

## News flow from two of the leading rare earth companies

Nothing much is changing as one week rolls into the next. The leading indices are moving higher round the world but our Metals and Mining Index continues to weaken. The smaller end of the market is still struggling. This must be the most boring market for a long time - perhaps 10 years.

### *China's lithium production much higher*

Some insight into the fall in the lithium price can be drawn from the news that China's lithium carbonate production last year was up 31.1% from 2022, according to the China Nonferrous Metals Industry Association. Production capacity of lithium carbonate reached 1.1 Mt last year, up 83.3% on the year. Lithium hydroxide output rose to 319,600 metric tons, up 30.1%. So there doesn't seem to be any shortage of supply just as we are seeing expectations of uptake of EVs starting to wane. This makes a rebound in the lithium price seem more remote.

### *Lindian's Kangankunde dimensions are growing*

From originally being described two years ago as a small but sweet rare earths project, recent rock chip sampling reported last week is showing that the story is getting much bigger. The potential north-south strike length of the mineralisation has increased from 1 km to 2.5 km, with 21 samples from outcropping mineralisation returning grades from 2.1% TREO to 7.15% TREO. NdPr proportions ranged from 16.9% to 28.9%, being consistent with the Kangankunde deposit.

The reported JORC Inferred Resource stands at 261 Mt at 2.19% TREO, with the highest grade domain being 23 Mt at 3.23% TREO. This is already large enough to support a long life high-grade mine. Just as with the comment on American Rare Earths last week, the potential NPV of the project is not going to change much because the resource size is growing, but there is a feel good factor in thinking that bigger is better.

I caught up with the CEO at INDABA recently and was pleased to learn that the Company is making good progress towards the development of Stage One.

### *Hasting is rejigging and optimising Yangibana*

Hastings Technology Metal's share price was brutalised in the market following an escalation of capital costs. That caused a review of the development proposal for Yangibana. Last week's announcement disclosed a further rejigging of the business plan.

### *A deal to toll treat and sell rare earth oxides*

Hastings is dropping the domestic profit sharing model that involved rare earth concentrate sales and third party processing in favour of an integrated tolling and offtake model, but further pre-production pilot test work is required before finalising yields and costs.

HAS announced a deal with Baotou Sky Rock Rare Earth New Material Co, Ltd, whereby it will toll treat and sell rare earth concentrates in China to produce separated rare earth oxides. This will cover 10,000 tpa of concentrates for seven years (about 25% of planned production) with an option to extend the period by a subsequent five years. The Baotou deal supplements the Thyssenkrupp Material Trading offtake agreement for two thirds of the annual production for Yangibana, and it replaced the earlier offtake contract with Baotou signed in November 2018, but which had expired in November 2023.

A formal sales contract is still to be completed. Rare earth oxide pricing is to be based on a 15-day average market pricing for neodymium, praseodymium, dysprosium, and terbium oxides recovered, less a hydrometallurgical process and oxide separation fee.

Based on the statement that Chinese hydrometallurgical processing costs will be up to 75% lower, and oxide separation costs will be 70% lower in China, Hastings says the Baotou deal delivers;

- a 61% increase in post tax NPV to \$865m
- a 14% increase in post tax IRR to 31%
- an 82% increase in mine life free cashflow to \$3.3bn and
- a reduction on capex payback to 3.4 years.

Additional modifications to Stage One include a review of the mine plan by bringing forward the mining of lower strip ratio zones while maintaining the grade. However, it will need to spend an additional \$33m to install a concentrate dryer, meaning capex for Stage One will now be \$503m. It has already spent \$142m of this on early works.

The Company says that the Yangibana Project will be one of the highest margin producers globally once in production – first quartile on global margin curve as assessed by CRU. That would be good if it can be achieved.

### *Comments*

On the face of this rejigging it looks like a good deal for Hastings. The 70-75% lower processing costs in China is quite a dramatic figure. What does this say about the Western World's ability to compete with Chinese industry?

Hastings strongly pushes its average NdPr ratio of 37%, saying it is the highest in the world. However, to be accurate, you need to relate this back to the head grade to get a meaningful view. Yangibana has a head grade of 1% TREO. Kangankunde's proportion of NdPr is lower at 20%, but it expects that mining of the higher grade zones of the orebody will deliver a head grade of 3-3.5%. That means for each tonne of ore mined Lindian will produce about twice the amount of NdPr as Hastings. That will go straight to the bottom line. Does that mean that Kangankunde will have twice the profit margin per tonne of ore treated? Possibly.

First concentrate production from Yangibana is now expected in 2026 i.e. more than two years away and a delay on the June Half of 2025 forecast in the recent annual report. That same report said that Hastings would produce 37,000 tpa of concentrate with the construction of a hydrometallurgical plant in Onslow, but is that figure now up for review given the recent news?

### *Share register action and funding*

It is noteworthy that both Morgan Stanley and Mitsubishi UFJ Financial Group have been lifting their shareholdings in HAS and are now at 9.37%. Is the percentage figure a coincidence?

Funding for Yangibana is complicated and is still work in progress. Multiple financing proposals including loans, bonds, and joint venture proposals have been received. Hastings is now in the process of negotiation to secure the most optimal financing package. So, there is still some uncertainty on the \$503m financing front. The weakness in the rare earth prices will be having some impact on the ability to raise all of the funds needed, but if the price cycle has bottomed out, a recovery in price could be of material assistance.

### *Comparing Hastings to Lindian*

The most obvious points are that Hastings is in WA and it is much further down the development track than Lindian, which is operating in Malawi, but Kangankunde could be on stream earlier due to its more modest scale. Hastings is looking at twice the mining rate but the head grade is only one third of what Lindian expects to achieve in its Stage One.

Lindian is expecting to announce the conversion of a proportion of its Inferred Resource to Indicated following a 4,800m drilling program, by the end of March. That will enable it to make more informative ASX releases on the potential economics, as Indicated Resources are a precondition to being allowed to do so.

At this juncture Lindian is looking at a treatment rate of 440,000 tpa in Stage One. A commencement of construction in Q2 of 2024, would facilitate the commencement of commissioning a year later. This looks like it will be 12 months before Hastings achieves the same.

We have assumed that Kangankunde's high grade could enable the production of 10,000 tpa of TREO in 18,000 tpa of concentrates, with a grade of 55-65% TREO. A relatively simple gravity separation recovery circuit and magnetic separation could enable capex of appreciably less than US\$40m. While Hastings plans to produce almost four times as much product, its capex looks like it will be 10x greater. Thus Kangankunde has a much lower capital intensity ... which would be expected with a grade three times higher.

Lindian has signed a 45,000 tonne monazite concentrate sales agreement with Gerald Metals, over a five year period in Stage One. The indicative price is 10% of the ruling NdPr price. At US\$50/kg, this is \$5/kg to Lindian. Cash costs are expected to be half this figure, meaning a gross operating margin in the order of 100% or US\$25m at recent prices.

A point to note is the high leverage to any recovery in the rare earth prices. Lindian expects to come on stream in the upswing of the price cycle, assuming a recovery commences within 12 months. If the market price was to

reach \$100/kg again i.e. 50% higher, the gross profit margin would increase from 100% to 300%.

Given that Lindian had \$20m in the bank as at 31 December 2023, and Gerald Metals is considering providing US\$10m of finance, project funding does not look intimidating.

While the Kangankunde rare earths project is exciting, don't forget that Lindian also has a very high grade bauxite resource in Guinea that could be progressed to a very profitable mining operation.

### *The Bottom Line*

Like all other companies Lindian has not been able to escape the sell-down of rare earths stocks following the fall in rare earth prices, but it is well positioned to benefit from a turnaround in the price cycle. It presents itself as one of the best prospective rare earth projects in the world (rather than saying it is world class) with the high grade being a great advantage. With a grade of only 1% TREO, Hastings is finding the development of Yangibana more challenging due to scale and capex. There is probably greater potential for things to go wrong as a result.

Interestingly, the market capitalisation of Hastings is \$87m, and Lindian's is \$167m. However, a simple comparison of these numbers is largely meaningless.

*Disclosure: Interests associated with the author owns shares in Linden Resources.*

### *s708 discriminates against small investors*

We have previously written that s708 discriminates against smaller investors, excluding them from participating in placements by companies if they don't meet the threshold of \$2.5m in net assets or \$250,000 p.a. in net income. For some reason ASIC takes a paternalistic approach and acts on the view that if you don't meet these thresholds, you are not smart enough to take placements. You need to have a disclosure document (prospectus) that explains the risks. That increases the costs to companies and helps line the pockets of lawyers, so companies avoid them like the plague. The net result is that smaller investors can't participate in these discounted issues. That is where the discrimination against little guys is obvious.

The ASIC approach is full of flaws. Most obviously the small investors can buy freely on the ASX without any threshold restrictions. What is the difference between buying on-market and taking a placement, other than the fact that a placement is cheaper by 10-20%. Why should wealthy investors be the only ones to get the cheaper price?

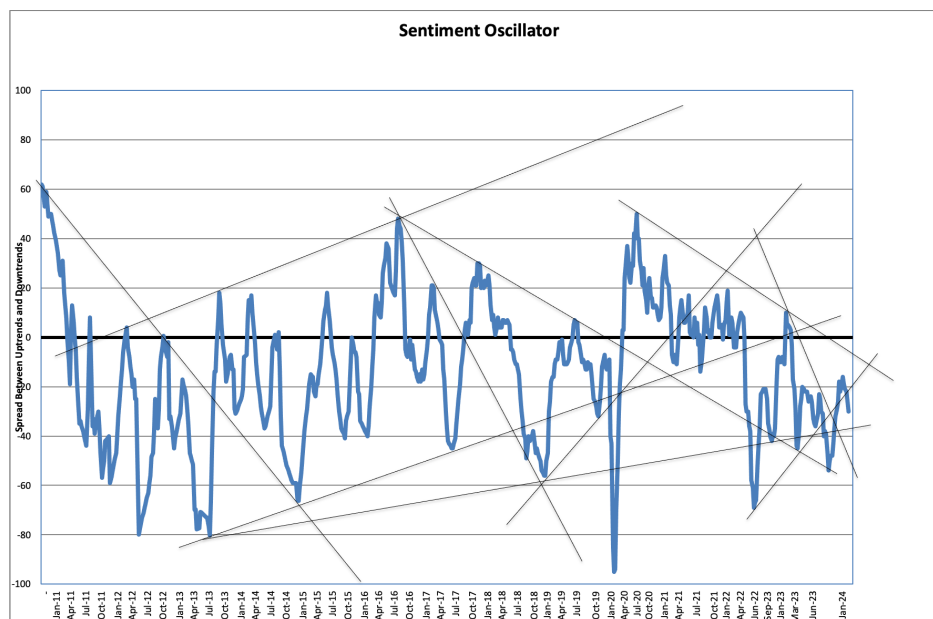
Secondly, who reads a prospectus anyway when it frequently exceeds 100 pages? Who has got the time, and who really understands all that it is written? Who cares? They are largely irrelevant in the decision making process, so why does ASIC insist on them? Is this just part of the corrupt legal system designed to fill the wallets of lawyers for no reasonable benefit of any other party?

When the s708 provision was enacted there was only 2% of the population that qualified. It is estimated that now 16% of people qualify, partially due to inflation. That more people qualify is good, as befitting of an increasingly

equitable society; s708 is not quite as discriminatory as it was.

So, why has ASIC recommended a lifting of the threshold to income of \$450,000 p.a. and \$4.5m? Why does it want to make life harder for little guys? At this stage the proposal is part of a submission that has not yet been acted upon, so

there is time to raise the matter with your local member of parliament. Anyone who likes to invest and get cheaper entry points afforded by the current thresholds should be making noise now. s708 is highly discriminatory as it favours the wealthy ahead of the general populations. It shouldn't even exist.



**Sentiment Oscillator:** Sentiment softened. There were 24% (27%) of stocks in uptrend and 54% (53%) in downtrend at the close of the week.

### Detailed Chart Comments

*NB. Only the bold comments have been updated. Comments in grey type are from previous weeks and will be less relevant. Please note that this list is a cross section of the market. It IS NOT a list of recommendations.*

Indices	Code	Trend Comment	
All Ordinaries	XAO	near highs	
Metals and Mining	XMM	heading down	
Energy	XEJ	pullback	
Information Technology	XIJ	strong uptrend	
Stocks	Code	Trend Comment (updated comments in bold)	Main Interest
5EA Advanced Materials	5EA	yet another new low	boron
92 Energy	92E	rising	uranium
Adriatic Resources	ADT	new high	zinc, polymetallic
Advance Metals (was Pacific American)	AVM	back to lows	coal, gold exploration
Aguia Resources	AGR	down	phosphate, copper exploration
Alkane Resources	ALK	down	gold
Alicanto Minerals	AQI	back to lows	base metals, silver, gold
Alligator Energy	AGE	rising again	uranium
Almonty Industries	All	rising	tungsten
Alpha HPA	A4N	wedge forming	HPA

*This commentary is provided at no charge and in good faith from sources believed to be reliable and accurate. Far East Capital Ltd directors and employees do not accept liability for the results of any action taken on the basis of information provided or for any errors or omissions contained therein. Readers should seek investment advice from their professional advisors before acting on information contained therein. Please see **Disclosure of Conflicts of Interest** at the end of this commentary.*

Altech Chemical	ATC		breaching downtrend	HPA, anodes
Alto Metals	AME		at lows with a placement	gold exploration
American Rare Earths	ARR		surge through downtrend line	rare earths
Anax Metals	ANX		new low	copper
Anteotech	ADO		breached uptrend	silicon anodes, biotech
Antilles Gold	AAU		new low	gold and copper expl.
Arafura Resources	ARU		new low	rare earths
Ardea Resources	ARL		breaching downtrend	nickel
Arizona Lithium	AZL		strong rally	lithium
Astral Resources	AAR		gentle downtrend	gold
Averina	AEV		down	phosphate
Aurora Energy Metals	1AE		heavy correction within broader uptrend	uranium
Aurelia Metals	AMI		sideways	gold + base metals
Australian Rare Earths	AR3		at lows	rare earths
Australian Strategic Materials	ASM		continuing lower	rare earths
Azure Minerals	AZS		another surge higher then pullback	nickel exploration
BHP	BHP		down	diversified, iron ore
Barton Gold	BGD		sideways through support line	gold exploration
Beach Energy	BPT		rising gently	oil and gas
Bellevue Gold	BGL		off its highs	gold exploration
Besra Gold	BEZ		breached downtrend	gold
Black Cat Syndicate	BC8		steep rally	gold
BMG Resources	BMG		down	gold exploration
Boab Metals	BML		heavy fall	silver/lead
Cadoux (was FYI)	CCM		testing steepest downtrend	HPA
Calidus Resources	CAI		new uptrend	gold
Caravel Minerals	CVV		strong rally	copper
Carnaby Resources	CNB		secondary downtrend	copper
Castile Resources	CST		new uptrend	gold/copper/cobalt
Cazaly Resources	CAZ		back to downtrend	rare earths
Celsius Resources	CLA		sideways	copper
Cobalt Blue	COB		down again	cobalt
Cyprium Metals	CYM		new low	copper
Ecograp	EGR		turning down at resistance line	graphite
Emerald Resources	EMR		rising, new high	gold
Empire Energy	EEG		fallen to support line	gas
EQ Resources	EQR		breaching downtrend	tungsten
Euro Manganese	EMN		new low	manganese
Evolution Energy	EV1		new low	graphite
Evolution Mining	EVN		crashed lower	gold
First Graphene	FGR		new high	graphene
Fortescue Metals	FMG		off its high	iron ore
Galena Mining	G1A		suspended	lead
Genesis Minerals	GMD		testing uptrend	gold

This commentary is provided at no charge and in good faith from sources believed to be reliable and accurate. Far East Capital Ltd directors and employees do not accept liability for the results of any action taken on the basis of information provided or for any errors or omissions contained therein. Readers should seek investment advice from their professional advisors before acting on information contained therein. Please see **Disclosure of Conflicts of Interest** at the end of this commentary.

Genmin	GEN		suspended	iron ore
Gold 50	G50		down again	gold exploration + gallium
Great Boulder Resources	GBR		new low	gold exploration
Group 6 Metals	G6M		down	tungsten
Hamelin Gold	HMG		new low	gold exploration
Hastings Technology Metals	HAS		back to lows	rare earths
Hazer Group	HZR		back to lows	hydrogen
Heavy Minerals	HVY		new low	garnet
Hillgrove Resources	HGO		rising gently	copper
Iluka Resources	ILU		heavy fall	mineral sands
ioneer (was Global Geoscience)	INR		new low	lithium
Ionic Rare Earths	IXR		breached downtrend	rare earths
Jervois Mining	JVR		new low	nickel/cobalt
Jindalee Lithium	JLL		back to lows	lithium
Kaiser Reef	KAU		new low	gold
Krakatoa Resources	KTA		new low	rare earths
Kingfisher Mining	KFM		breached downtrend	rare earths
Lepidico	LPD		new low	lithium
Lindian Resources	LIN		new low	rare earths + bauxite
Lion One Metals	LLO		heavy fall - suspension	gold
Li-S Energy	LIS		new low	Lithium sulphur battery technology
LCL Resources	LCL		new low	gold exploration
Lotus Resources	LOT		rising	uranium
Lucapa Diamond	LOM		sideways	diamonds
Lunnon Metals	LM8		new low	nickel
Lynas Corp.	LYC		still down	rare earths
Marmota	MEU		rising	gold exploration
Mayur Resources	MRL		strongly higher	renewables, cement
Meeka Gold	MEK		down	gold
MetalsX	MLX		down	tin, nickel
Meteoric Resources	MEI		down	rare earths
Metro Mining	MMI		improving	bauxite
Midas Minerals	MM1		slump	lithium
Nagambie Resources	NAG		down	gold, antimony
Neometals	NMT		new low	lithium
Newfield Resources	NWF		down	diamonds
Nexgen Energy	NXG		rising	uranium
Northern Star Res.	NST		rising	gold
Nova Minerals	NVA		off its highs	gold exploration
Pacific Gold	PGO		new low	gold exploration
Paladin Energy	PDN		new high	uranium
Pantoro	PNR		breached short term uptrend	gold
Patriot Battery Metals	PMT		bounced off new low	lithium
Peak Resources	PEK		new low	rare earths

This commentary is provided at no charge and in good faith from sources believed to be reliable and accurate. Far East Capital Ltd directors and employees do not accept liability for the results of any action taken on the basis of information provided or for any errors or omissions contained therein. Readers should seek investment advice from their professional advisors before acting on information contained therein. Please see **Disclosure of Conflicts of Interest** at the end of this commentary.

Peninsula Energy	PEN		breached downtrend	uranium
Perseus Mining	PRU		testing support line	gold
Poseidon Nickel	POS		new low	nickel
Provaris Energy	PV1		down	hydrogen
QMiners	QML		new low	copper
Queensland Pacific Metals	QPM		new low	nickel/cobalt/HPA
RareX	REE		new low	rare earths, phosphate
Regis Resources	RRL		turned down again	gold
Renergen	RLT		down	gas, helium
Richmond Vanadium	RVT		rising	vanadium
RIO	RIO		off its highs	diversified, iron ore
Rumble Resources	RTR		new low	gold exploration
S2 Resources	S2R		down	gold exploration
Sandfire Resources	SFR		rising again	copper
Santos	STO		weaker	oil/gas
Sarama Resources	SRR		sideways	gold exploration
Sarytogan Graphite	SGA		new low	graphite
Siren Gold	SNG		bounced from lows	gold exploration
South Harz Potash	SHP		new low	potash
Southern Cross Gold	SXG		breached support line, then rallied	gold exploration
Southern Palladium	SPD		testing downtrend	PGMs
Stanmore Coal	SMR		testing uptrend	coal
Strandline Resources	STA		suspended	mineral sands
Sunstone Metals	STM		meeting resistance line	gold/copper exploration
Suvo Strategic Minerals	SUV		stronger	kaolin
Talga Resources	TLG		rallying	graphite
Tamboran Resources	TBN		riding again	gas
Technology Metals	TMT		down	vanadium
Theta Gold Mines	TGM		breached downtrend	gold
Thor Energy	THR		new uptrend	uranium
Tietto Minerals	TIE		surge on takeover approach	gold
Vanadium Resources	VR8		drifting lower	vanadium
Venture Minerals	VMS		rising	tin, tungsten
Vintage Energy	VEN		breached downtrend	gas
Voltaic Strategic Resources	VSR		new low	REO + lithium
West Cobar	WC1		new low	rare earth + lithium
Westgold Resources	WGX		breached uptrend	gold
West Wits Mining	WWI		sideways	gold
Whitehaven Coal	WHC		testing uptrend	coal
Xantippe Resources	XTC		suspended	lithium
Zenith Minerals	ZNC		heavy correction	gold exploration
Totals	24%	33	Uptrend	
	55%	76	Downtrend	
		138	Total	

This commentary is provided at no charge and in good faith from sources believed to be reliable and accurate. Far East Capital Ltd directors and employees do not accept liability for the results of any action taken on the basis of information provided or for any errors or omissions contained therein. Readers should seek investment advice from their professional advisors before acting on information contained therein. Please see **Disclosure of Conflicts of Interest** at the end of this commentary.

### Guides to Chart Interpretations

- Charts usually go pass from one trend (up or down) into the other via a period of indecision and uncertainty during which the trend can either recover or change. This period is signified by the orange colour. The orange represent both the greatest risk and greatest reward possibilities.
- Once a chart is in confirmed up or downtrends it is not uncommon for 10-20% of that trend to have already transpired.
- There are trends within trends. The focus of this chart review is the immediate trend that affects the sentiment i.e. it can be a downtrend within a long-term uptrend.
- Not every chart warrants a new comment every week. The new comments are in bold type. Grey type comments may be dated.
- Individual charts provide a single view. It is valuable to look at charts of other companies in similar commodities, and the overall sentiment is also very valuable. Not many stocks can swim against the tide.
- We periodically add or delete charts, some times for obscure reasons. If a chart consistent gives poor signals or is very erratic, we may delete it. Sometimes we add a chart because we want to see what all the fuss is about. We do have a preference for charting stocks that we cover in our research as well.
- Errors and omissions may occur from time to time, especially in fast moving markets.

Amber Lights in Tables: Just a reminder if when the amber light is used in the table – it is when the charts are ambiguous or when there is a change of trend taking place. If a chart is breaching a downtrend it can either be a positive sign or a trap. Only once it has done more work can it be confirmed as a new uptrend. Maybe it is a new uptrend (or conversely a new downtrend); the risk takers can decide to jump on board early (or sell). They will maximise their profits (or minimise their losses if indeed it is the start of the new uptrend (downtrend). More risk-averse investors should wait a little longer, being prepared to give up some of the gains in return for greater certainty.

Weightings of Sectors Represented in the Company Charts			
Sector	No. of Companies	Weighting	
Gold Exploration	18	13.0%	
Gold	19	13.8%	
Rare Earths	14	10.1%	
Lithium	10	7.2%	
Copper	9	6.5%	
Uranium	9	6.5%	
Oil/Gas	8	5.8%	
Nickel	6	4.3%	
Iron Ore/Manganese	5	3.6%	
Graphite/graphene	5	3.6%	
Silver	4	44.4%	
Tungsten	3	2.2%	
Mineral Sands	2	1.4%	
Vanadium	3	33.3%	
Zinc/Lead	2	1.4%	
Coal	2	1.4%	
Potash/Phosphate	3	2.2%	
Bauxite	2	1.4%	
Tin	2	1.4%	

Cobalt	1	0.7%	
Diamonds	2	1.4%	
Other	9		
Total	138		

**FEC Disclosure of Interests:** It is a requirement of ASIC that holders of AFS licences prominently disclose any conflicts of interest. At all times readers should be aware that Far East Capital Ltd is an active investor. It shares its research and opinions free of charge to other investors and it aims to do so on an ethical basis. Accordingly, when it is writing about stocks in which it holds interests, these will be disclosed. The author is chairman of First Graphene and one of the largest shareholders, through a number of entities. Over the last three years FEC has received capital raising fees from a number of companies but it does not receive payment for research. See individual disclosure notes in the body of the Weekly where they are relevant. Its primary business is investing and managing its own money, but it does occasionally raise money for resource companies.

**Disclaimer:** This Research Report has been prepared exclusively for Far East Capital clients and is not to be relied upon by anyone else. In compiling this Commentary, we are of necessity unable to take account of the particular investment objectives, financial situation and needs of any of our individual clients. Accordingly, each client should evaluate the recommendations obtained in this Commentary in the light of their own particular investment objectives, financial situation and needs. If you wish to obtain further advice regarding any recommendation made in this Commentary to take account of your particular investment objectives, financial situation and needs, you should contact us. We believe that the advice and information herein are accurate and reliable, but no warranty of accuracy, reliability or completeness is given and (except insofar as liability under any statute cannot be excluded) no responsibility arising in any other way for errors or omissions or in negligence is accepted by Far East Capital Limited or any employee or agent. For private circulation only. This document is not intended to be an offer, or a solicitation of an offer, to buy or sell any relevant securities (i.e. securities mentioned herein or of the same issuer and options, warrant, or rights with respect to or interests in any such securities). We do not guarantee the accuracy or completeness of the information herein, or upon which opinions herein have been based. At any time we or any of our connected or affiliated companies (or our or their employees) may have a position, subject to change, and we or any such companies may make a market or act as principal in transactions, in any relevant securities or provide advisory or other services to an issuer of relevant securities or any company therewith. Unless otherwise stated all views expressed herein (including estimates or forecasts) are solely those of our research department and subject to change without notice. This document may not be reproduced or copies circulated without authority. Copyright © Far East Capital Ltd 2023.