

CHARLEY CREEK ALLUVIAL REE PROJECT

Developing one of the world's largest,
lowest capital cost, rare earths projects



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JORC Statement. *The information in this presentation that relates to Exploration Targets, Exploration Results, or Mineral Resources is based on information compiled by Geoffrey S Eupene FAusIMM CP, a Competent Person who is 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, which is engaged by the Company. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration, and to the activity which is being undertaken to qualify as a Competent Person as defined in the 2012 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 the report of the matters based on his information in the form and context in which it appears.*

ASX Listing Rules Statement re Production Targets. *This presentation is based upon a production target and forecast financial information derived therefrom that was initially reported in CUX ASX Release of 15th April 2013: "Charley Creek Rare Earth Project Scoping Study Results". The assumptions underpinning the production targets therein continue to apply and have not materially changed. Some of the production target is based upon an exploration target. The potential quantity and grade of a exploration target is conceptual in nature, there has been insufficient exploration to determine a mineral resource and there is no certainty that further exploration work will result in the determination of mineral resources or that the production target itself will be realised.*

Working towards production in 2016

- ❖ **Charley Creek REE Project situated in NT**
- ❖ **Located 1hr from Alice Springs – close to existing infrastructure**
- ❖ **Drilling has tested 1% of exploration potential**
- ❖ **Very low risk simple mineral sands process**
- ❖ **High proportion of Heavy and Critical Rare Earths**
- ❖ **Favourable regulatory regime**
- ❖ **JORC- Compliant Scoping Study completed April 2013.**

Scoping Study Highlights

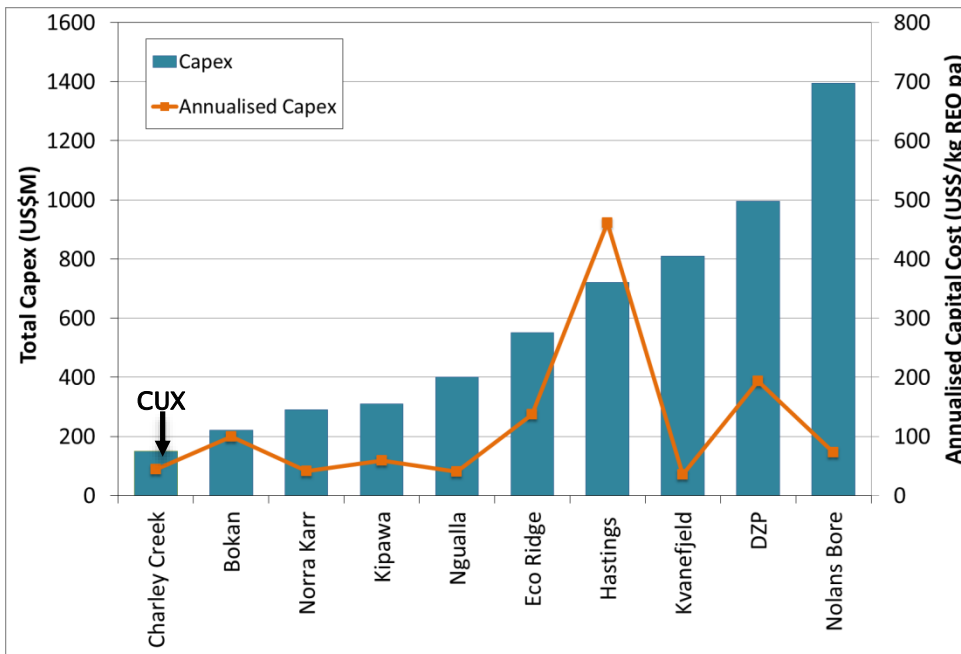
PROJECT FINANCIALS	Net Present Value (NPV ₁₀)	A\$302M
	Internal Rate of Return	39.4%
CAPITAL EXPENDITURE	Total Capex (including contingency)	A\$156M
	Payback period	2.5 years
REVENUE	Annual revenue (75% off-take terms)	A\$154M pa
	“Basket Price” of REO product	US\$57.38/kg
OPERATING EXPENDITURE	Total operating costs (including G & A’s)	A\$85.4M pa
	Operating unit cash cost	\$7.12/t ROM

Scoping Study Highlights

MINING	Annual ROM Throughput	12M tpa
	Strip Ratio	0.01
	Mining Costs	\$2.64/t ROM
CONCENTRATOR	Concentrate annual production (40% REO)	10kt/yr
	Wet & Dry plant opex	\$1.81/t ROM
REO REFINERY	REO Production (as mixed carbonate)	3,645t/yr
	Opex (including delivery FOB Darwin)	\$6.54/kg REO
	Overall metallurgical recovery	60.8%
INFRASTRUCTURE	Power (BOO Arrangement)	12MW/hr
	Water	4.3GL/yr
	Sulphuric Acid (Imported)	10kt/yr

Capital Expenditure

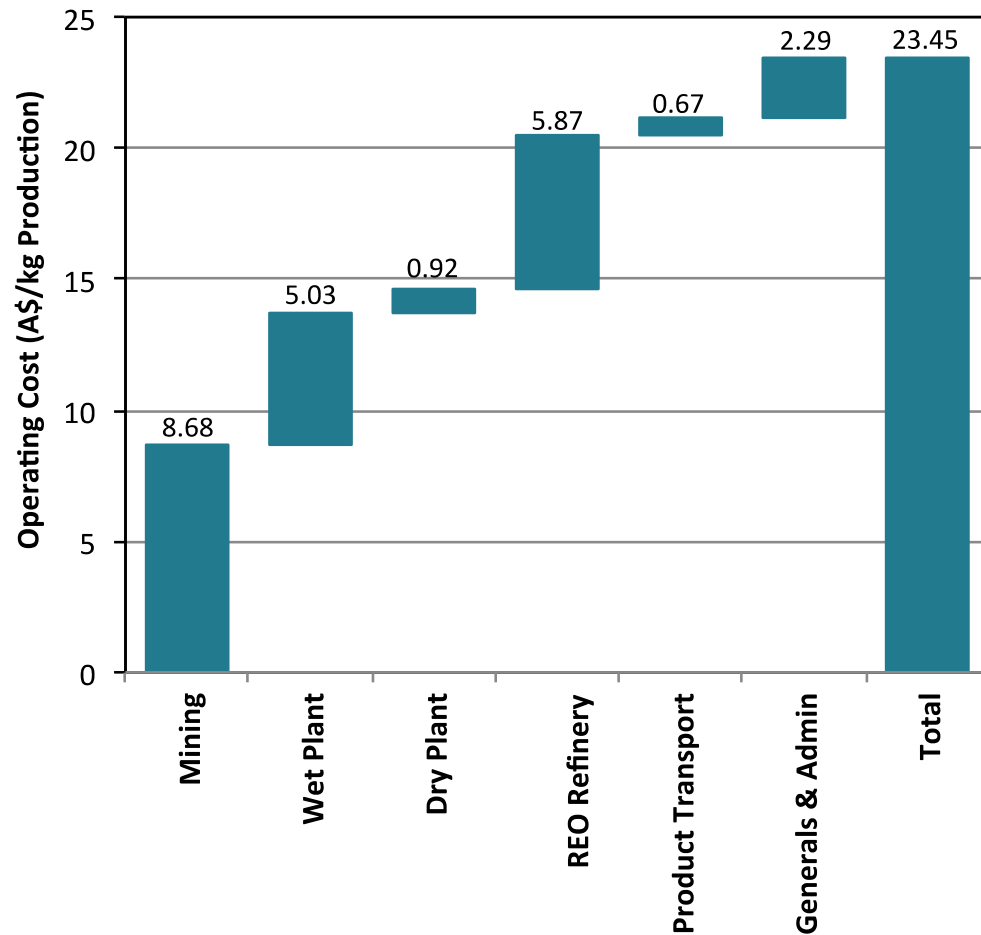
- Charley Creek is one of the lowest capital cost undeveloped REE projects globally .
- On an annualised basis, its capital cost is equivalent to US\$43/kg REO pa.
- Capital cost is fully inclusive of all infrastructure.
- Inclusive of contingency allowance of \$12M



Capital Item	AUD \$
Mining Field Units	\$9,560,189
Wet Concentrator Plant	\$55,257,469
Dry Concentrator Plant	\$12,728,878
REO Refinery	\$15,799,437
Infrastructure	\$26,938,914
TOTAL DIRECTS	\$120,284,887
Indirects	\$5,672,830
EPCM	\$17,565,280
Contingency	\$12,734,166
TOTAL CAPEX	\$156,257,164

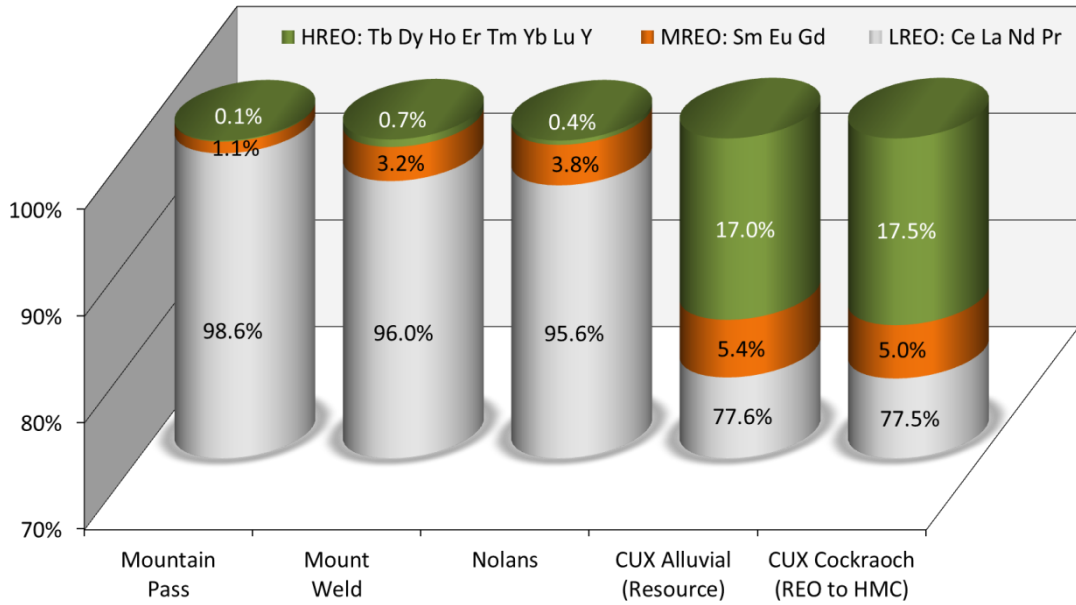
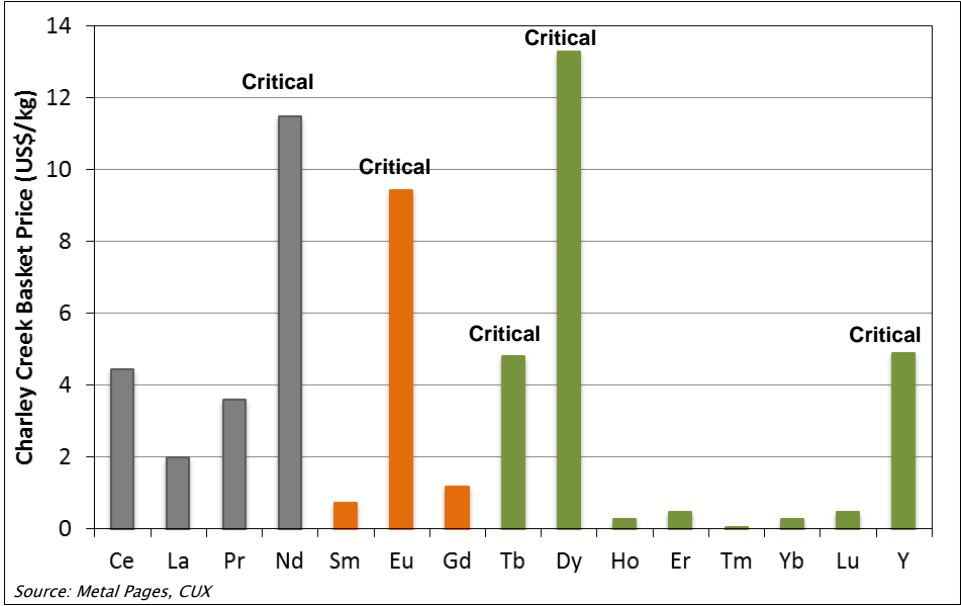
Operating Costs

- Charley Creek is a high tonnage ‘mineral sands’ style operation.
- Total cash costs including overheads is \$7.12/t ROM or \$23.45/kg REO production.
- Several areas to reduce costs have been identified:
 - ✓ High grade starter pit areas to be drilled in next phase
 - ✓ Location of REO Refinery – potential saving of \$2.00/kg REO in reagents transport
 - ✓ Number of process improvements identified to increase overall metallurgical recovery



REO Basket Price

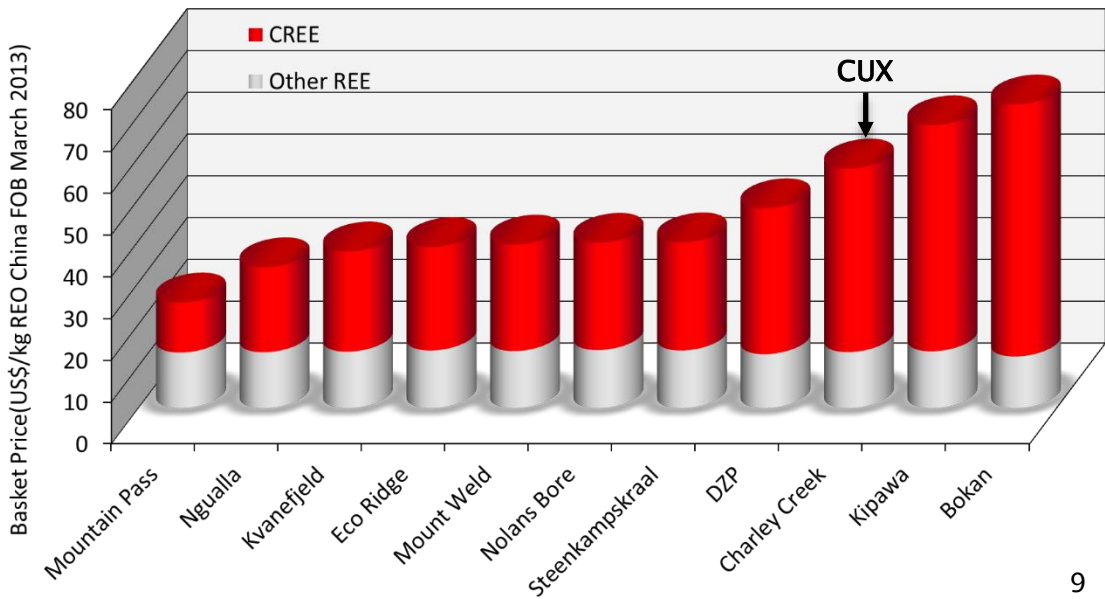
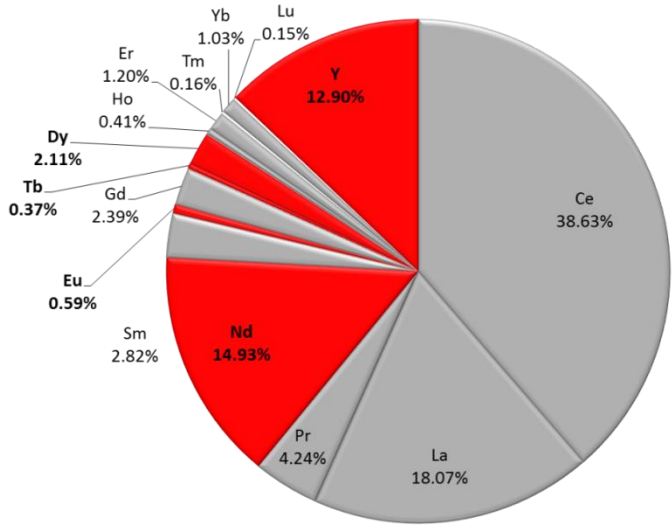
- Current China FOB (March 2013) spot price has been assumed for Scoping Study
- Charley Creek basket price is US\$57.38/kg REO.
- Highly unique deposit has a broad spectrum of heavy and critical rare earths
- Charley Creek has one of the highest HREE & CREE distributions
- TREO composition contains 17% HREEs.
- Not dependent on LREE metal prices.



How do we compare?

- US Department of Energy has assessed Nd, Eu, Tb, Dy & Y to be in critical shortage.
- These five elements are commonly referred to as Critical Rare Earth Elements (CREE).
- Charley Creek contains 30% CREEs by weight and they represent approximately 80% of basket price.

Charley Creek REO Distribution



Source: TMR, Metal Pages

Charley Creek Resource

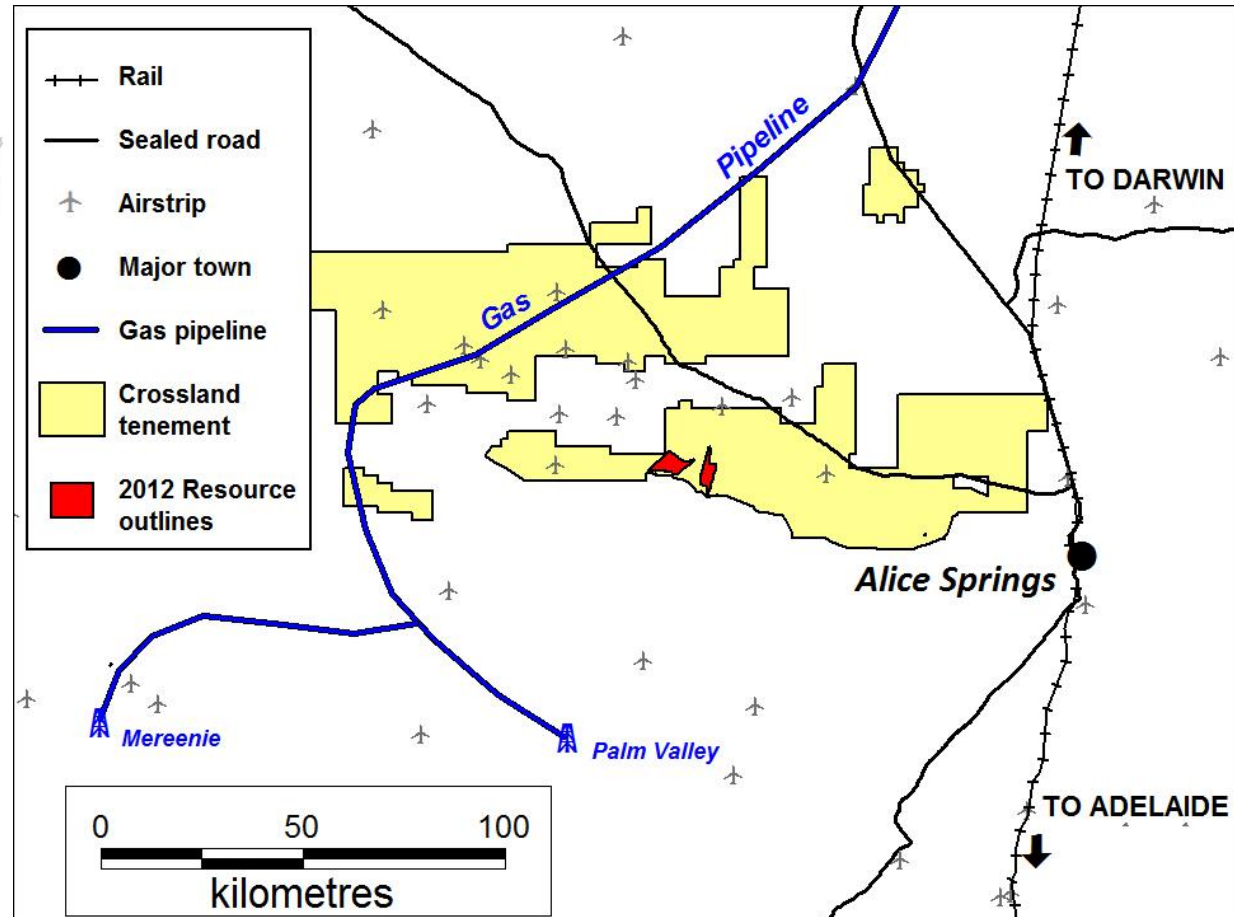
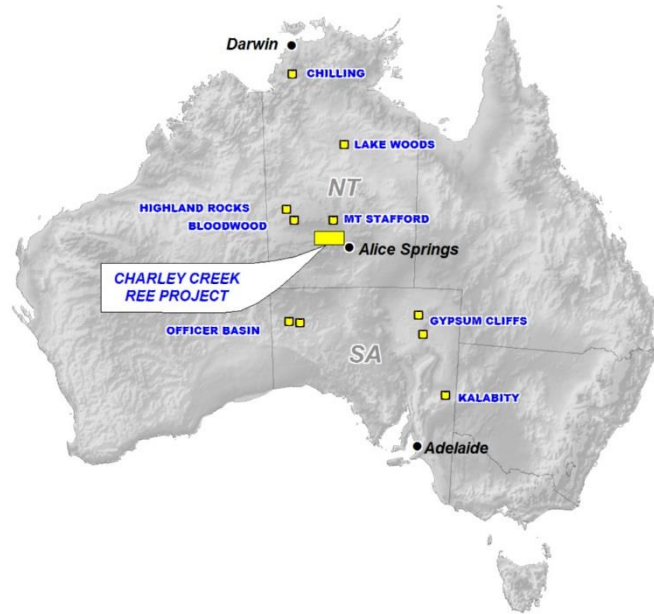
RESOURCE	Mass (Mt)	Weighted Average TREO (ppm)	Contained TREO (t)	Contained Xenotime (t)	Contained Monazite (t)	Contained Zircon (t)
Cattle Creek Indicated Resource	250	280	69,900	17,600	97,200	124,650
Western Dam Indicated Resource	137	323	44,150	9,675	63,700	70,930
TOTAL INDICATED RESOURCES	387	295	114,050	27,275	160,900	195,580
Cattle Creek Inferred Resource	353	291	102,750	26,450	141,075	183,750
Western Dam Inferred Resource	65	282	18,350	4,240	26,160	36,230
TOTAL INFERRED RESOURCE	418	289	121,100	30,690	167,235	219,980

20+ Year Mine Life on Existing Resource

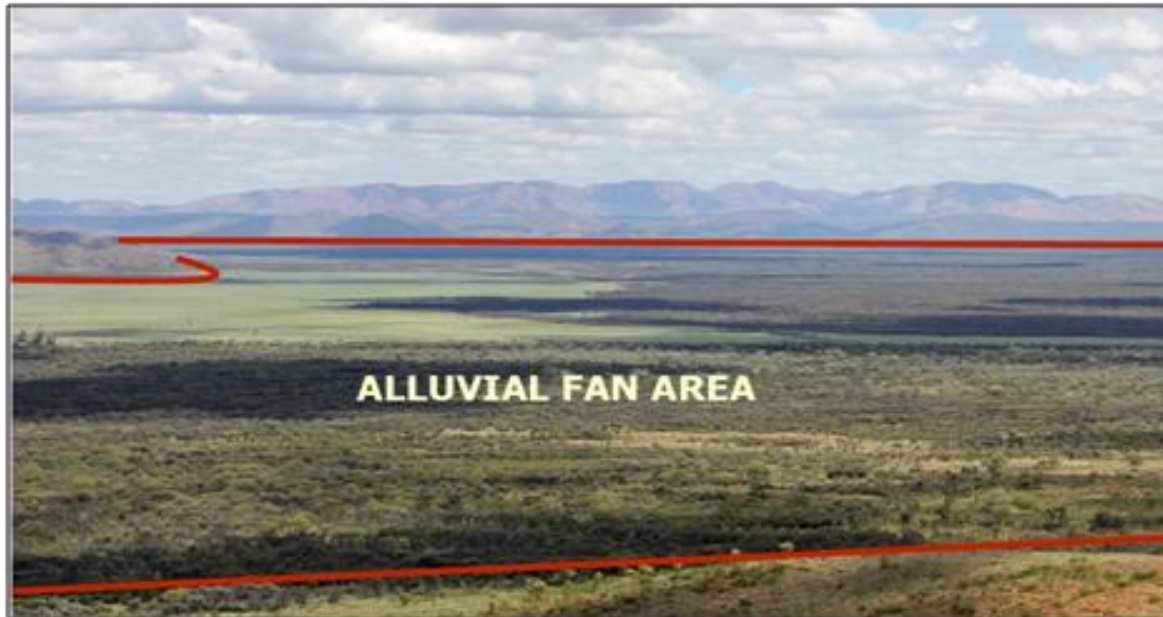
*An **Exploration Target** of 60 to 100Mt at grades of 500 to 1,000ppm TREO, that would contain 30,000t to 100,000t TREO is the priority of the upcoming Resource drill out program. This target is conceptual in nature, and there has been insufficient exploration to estimate a Mineral Resource, and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Charley Creek Alluvial REE Project

Advantageous REE mining Location



Deposit Model



- Charley Creek alluvial plains with a rough outline of the area of interest
- The REE minerals are contained as separate mineral grains monazite & xenotime from surface.
- Alluvium is readily mined and upgraded using conventional mineral sands technology
- Average thickness of resource is 15m, commencing from surface (no overburden) and up to 80m thick in places
- Vast alluvial flats are cheap & easy to rehabilitate

Charley Creek Alluvial REE Project

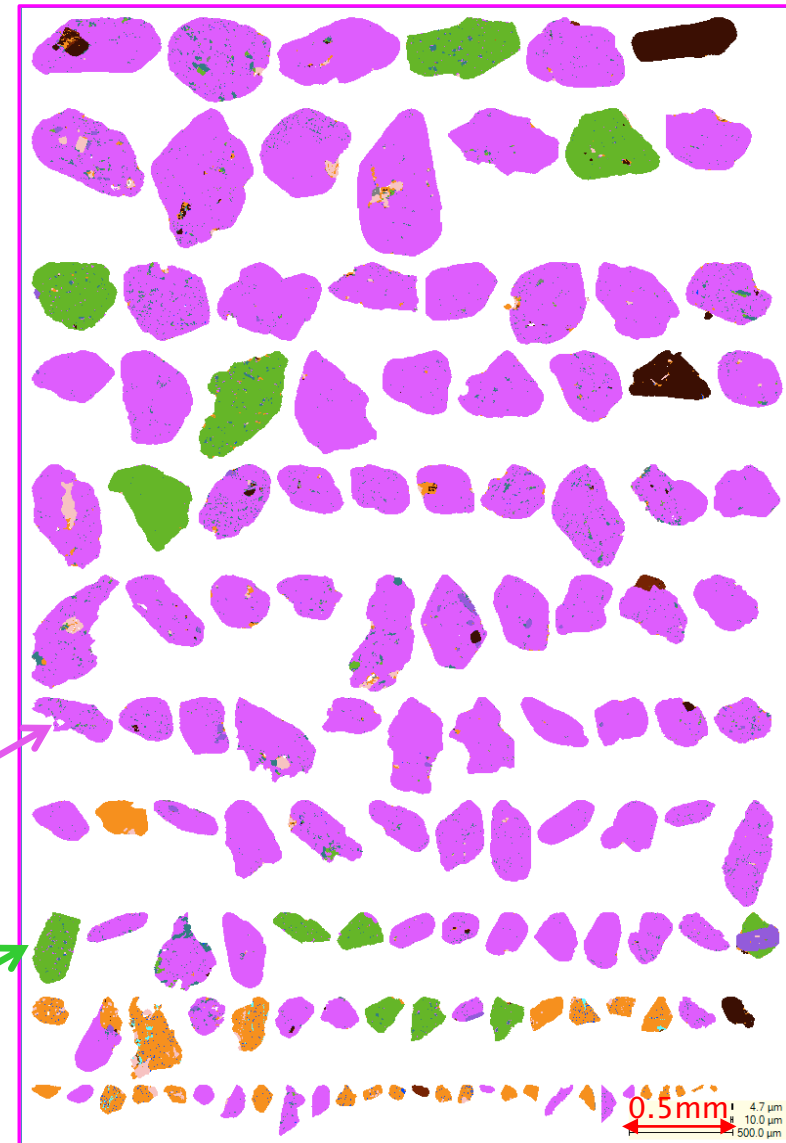
Charley Creek Dry Plant Concentrate.

Why we have a competitive advantage!

- The HMC contains REE in liberated mineral grains: the Dry Plant produces high grade mineral concentrate (>40%TREO), using simple and cheap physical methods based on mineral sands technology.
- Favorable mineralogy & metallurgy: the monazite and xenotime mineral products are the preferred REE refinery feedstock for LREE and HREE.
- Good (>95% of TREO) leach results on high concentrate grades means small, low capital cost refinery.

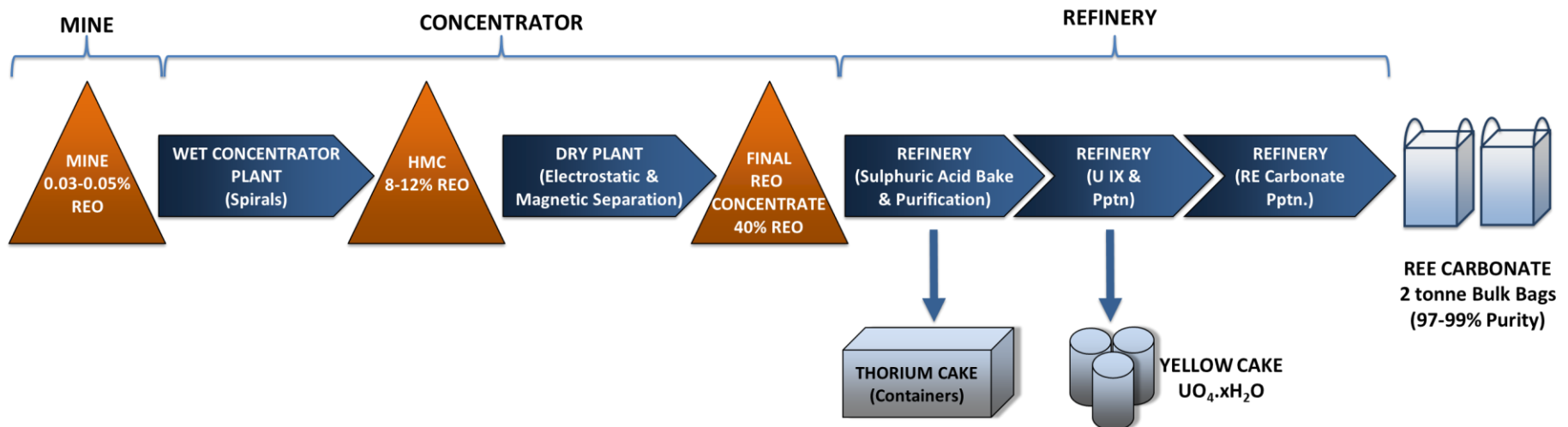
Monazite

Xenotime



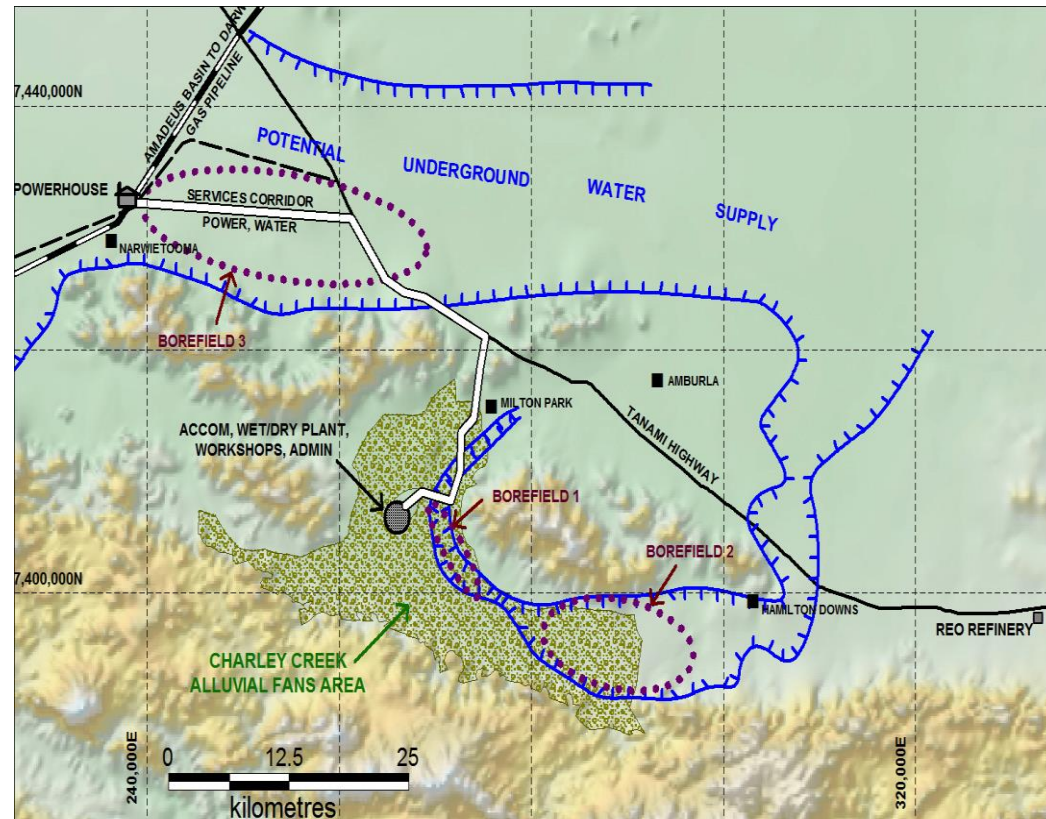
Process Flowsheet

- **Low risk mining and processing**
- Simple gravity spiral plant.
- Tailings pumped to pit void.
- Wet & Dry Plant flowsheets confirmed via pilot test work.
- Final heavy mineral concentrate from Dry Plant contains 40% TREO.
- **Refinery low capital** due to high REO grade.
- Feed rate only 1.2 tonne / hr
- Excellent extraction using sulphuric acid roast and water leach (>95% REE extraction)
- High purity mixed rare earth carbonate produced (97-99% purity RE Carbonate)



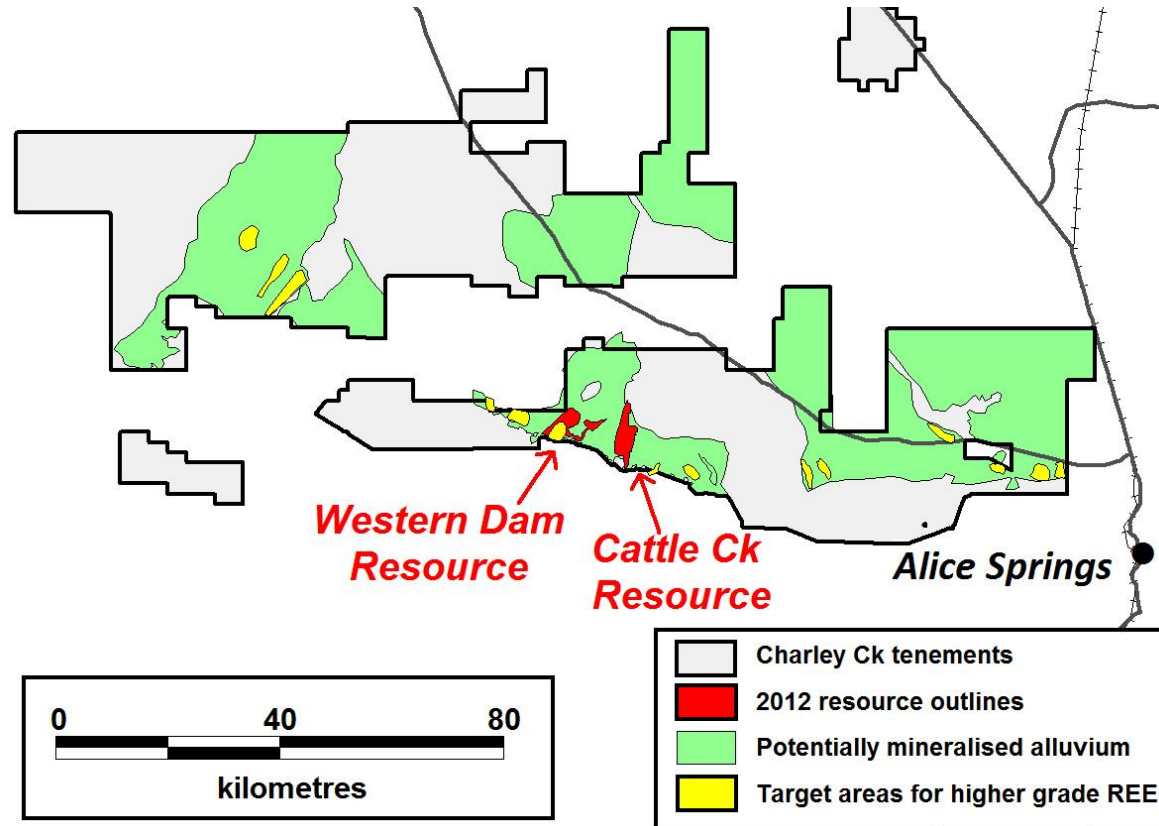
Infrastructure

- Mine site located ~100km from Alice Springs.
- Fly-in/Fly-out operation with 150 personnel camp and mess facility.
- Amadeus Basin Gas Pipeline to provide gas to BOO power station.
- Three large borefields targets have been identified and will be drilled in next phase.
- REO Refinery to be located 35km from Alice Springs (DIDO).
- All reagents to be transported to site (no complex acid plant).



Next Steps

- Secure funding for DFS
- Drill high grade zones
- Continue optimisation test work
- Tailings disposal & management
- EIS Baseline survey
- Value engineering to reduce capital and operating



Charley Creek Alluvial Rare Earth Project

<i>Ticks these boxes</i>	
<i>Resource size</i>	<input checked="" type="checkbox"/>
<i>Mineralogy</i>	<input checked="" type="checkbox"/>
<i>HREE & CREE Composition</i>	<input checked="" type="checkbox"/>
<i>Low capital cost</i>	<input checked="" type="checkbox"/>
<i>Low cost mining and processing</i>	<input checked="" type="checkbox"/>
<i>Scalable</i>	<input checked="" type="checkbox"/>
<i>Location</i>	<input checked="" type="checkbox"/>
<i>Infrastructure</i>	<input checked="" type="checkbox"/>
<i>Regulatory regime</i>	<input checked="" type="checkbox"/>
<i>Early start-up</i>	<input checked="" type="checkbox"/>

ASX code:	CUX
Share price: (As at 10 Apr 13)	3.9 cents
52 week low/high (rounded)	2.6 to 7.2 cents
Shares on issue:	~167 million
Options on issue:	~42 million
Total Shares (fully diluted):	~209 million
Market Capitalisation	\$6.5 million
Top 20 Shareholders:	38.37%
Directors and related parties:	12%

DIRECTORS

Name	Position
Bob Richardson	Chairman
Geoff Eupene	Executive Director
Peter Walker	Non-Executive Director
Malcolm Smartt	Finance Director

