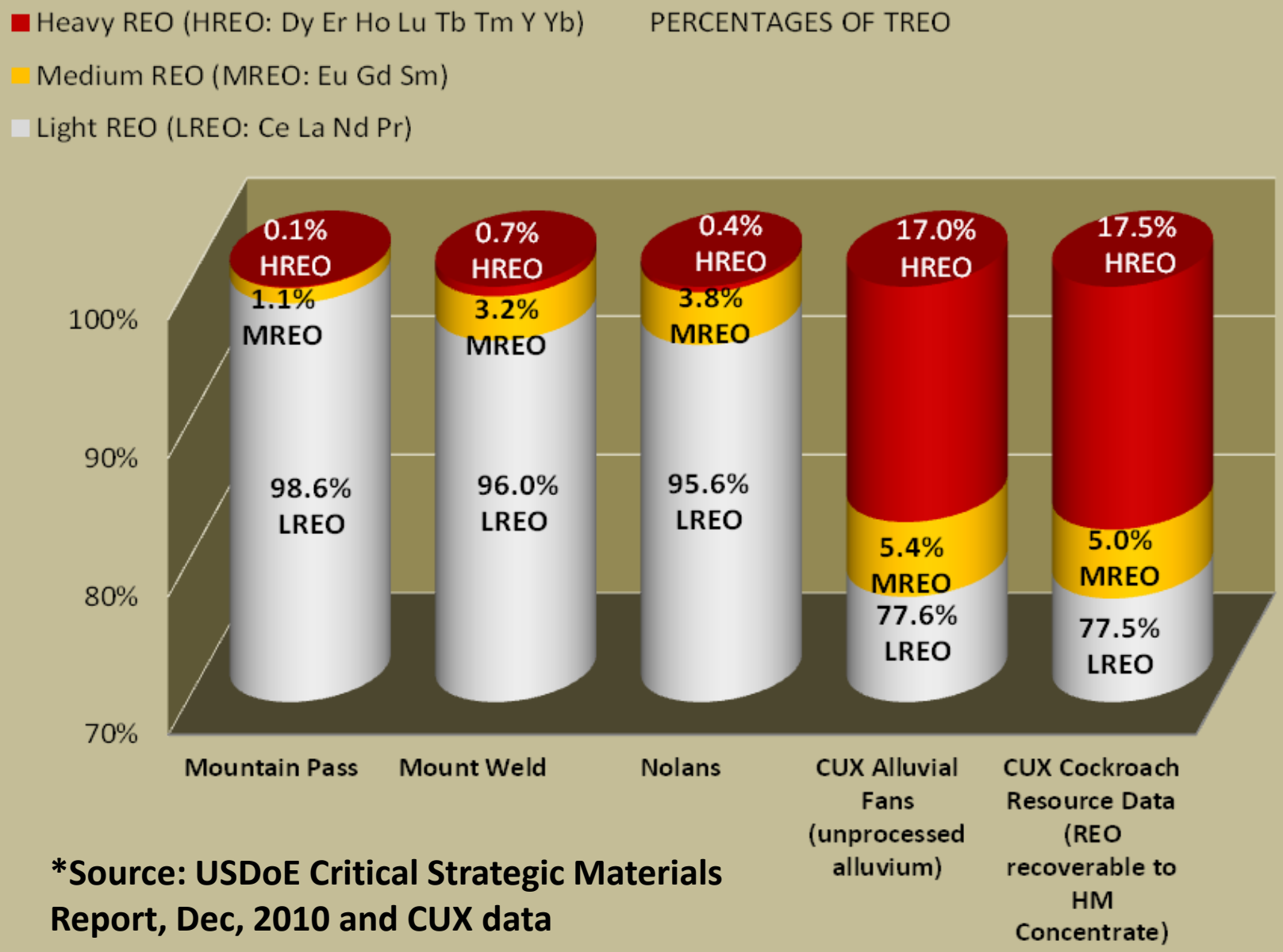
TYPE	LOCATION(S)	LIGHT				MEDIUM			HEAVY							
	Designated Critical by USDoE	Lanthanum (La)	Cerium (Ce)	Praseodymium (Pr)	Neodymium (Nd)	Samarium (Sm)	Europium (Eu)	Gadolinium (Gd)	Terbium (Tb)	Dysprosium (Dy)	Holmium (Ho)	Erbium (Er)	Thulium (Tm)	Ytterbium (Yb)	Lutetium(Lu)	Yttrium(Y)
Possible to come online in the next 5 years:																
Bastnäsite[22]	Mountain Pass, California, United States	33.2	49.1	4.3	12.0	0.8	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Monazite	Mount Weld, Australia	26.0	51.0	4.0	15.0	1.8	0.4	1.0	0.1	0.2	0.1	0.2	0.0	0.1	0.0	0.0
Apatite	Nolans bore, Australia	20.0	48.2	5.9	21.5	2.4	0.4	1.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Fergusonite[23]	Nechalacho, Canada	16.9	41.4	4.8	18.7	3.5	0.4	2.9	1.8	0.7	0.0	0.0	0.0	0.0	0.0	7.4
Bastnäsite & Parisite	Dong Pao, Vietnam	32.4	50.4	4.0	10.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.007
Alanite & apatite	Hoidas Lake, Canada	19.8	45.6	5.8	21.9	2.9	0.6	1.3	0.1	0.4	0.0	0.0	0.0	0.0	0.0	1.3
Trachyte	Dubbo Zirconia, Australia	19.5	36.7	4.0	14.1	2.5	0.1	2.1	0.3	2.0	0.0	0.0	0.0	0.0	0.0	15.8
Monazite+ Xenotime	**Cockroach Non-mag REO Conc.**	**21.1**	**43.8**	**4.8**	**14.9**	**2.7**	**.1**	**1.9**	**0.3**	**1.3**	**0.2**	**0.7**	**0.1**	**0.5**	**0.1**	**7.5**

Most current REE projects outside China are

a. Carbonatite- Hosted with bastnäsite or monazite mineralogy, endowed with Light REE

b. deposits with complex minerals hosting varying proportions of the REE and Yttrium, from which the REE may be difficult to extract

COMPARISON OF POSSIBLE NEW REE PRODUCTION* AND RECENT CUX RESULTS



***Source: USDoE Critical Strategic Materials Report, Dec, 2010 and CUX data**

All REE projects involve the following stages:

a. Mining
b. Pre- Concentration
c. Extraction of initial saleable product
d. Refining of pure metal products

.....

Crossland's development concept for Charley Creek Alluvial deposits:

- a. Mining- using low cost alluvial methods
- b. Pre- Concentration- using low cost well tested methods to produce very high grade REE concentrates of monazite and xenotime
- c. Extraction of initial saleable product: production of a range of oxides/ hydroxides on-site in small low- cap plant (because of high grades) using proven technology on ideal mineral feed-stocks in a regime familiar with nuclear materials, which are by-products of this processing. CUX plans to market the REE oxide/ hydroxide products produced in this stage.
- d. Refining of pure metal products: CUX will not initially be involved in REE metal production

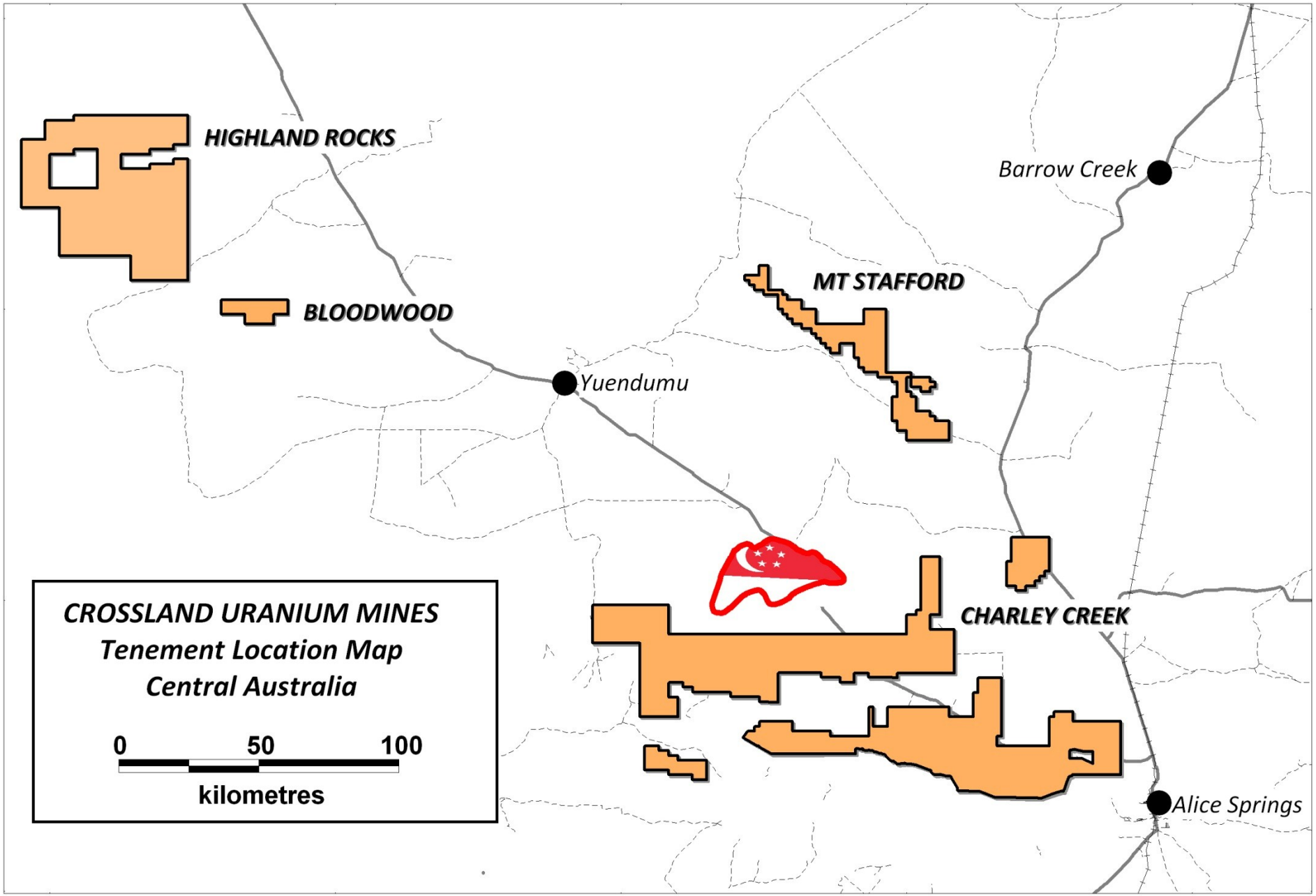
CUX's Charley Creek Alluvial REE Project concept

- Based around alluvial accumulations of pure monazite and xenotime sand that:
- can be separated using conventional gravity concentration processes to very high grade mineral concentrates.
    - These minerals have well known metallurgical properties and are ideal feedstock for production of value added REE products.
- While monazite and xenotime can be sold as mineral concentrates,
- Capital and operating costs of value adding can be markedly reduced with the high grade feed stocks available at Charley Creek, so
- CUX's plan is to take advantage of the high grade concentrate that will be produced from Charley Creek Alluvials, and a regulatory regime that is familiar with nuclear materials handling to manufacture value- added REE products on site.

- **Crossland's REE Targets are:**

- Alluvial deposits draining directly from granite source rocks in the mountains
- Alluvial deposits in the vast alluvial fans draining from the mountains
- Newly- discovered bedrock values below the flats.

CUX MINERAL TENEMENT HOLDINGS IN CENTRAL AUSTRALIA



How do we find REE deposits?

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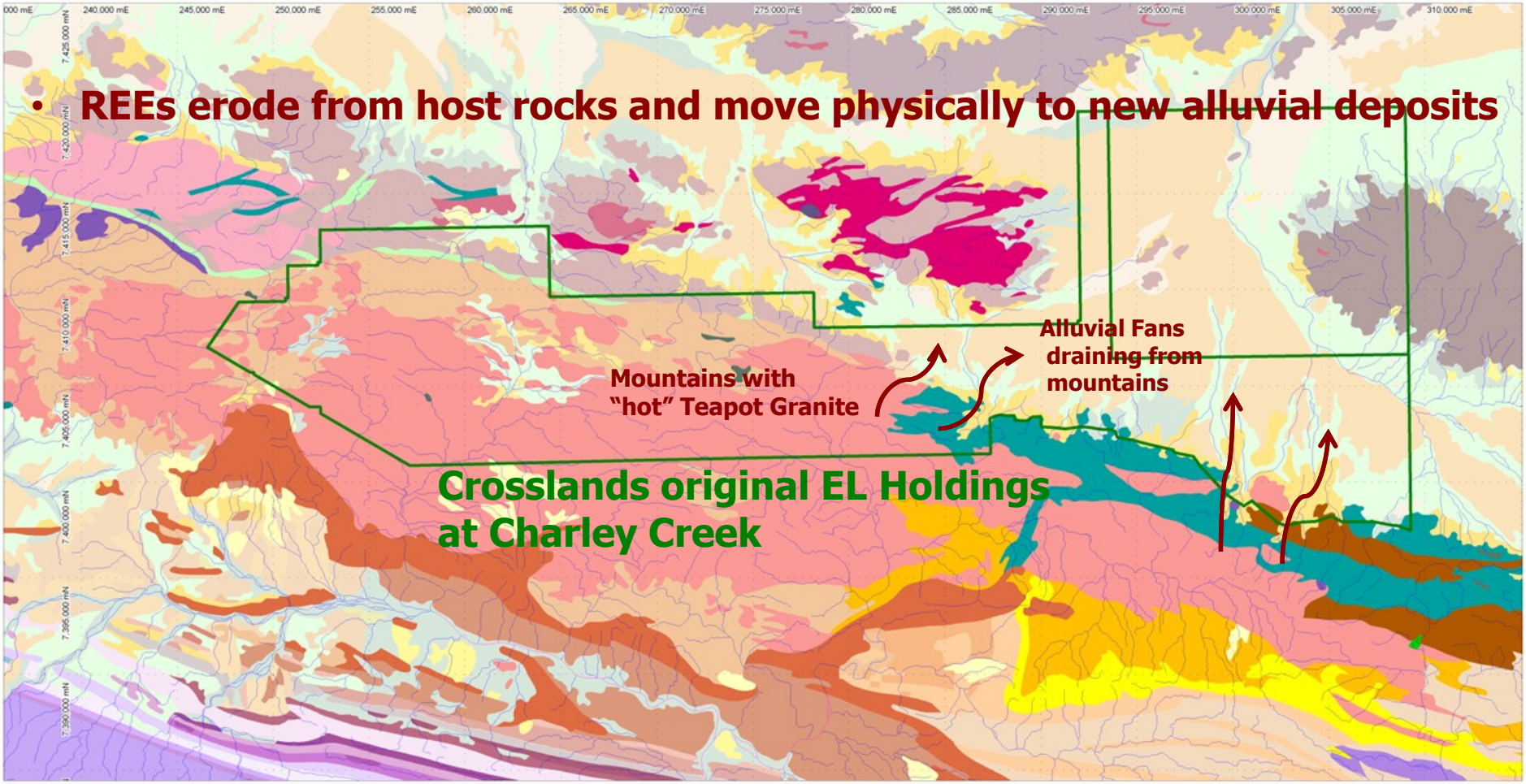
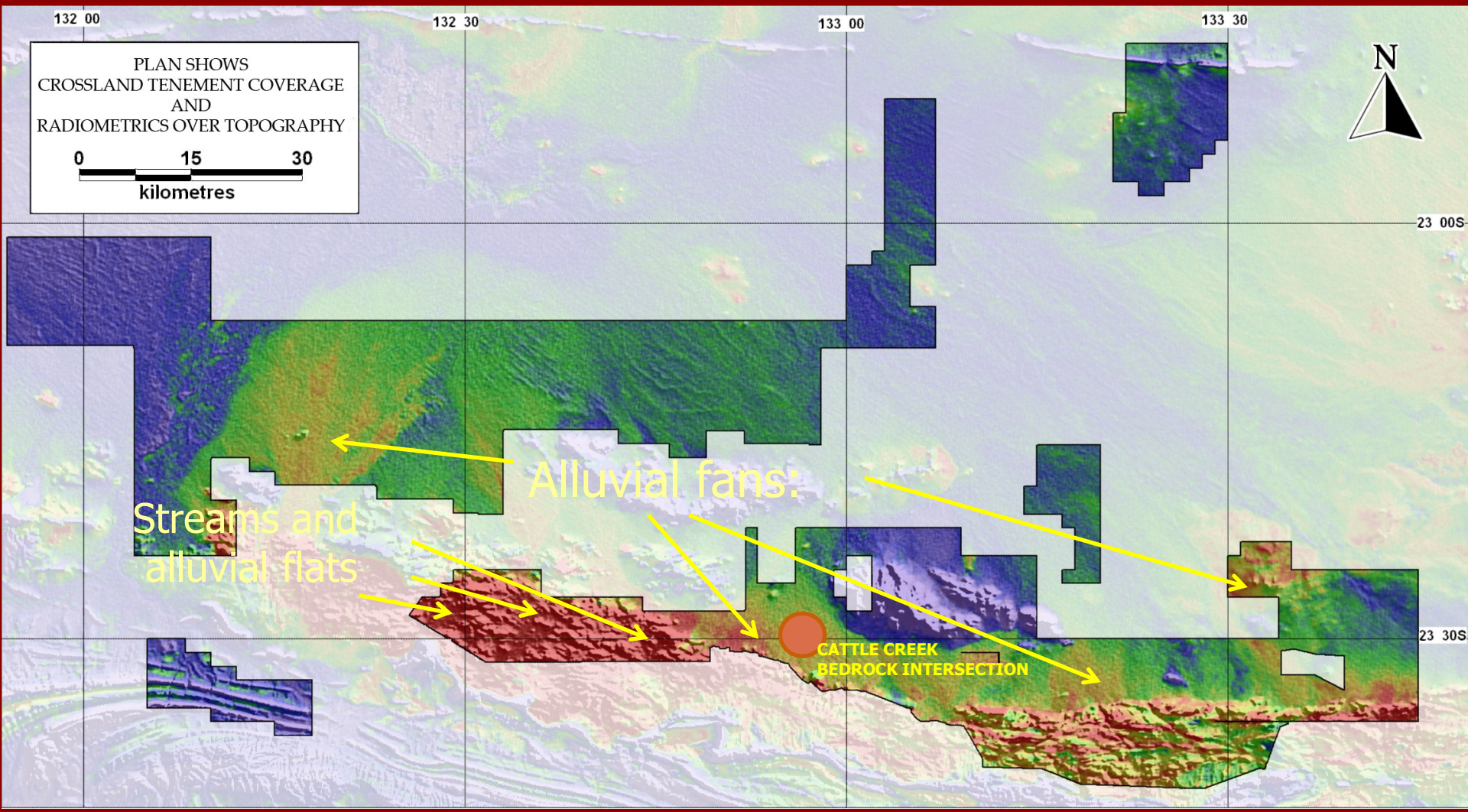
CROSSLAND EXPLORATION CONCEPT:

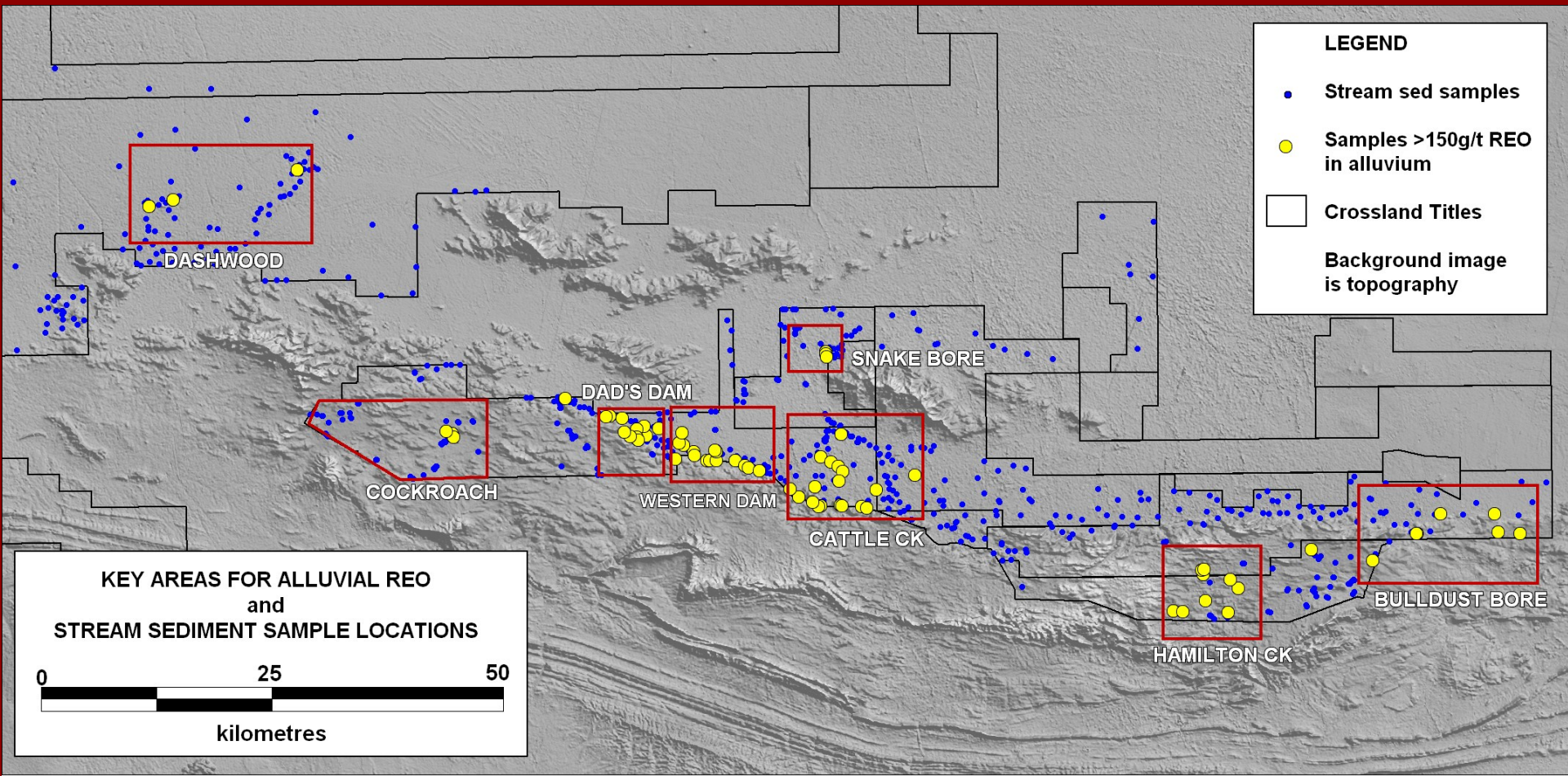


- **Charley Creek Alluvial REE:**

- **CUX Titles showing Radiometrics (Red is high; blue is low) and Topography (background relief)**



Charley Creek Alluvial REE: CUX/PUC Titles showing Stream Sediment Results and Prospects



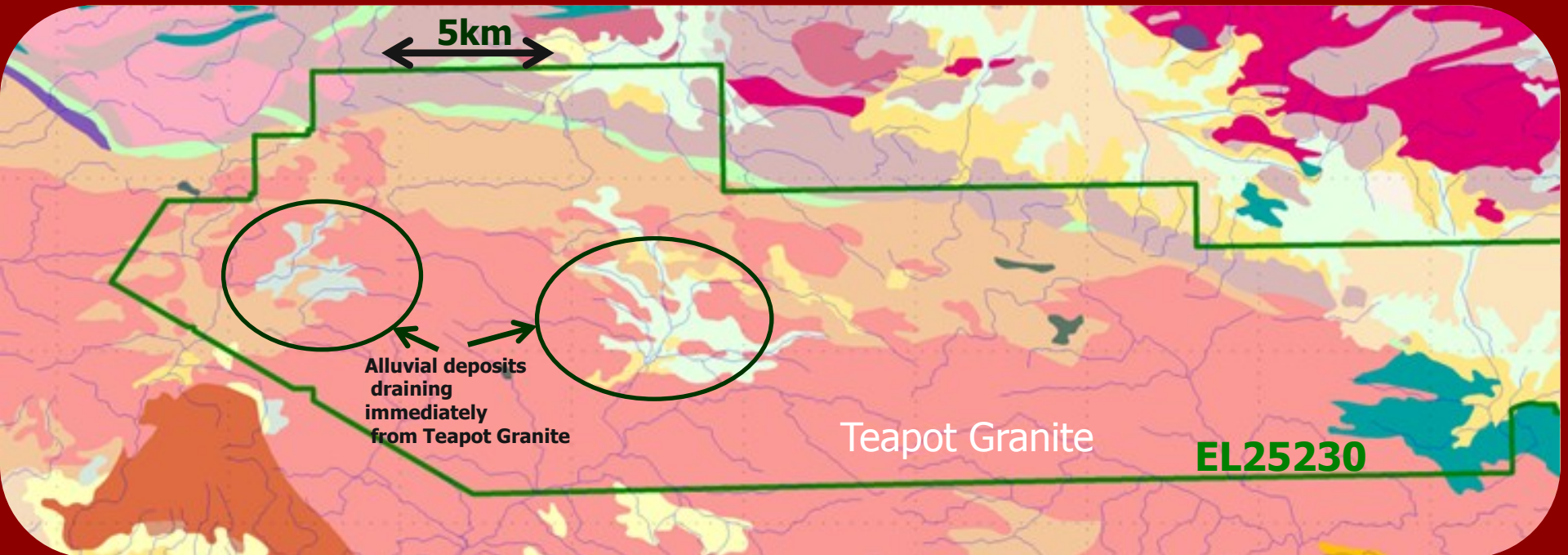
CURRENT CUX STRATEGY:

- At COCKROACH ALLUVIALS: To demonstrate to JORC standards an initial high grade alluvial source of Monazite/ Xenotime with good REO mix (a strong ratio of Heavy REO) that we could permit and get to market quickly from the original discovery area in the hills of the Teapot Granite,
- On The ALLUVIAL FAN DEPOSITS: Scoping, proving and development of the larger alluvial fan deposits with potential for decades of production;
- Establish processing, value adding and marketing options for concentrate; e.g. on- site production of Rare Earth Carbonate or Oxide/ Hydroxide mix; straight sale of concentrates
- REGIONAL EXPLORATION: See what else is out there on our over 5,000sq.Km of holdings:
  - Do district variations in Xenotime / Monazite mix offer possibilities for customising supply?
  - Are there other bedrock (higher grade) sources of REO (and possibly other metals) beneath the plains or in the mountains?

PROGRESS:

COCKROACH Alluvial Deposits in the mountains draining immediately from the Teapot Granite :

- Over 50sq.Km already auger sampled on 400 by 100m grid (1400 samples)
- 25kg Samples have been processed to primary heavy mineral concentrate on site
- 564 infill aircore holes completed and processed to heavy mineral concentrate: Resource estimates based upon recovered concentrates.
- Initial Resource Estimate completed; awaiting confirmation of High grade concentrate assays to release this.
- Alluvium is easy to work, has good REO mix and mineral liberation, and possibility of fast permitting and production. Process test work in progress.

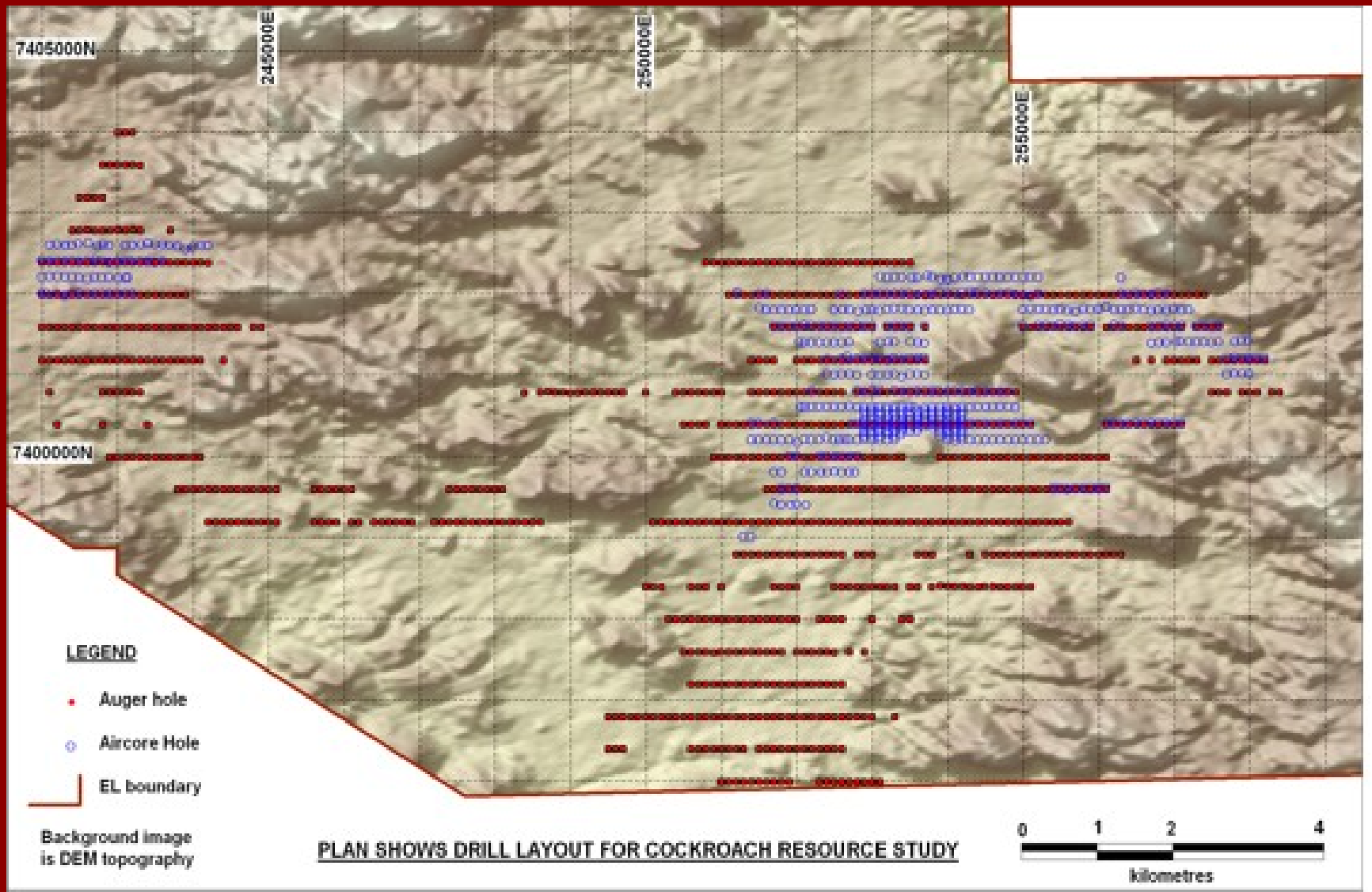


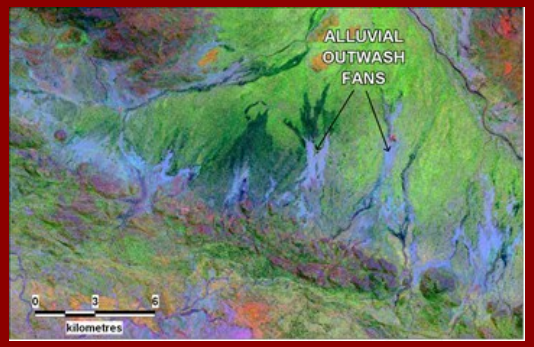
Cockroach alluvial valley fill deposits:
initial alluvial resources draining from source rocks

- Modest tonnage potential, but evaluation is easier
- Permitting in place for intensive exploration
- A lead in to a larger resource in the large alluvial fans

PROGRESS: Cockroach Alluvial Resource:

- 798 auger results received;
- Infill Aircore holes: 564 completed and processed;
- Initial Cockroach Resource Estimate soon: delayed by Check assay discrepancies on high grade concentrates.





Charley Creek REE Target Areas
Currently under study

CROSSLAND TENEMENTS

LEGEND

Crossland EL boundary

Quaternary alluvium and sediments with REE potential, defined from NTDME geology

Hills comprised of outcropping Proterozoic igneous and metamorphic rocks - source rocks for alluvial REE

COCKROACH RESOURCE PILOT STUDY

Initial Alluvial Fan Prospects

CROSSLAND TENEMENTS

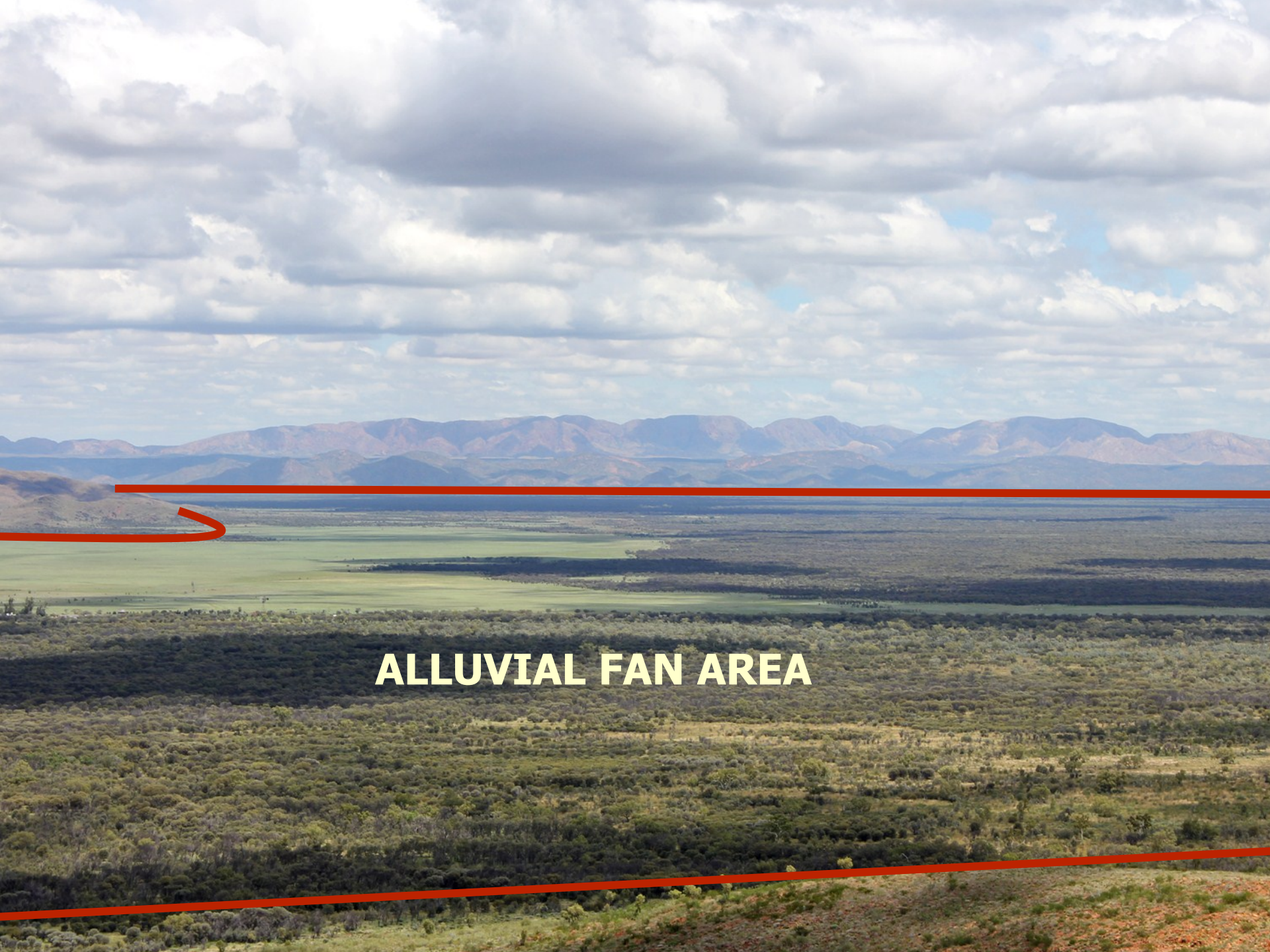
CHARLEY CREEK PROJECT
Shows Crossland tenements and extent of Quaternary age alluvial material with potential for REE

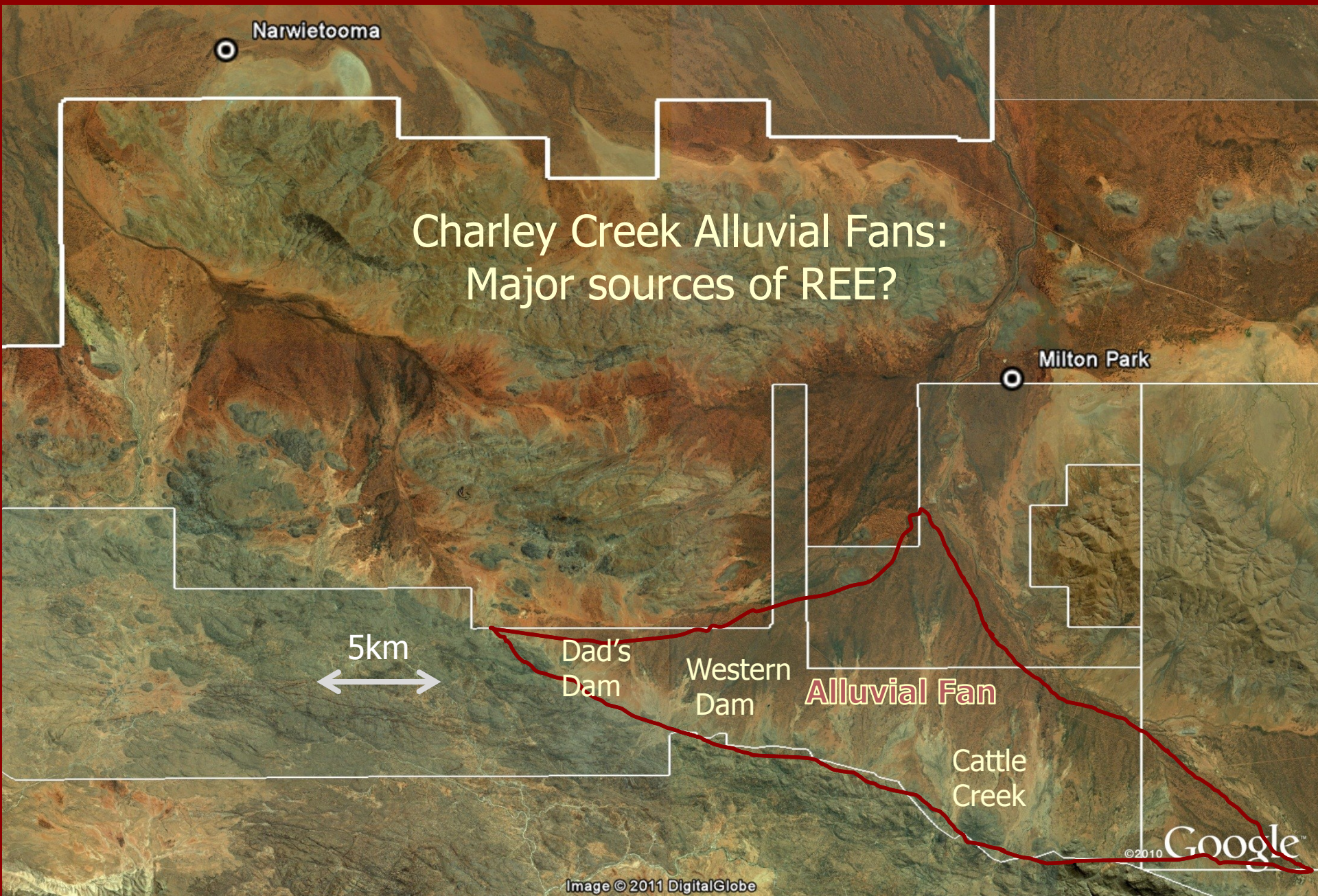
0 15 30

kilometres

2011 drilling program at Cattle Creek Alluvial Fans

- Light air- core rig averages 200m/ shift in holes to 100+m deep (if required):
- Alluvial holes up to 30m deep and 200m- 400m apart


ALLUVIAL FAN AREA


Narwietooma
Charley Creek Alluvial Fans:
Major sources of REE?
Milton Park
5km
Dad's
Dam
Western
Dam
Alluvial Fan
Cattle
Creek
©2010 Google
Image © 2011 DigitalGlobe

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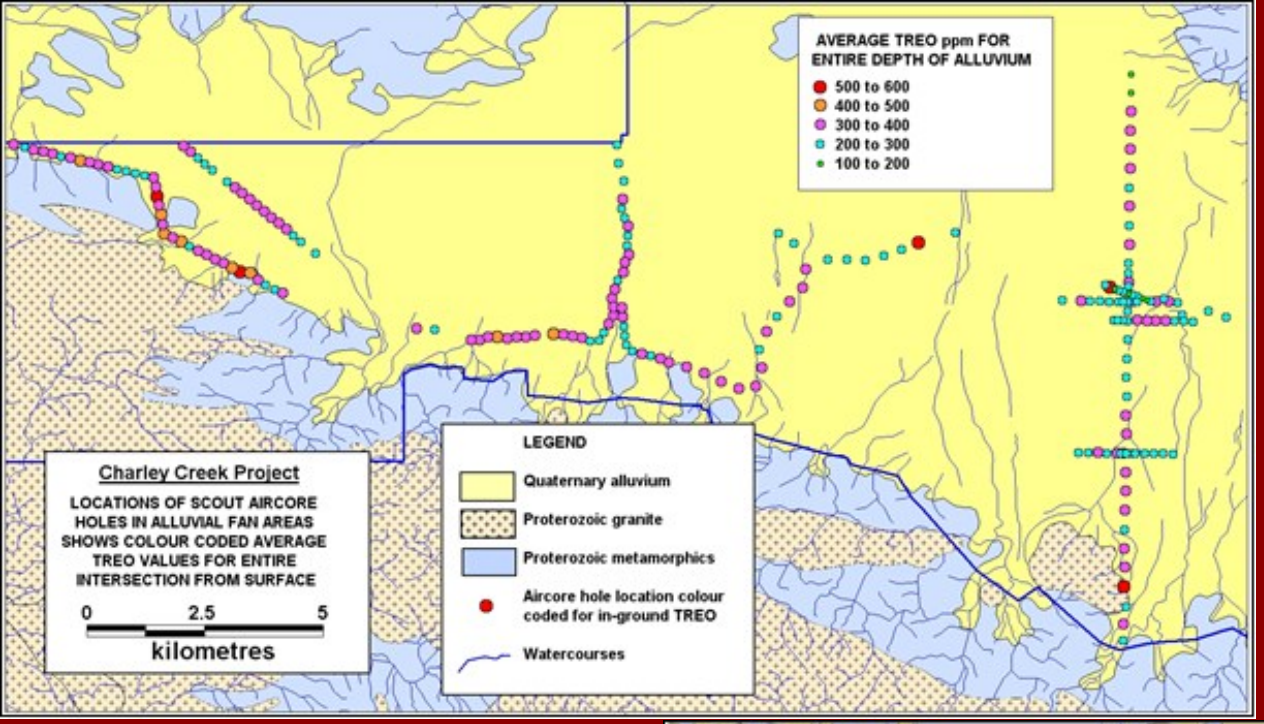
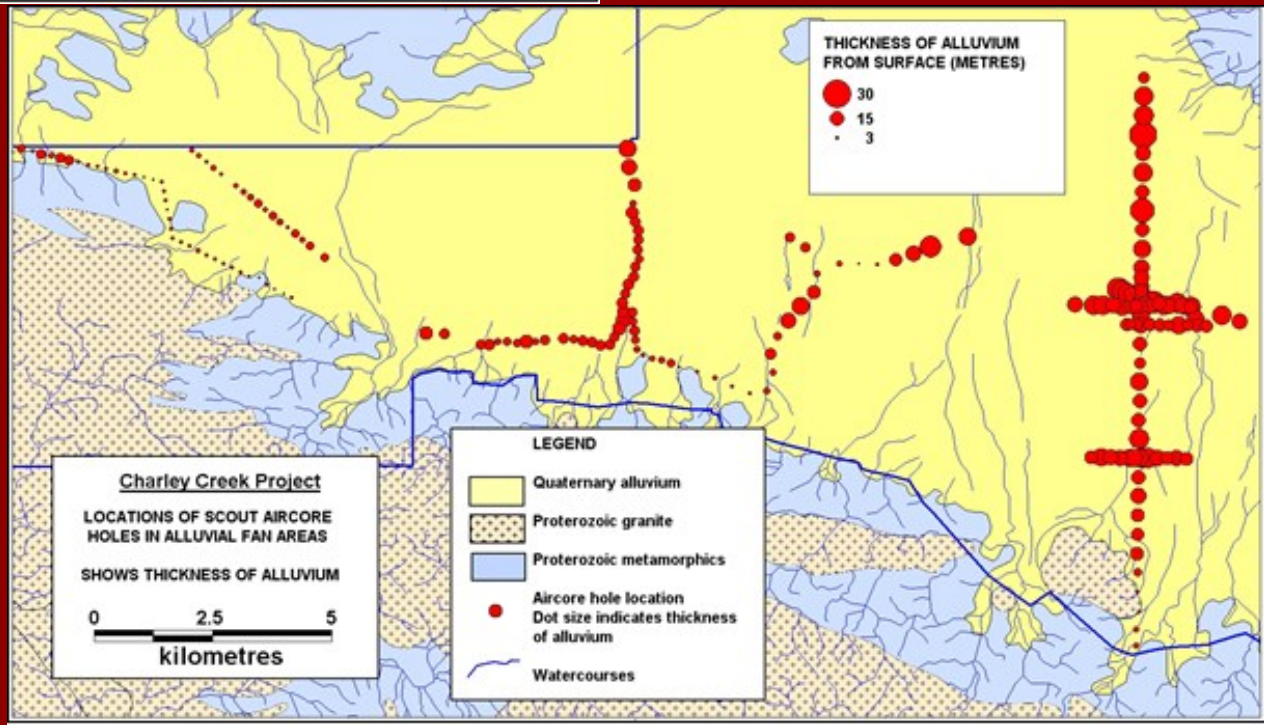
Charley Creek Alluvial Fans: 2011 Aircore Holes, showing alluvial REO Grades



Charley Creek Alluvial Fans: 2011 Aircore Holes, showing thickness of alluvium from surface



Charley Creek Alluvial Fans REE: Scope of Conceptual Target based upon project results to date:

- **Initial Target Size: minimum 10 years' production: 300 million to 1000+million T of Alluvium with a recoverable grade of 150- 400g/T of TREO.**
- **Mining method: Early production probably by dry methods; (ultimately) Dredge mining of sands with wet gravity concentration followed by dry plant to produce Valuable Heavy Mineral Concentrates (Monazite, Xenotime, Zircon). Target op. cost to HM Concentrate: $1.50-$2.50/T of feed.**
- **Conceptual excavation rate: 15-20Million T/year, providing between 2,250T and 8,000T of TREO from monazite and xenotime.**
- **Monazite and xenotime concentrate would be converted on site to a range of RE oxide, hydroxide and carbonate value- added products.**
- **REO Mix: 26.5%HREO (incl. Y) by value; Value of contained TREO@ 27Jan2012 FOB prices: US$102/kg.**

NB: These Conceptual Target quantities are expressed as ranges in conformity with Clause 18 of the JORC code. No Mineral Resources as defined by JORC Code have as yet been established at the Charley Creek Alluvial Fans, and it remains uncertain if further exploration will result in definition of a Mineral Resource. An estimate of an inaugural Mineral Resource for the Charley Creek Alluvial Fans is expected in Q2, 2012.

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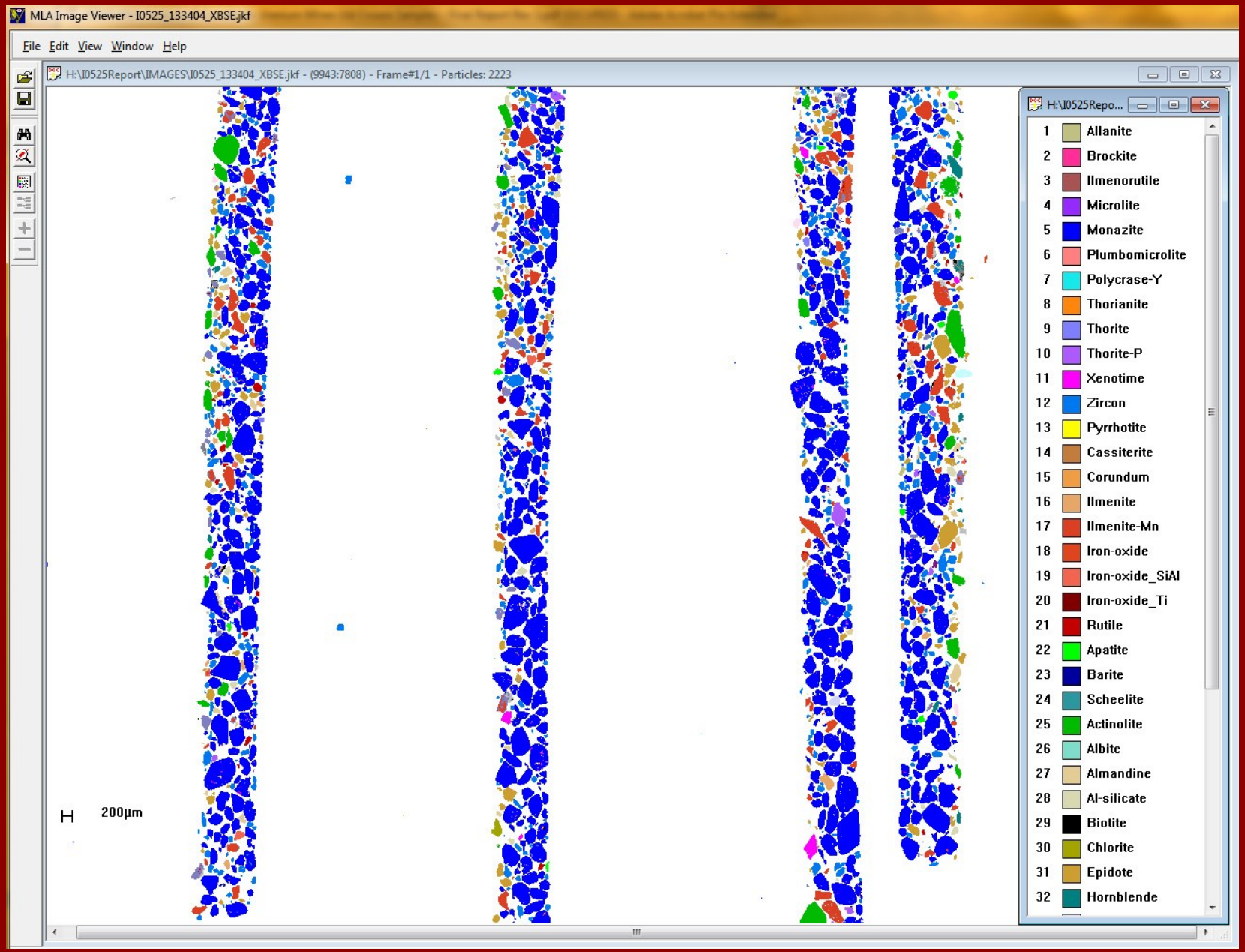
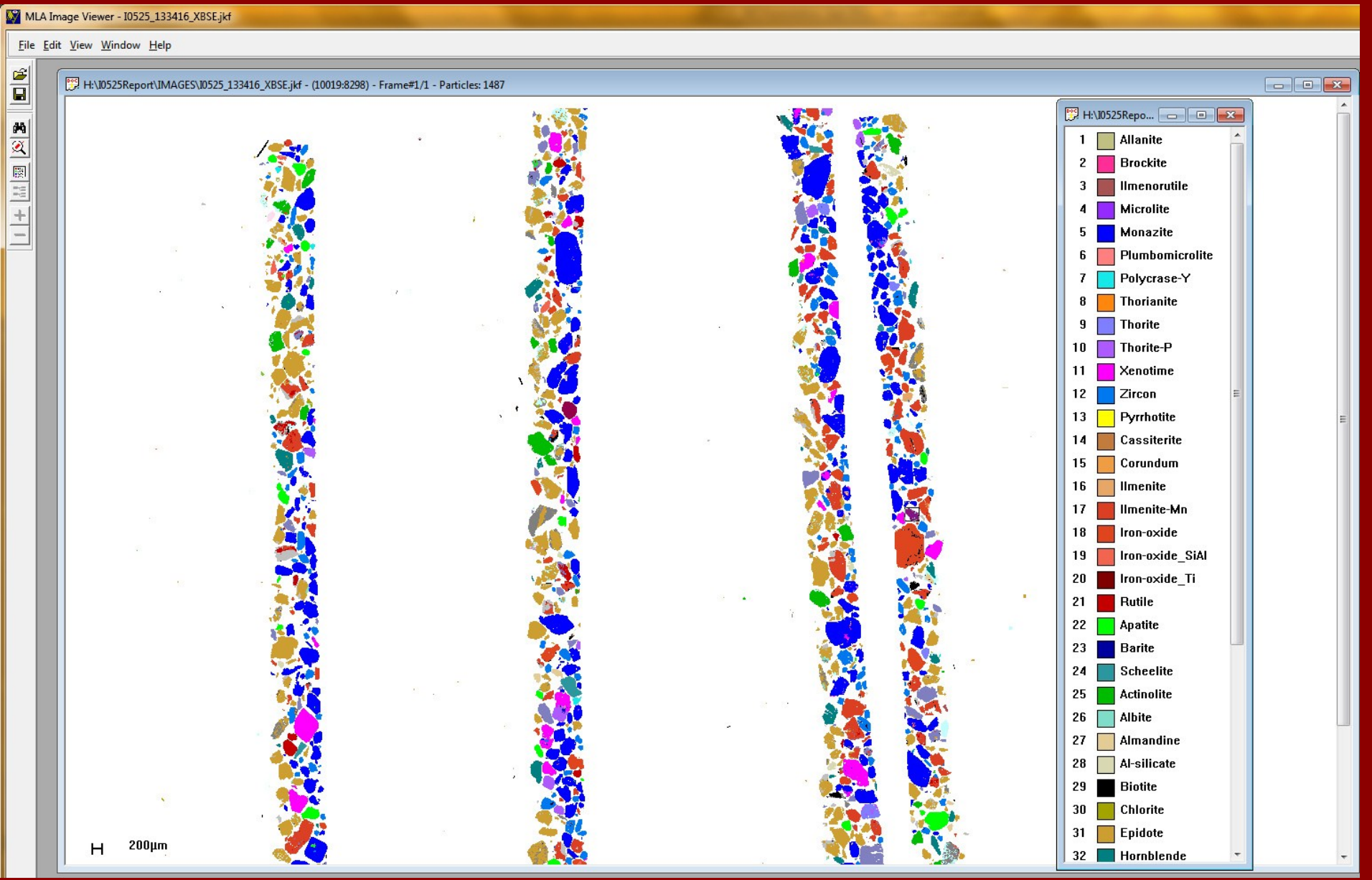
OBSERVATIONS ON CUX REO MIX:

- Mineralogy studies show REE content in monazite across the district of around 58%TREO; Xenotime of ~67%TREO; over 90% REO in Xenotime are HREO.
- The original Heavy Mineral Concentrate grades announced by CUX of 39.1% TREO+Y can be produced from the drainages of the Teapot Granite with simple gravity concentration methods.
- Subject to removal of variable amounts of other heavy minerals (some of these potentially saleable zircon and titanium bearing minerals) using physical processes, these should be upgradeable to saleable mineral products: test work near complete.
- There is a variety of REE mixes indicated in the regional stream sediments and in drill samples. We have established that almost all Heavy REE is present in xenotime at Cockroach Dam and Cattle Creek. More widespread indications of alluvial xenotime elsewhere suggests other attractive targets.
- Bedrock intersections beneath the Cattle Creek Alluvial Fan contain a greater proportion of Heavy REE and also Europium, suggesting it may come from a different bedrock source than Teapot Granite. This will be the target of a later program.

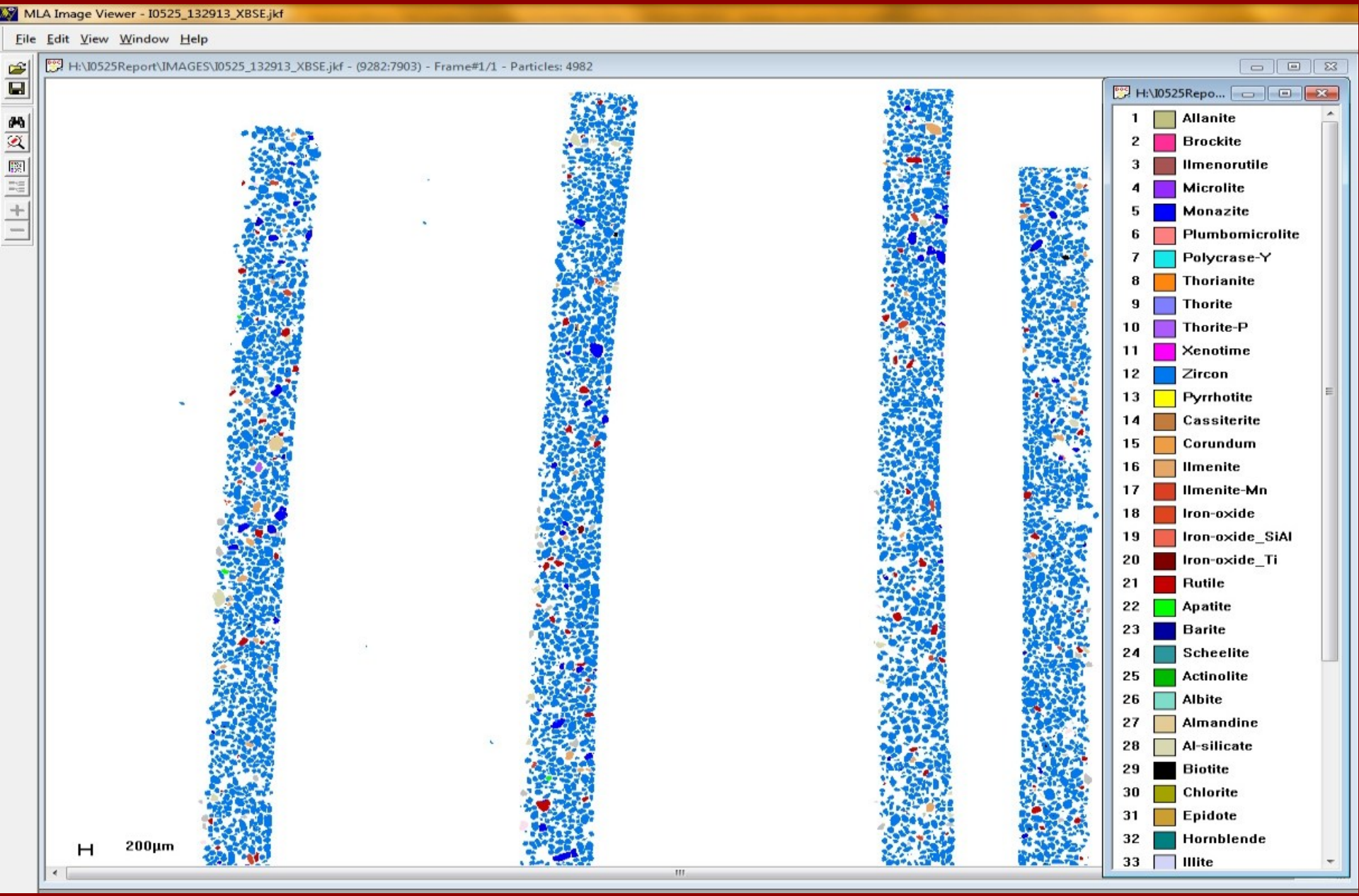
Mineragraphy first phase establishes regional variability and good liberation properties; presence of free monazite (mid- blue):



Mineragraphy first phase establishes regional variability and good liberation properties; presence of free xenotime (pink) :

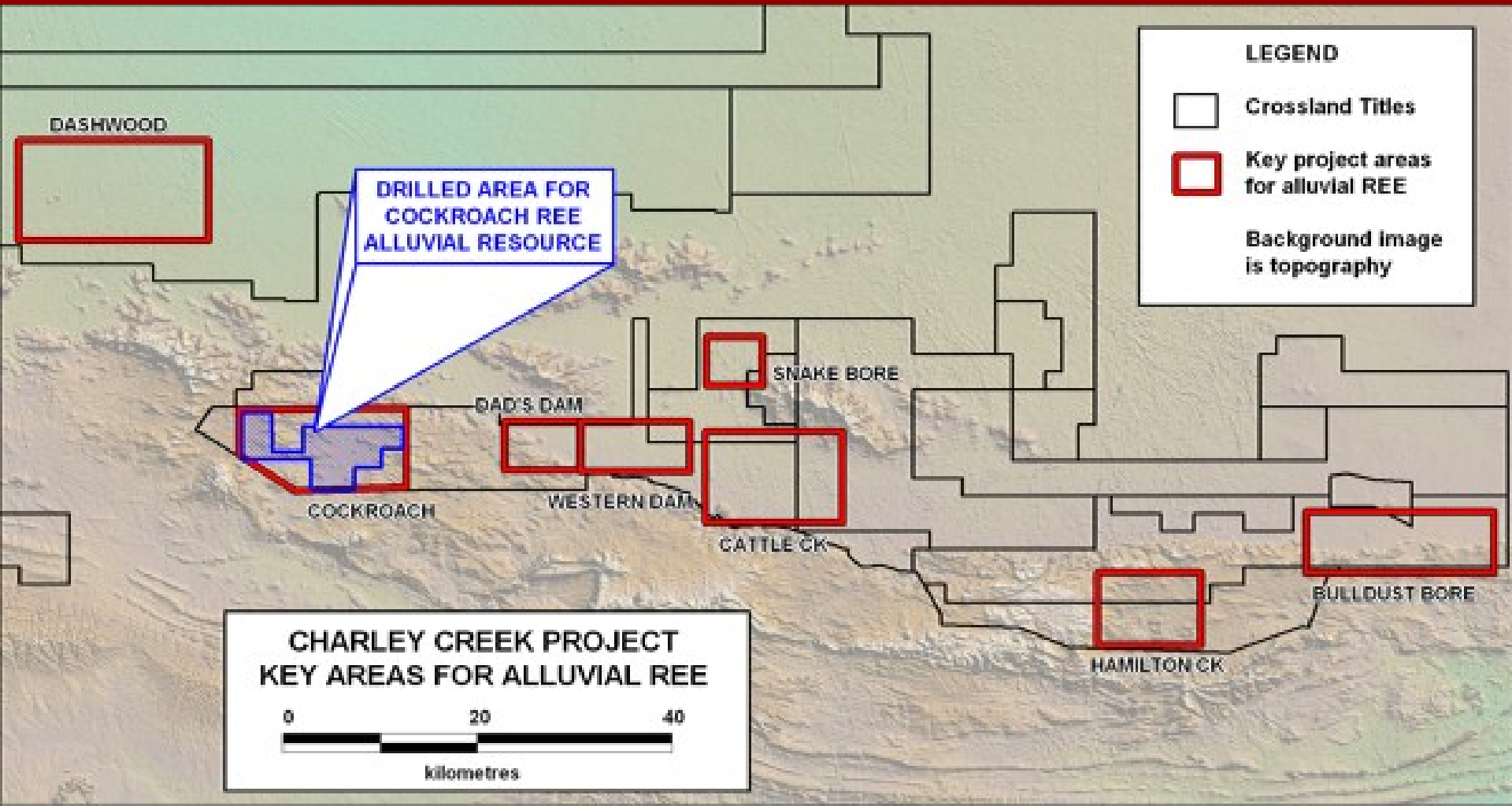


Mineragraphy first phase establishes regional variability and good liberation properties; presence of free, finer grained zircon in places (lt. blue):



PROGRESS: Regional stream sediment sampling:

- Over 1000 samples collected
- Cattle Creek +6 other Prospects identified:
- Broad drill testing of three Alluvial Fan prospects so far: initial Resource and follow up Indicated Resource definition expected this year.



2012 REE plans:

- Complete Cockroach initial Alluvial Resource estimate (by April 2012)
- Characterisation study of gravity concentrate- process development for first saleable mineral and leach products (Present –June 2012)
- Follow up process and marketing studies (June 2012-)
- Initial testing of Alluvial fans (Complete; Initial Resource estimate April 2012):
- Resource definition of alluvial fan deposits (April- August 2012: Targeting over 350M Tonnes@150-450g/T Recoverable TREO)
- Aim to have Pre- feasibility study completed before end 2012; commence long- lead environmental baseline studies Q3 this year
- Follow up regional leads for Xenotime concentrates (April 2012-); Bedrock deposit exploration at Cattle Creek Prospect
- Feasibility Studies in 2013: A pathway to early permitting and production .

- **NB: Conceptual Target quantities are expressed as ranges in conformity with Clause 18 of the JORC code. No Mineral Resources as defined by JORC Code have as yet been established at the Charley Creek Alluvial Fans, and it remains uncertain if further exploration will result in definition of a Mineral Resource. An estimate of an inaugural Mineral Resource for the Charley Creek Alluvial Fans is expected in Q2, 2012.**

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Current Share Structure

31 Jan. 2012

CUX – Ordinary Listed Shares			137,123,067
UnlistedOptions	*Expiry*	*Price*	
CUXAS	31 Mar 12	$0.50	1,200,000
CUXAT	31 Dec 12	$0.20	2,300,000
CUXAU	30 Jun 15	$0.15	5,750,000
Fully Diluted			146,373,067