

# INVESTOR PRESENTATION

January 2019





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Exploration Targets: It is common practice for a company to comment on and discuss its exploration in terms of target size and type. The information in this presentation relating to exploration targets should not be misunderstood or misconstrued as an estimate of Mineral Resources or Ore Reserves. Hence the terms Resource(s) or Reserve(s) have not been used in this context in this presentation. The potential quantity and grade of resource targets are conceptual in nature since there has been insufficient work completed to define them beyond exploration targets and that it is uncertain if further exploration will result in the determination of a Mineral Resource or Ore Reserve.



THE COMPANY





# CORPORATE INFORMATION

## Capital Structure

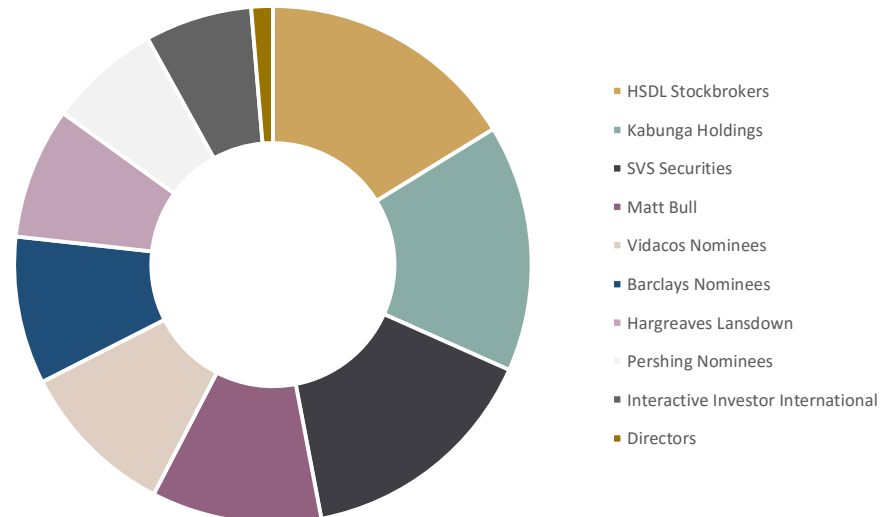
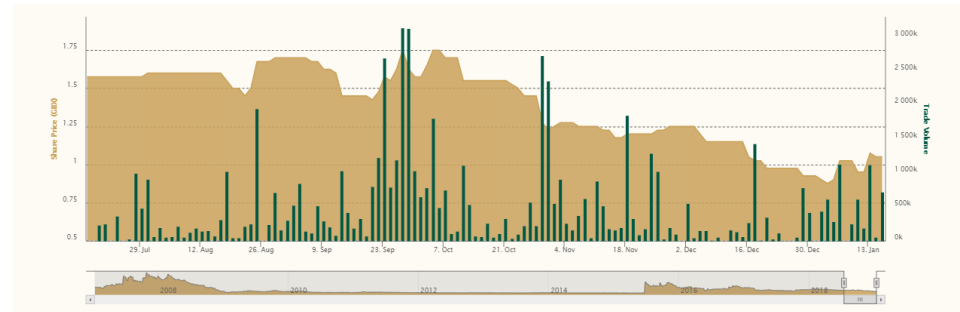
EPIC	ACP
Shares on issue	303.03m
Share Price*	1.05p
52 week high / low	2.39p/0.85p
Market cap*	£3.18m
Avg. daily volume (shares)	421,700 (3 mths)

\*as at 17.01.19

## Advisers

finnCap Ltd	Nomad & Joint Broker
SVS Securities Plc	Joint Broker

## ACP Share Price Chart (12-months)





# BOARD AND MANAGEMENT

## Emmanuel Steve Mahede

*BEng MBA*

**Non-Executive Director**

Qualified engineer with more than 35 years' in mining related project management.

Experienced CEO in Australia and Africa.

BSc (Eng) from the University of Western Australia and MBA from Murdoch University.

Patron of the Tanzanian Community in Western Australia Inc.

## Nicholas Johansen

*BEcon GDLP LLB (Hons)*

**Non-Executive Director**

Experienced legal practitioner based in Northern Territory, Australia.

Extensive involvement in junior mining exploration and production companies across many different commodities .

Expert in environmental regulation.

Law degree with Honours from Charles Darwin University, NT and Bachelor of Economics from the University of Adelaide, SA.

## Dave Pass

*Study Manager*

**Study Manager**

Leading Australian metallurgist with 30 years' experience in the mining industry.

General Manager of graphite specialist consultancy Battery Limits.

20 years in Western Australia including 10 years at Barrick Gold's Granny Smith project.

Key executive positions including General Manager and CEO with the ASX listed company Moly Mines.

## Peter Anderton

*Project Manager*

**Technical Advisor**

Entrepreneur, developer, chairman and CEO with over 40 years in engineering, construction, mining and minerals.

Managed private and public companies in Australia, New Zealand, North, South and Central America, Africa, Asia, Europe and the Middle East.

Headed successful global entities specialising in project delivery and operations in gold, magnesium, iron ore, nickel, silicon and base metals.

Diverse business experience in commercial fishing, aquaculture, biofuel development, cattle and broad acre farming.



## OVERVIEW

- > *Armadale Capital (ACP) is an international resource investment company*
- > *Primary focus is the world class Mahenge Liandu Graphite Project*
- > *Low technical risk project based on a large, high grade open cut resource*
- > *Established potential as a significant high-grade graphite mine*
- > *East African region is the world's largest graphite province with outstanding potential to become a top producer over the next decade*
- > *Global demand for graphite is set to boom driven by the energy sector*
- > *The Company has additional potential upside through:*
  - *JSE listed portfolio of interests which are rebalanced periodically*
  - *Royalty agreement over the 670,000oz Mpokoto Gold Project in the DRC*



## MAHENGE LIANDU GRAPHITE PROJECT

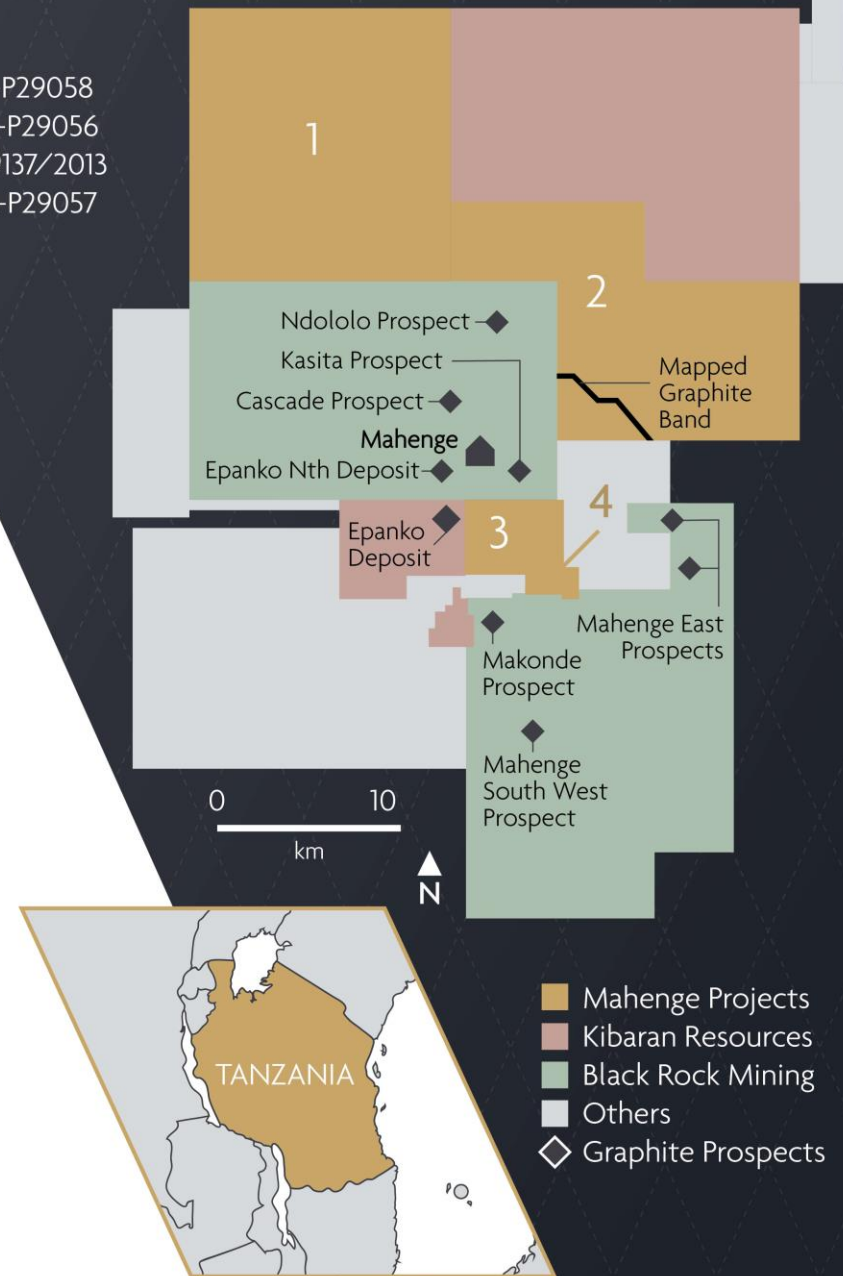


## PROJECT STATUS

ACP's 100% owned Mahenge Liandu, in Tanzania, comprises two tenements over 29.9km<sup>2</sup> in a region known for high grade mineralisation

- > *Product quality drilling is underway and offtake agreements are being finalised*
- > *Establishing maiden reserves*
- > *Progressing environmental and social permitting to allow the application of a mining license are key to advancing the project*

KEY:  
1 – HQ-P29058  
2 – HQ-P29056  
3 – PL 9137/2013  
4 – HQ-P29057







## RESOURCE DESCRIPTION

Demonstrated near surface high grade deposit:

- > *Inferred Resource of 51.1Mt at 9.3% TGC with 38.7Mt indicated at 9.3% and 12.4Mt at 9.1% TGC*
- > *Excellent quality graphite concentrates confirmed*
- > *High purity and excellent flake size distribution*
- > *Low capex and opex operation with a long mine life*
- > *Access to established infrastructure*



Mahenge Liandu site photo



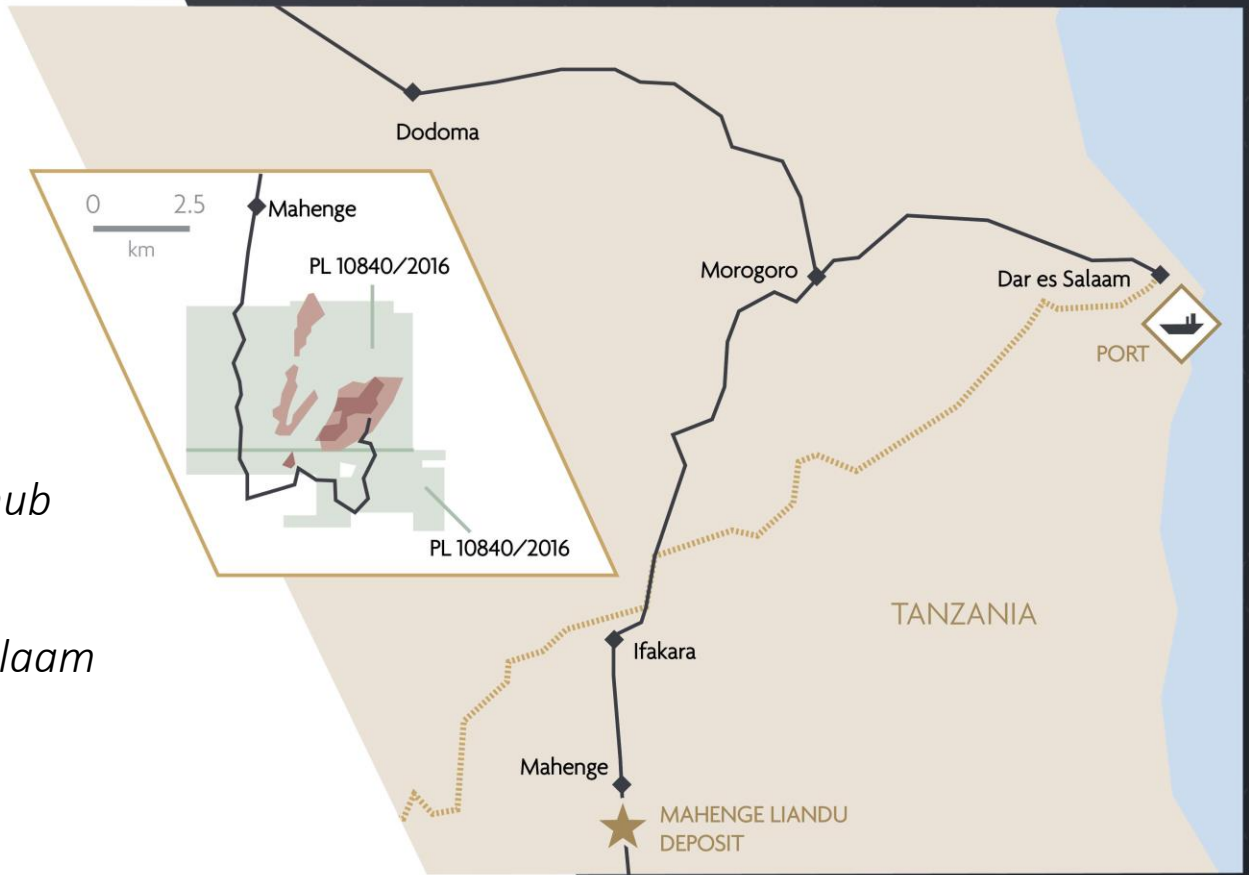
Access road to the project site



## LOCATION

The project is well located close to established infrastructure:

- > *Mains power within 5km*
- > *80km by road to central rail hub at Ifakara*
- > *Direct rail access to Dar es Salaam 320km away*
- > *Labour and materials within 10km at Mahenge town*



Kilombero Bridge



Tanzania-Zambia Railway



## WORLD CLASS RESOURCE

- > *Mahenge Liandu is one of the highest grade, large flake deposits in the world – JORC resource of 51.1Mt at 9.3% TGC*
- > *Scoping study highlights significant potential value – NPV of US\$349m and IRR of 122% (March 2018) (pre-tax) low capex*
- > *Feasibility study underway to confirm 400,000tpa plant over 32-year mine life*
- > *Rapidly growing demand in a range of end uses*
- > *Accelerated development schedule with decision to mine expected in early 2019*



## SCOPING STUDY RESULTS

Robust economics returned from scoping study completed in Q1 2018:

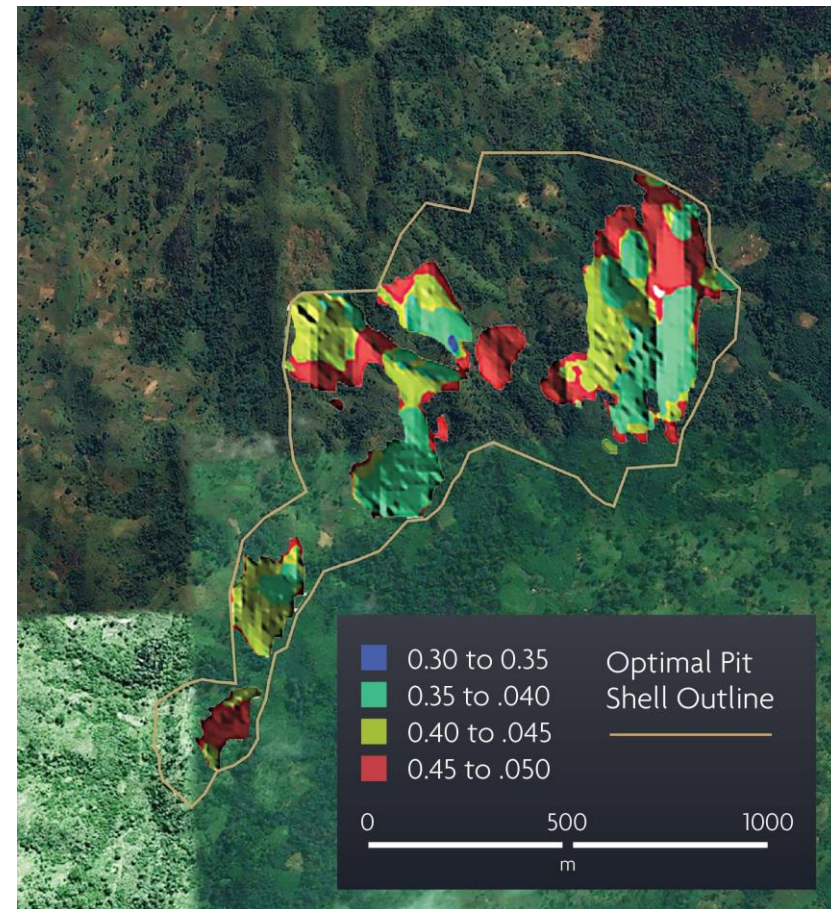
- > *Lowest quartile cash costs driven by high mined grade of 12.5% and low strip ratio of 1:1 for LOM*
- > *1.2 year payback on \$US35m capex after tax*
- > *Based on conservative basket price of \$US1,272/t*
- > *High quality graphite product confirmed*
- > *Potential to increase throughput as 32 year mine life is based on ¼ of the Resource*
- > *Rapidly growing demand for high quality graphite*



## OPTIMISED RESOURCE

- > Optimised mine plan of 13Mt @ 12.5% TGC
- > The 32-year plan represents only 25% of the overall resource

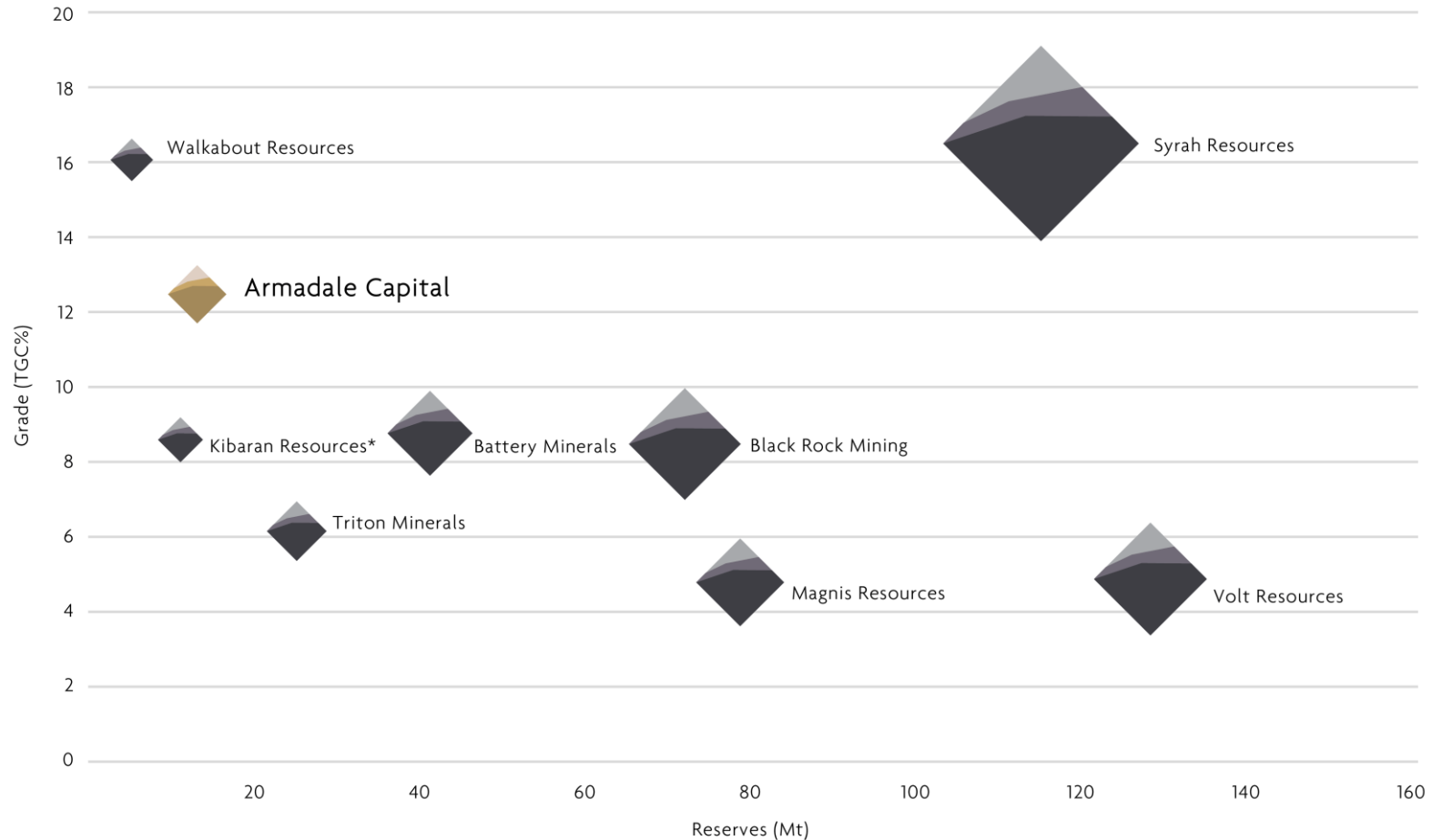
	Tonnage (Mt)	% Cut-Off TGC	Average % TGC
Inferred	12.4	3.5	9.1
Indicated	38.7	3.5	9.3
Measured	0	3.5	0
Total	51.1	3.5	9.3





# GRAPHITE PROJECT COMPARISON

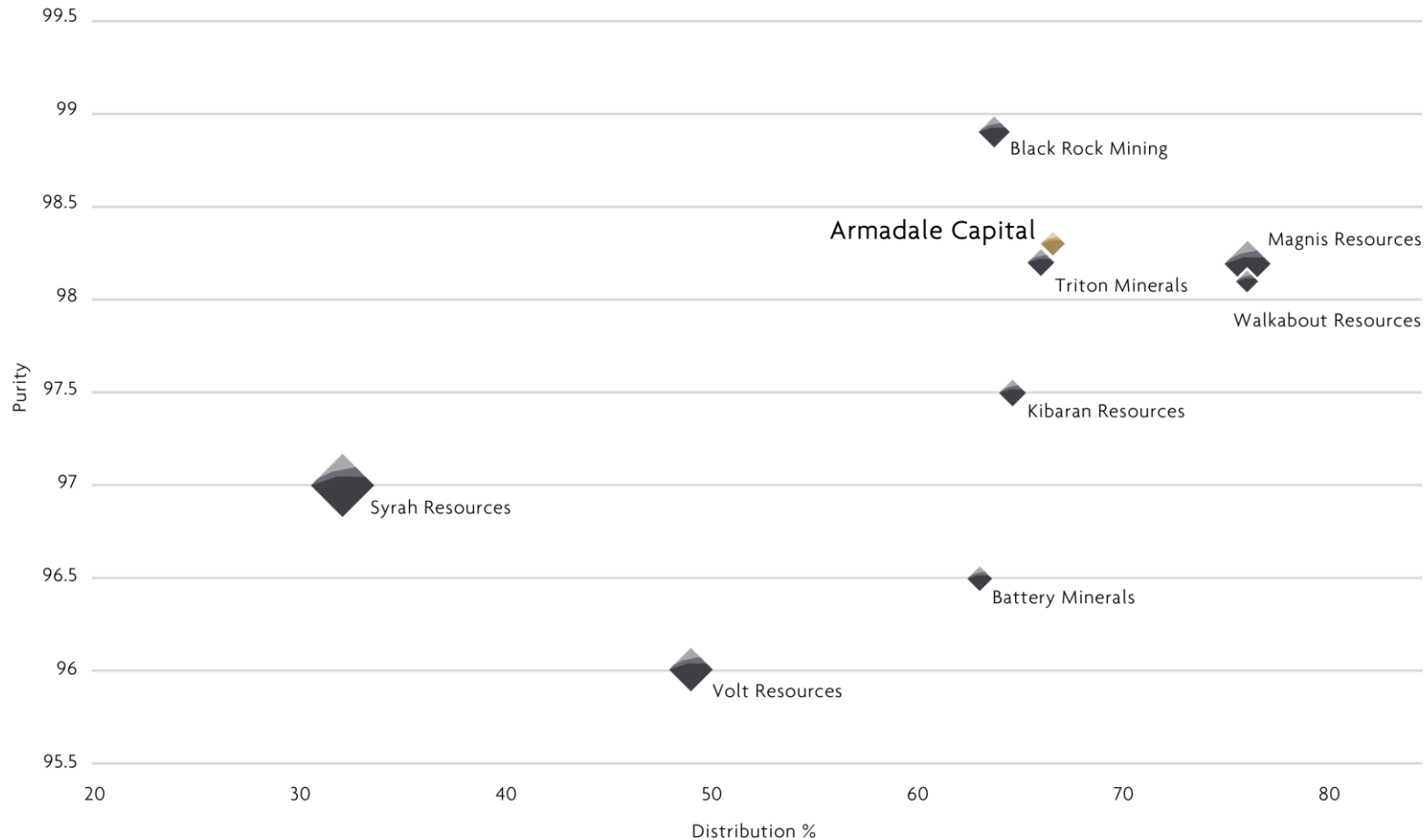
Scoping study results indicate one of the highest mined head grade graphite deposits:





# GRAPHITE PROJECT COMPARISON >150µM FLAKE SIZE VS CONCENTRATE PURITY

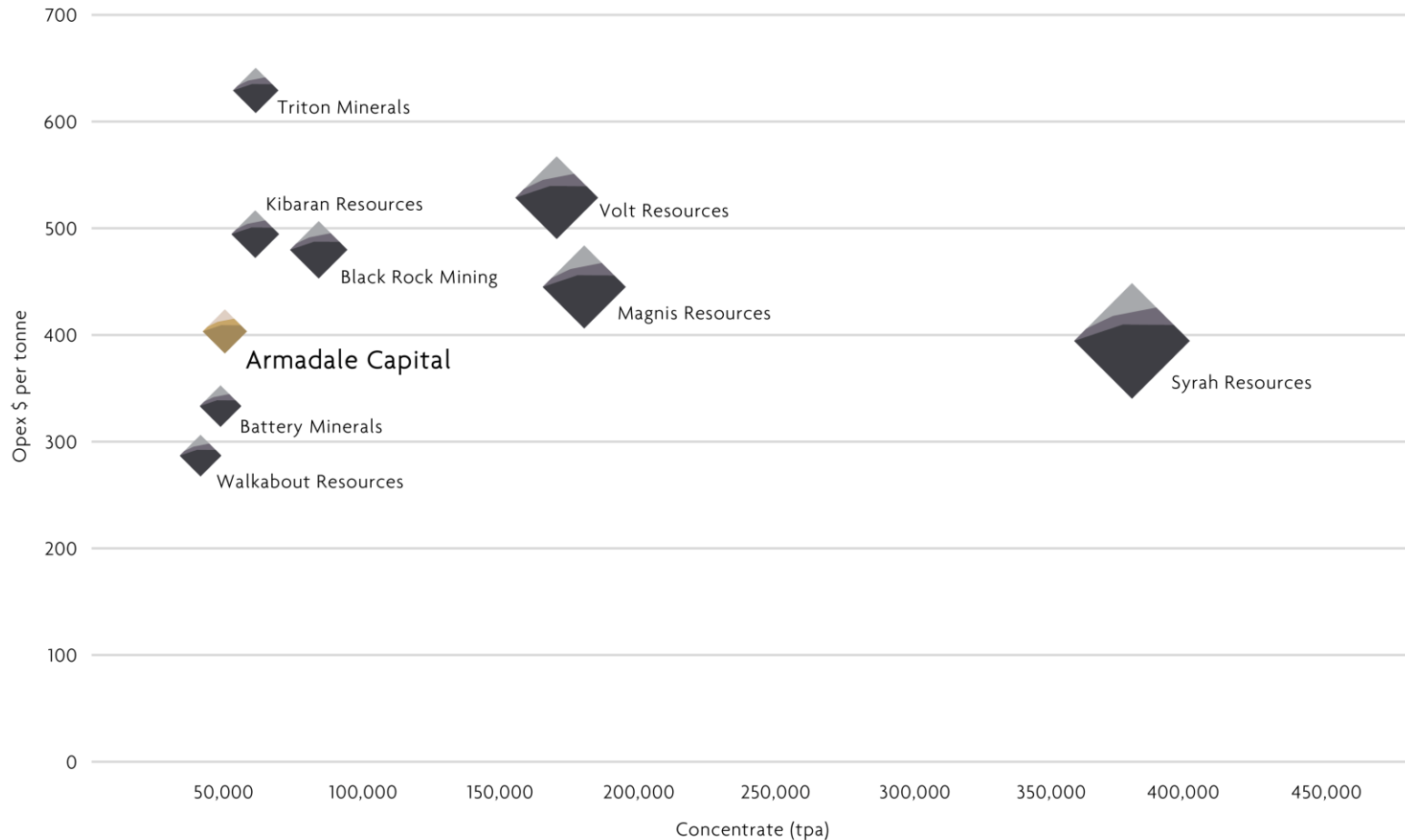
Test results show excellent purity and a high proportion of high value larger flakes:





# GRAPHITE PROJECT COMPARISON OPERATING COSTS

Scoping study results show one of the lowest operating costs:







GRAPHITE  
MARKET





## GROWING DEMAND

Demand reflects product innovation in the high tech manufacturing sector:

- > *Spherical graphite for lithium-ion battery manufacturers reflecting growing demand for electric vehicles and power storage equipment*
- > *Expandable graphite for flammable retardant building materials replacing toxic brominated products, ahead of expected regulatory requirements*
- > *Rapid capacity expansion in the lithium-ion battery sector is driving substantial price upswing with 360,000t needed to supply the battery market*
- > *Premium depends on Total Graphitic Content (TGC), purity, flake size, consistency, supply reliability and downstream application*
- > *Industry benchmark data shows increasing prices for uncoated spherical graphite in China*



## GLOBAL MARKET BOOM

Rapidly expanding graphite market driven by demand for new products:



### Lithium ion batteries

- Increasing demand for electric vehicles - could reach >5 million by 2020 (from <1 million in 2015)
- Growing need for energy storage units to enable off-peak use of power generated by solar/wind
- More than a dozen new lithium-ion giga-factories worldwide underpinning 200GWh expansion by 2020
- Requiring 400kt 'spherical graphite' needed – or 800kt feedstock if yield is 50% and all naturally sourced



Graphene for electronic, medical, chemical and industrial processes



Expandable graphite for flame-retardant building materials



Graphite paper/sheet for sealing gaskets, tapes & packing

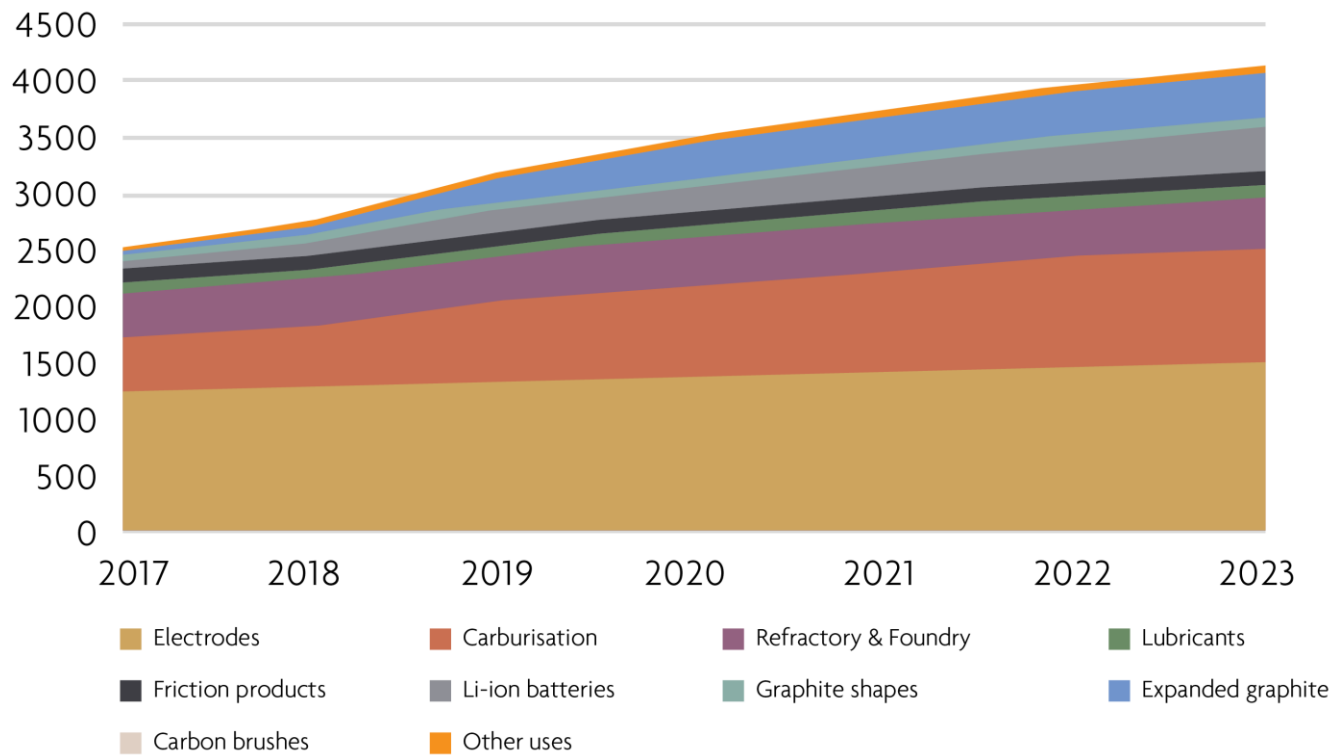


Graphite foil used in electronic products like smart phones/tablets



## PRICE DRIVERS

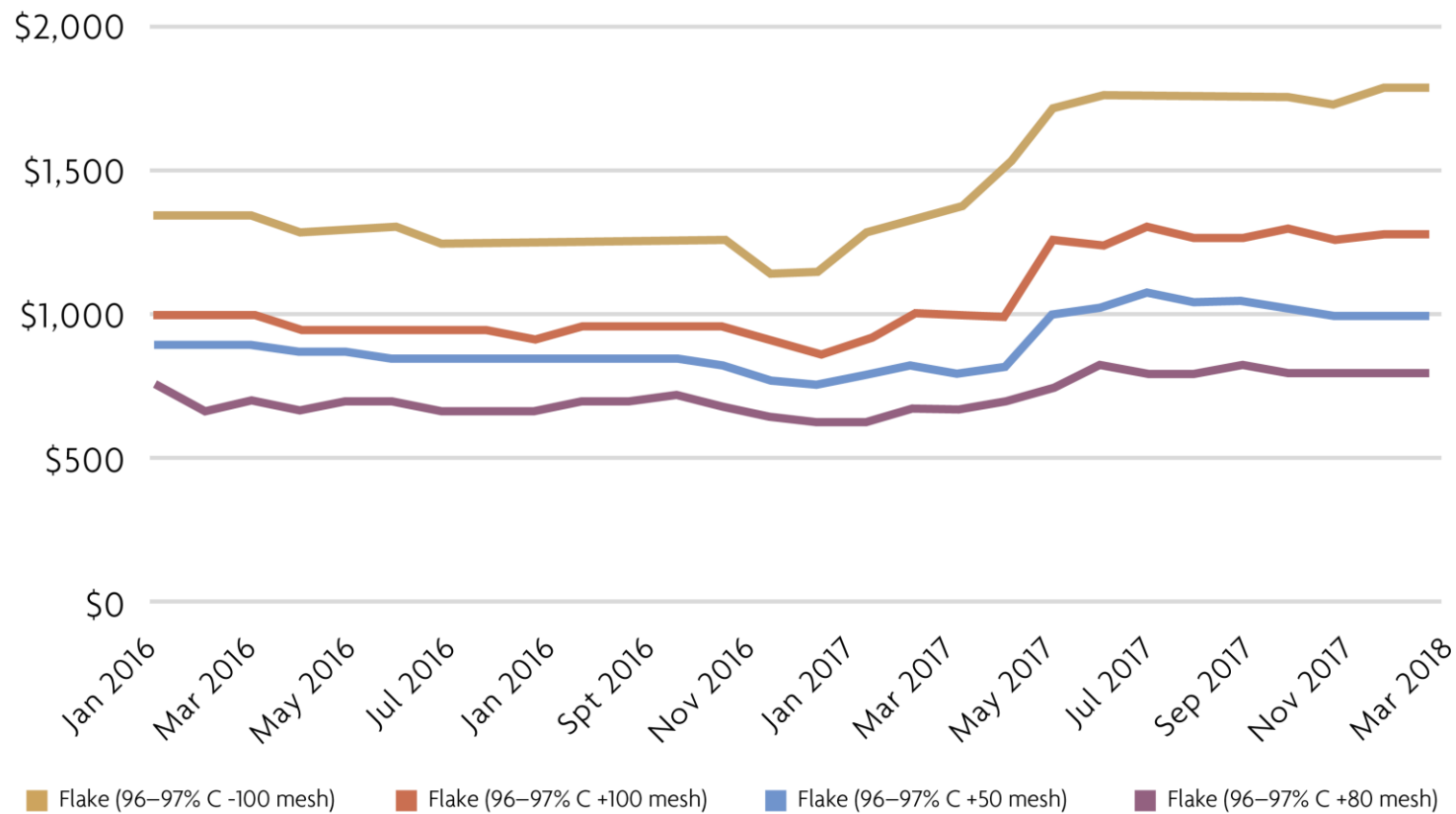
Total graphite demand driven by expandable graphite and Li-ion batteries





## GRAPHITE CONCENTRATE PRICE TRENDS

Increasing graphite prices particularly in the larger sizes





## LEGISLATIVE ENVIRONMENT

- > *Tanzania has a long mining history and is the fourth biggest gold producer in Africa*
- > *Stable democracy*
- > *English law and language*
- > *30% corporate tax rate*
- > *New mining legislation introduced in July 2017 mandates minimum 16% Government fee carried interest*
- > *3% royalty maintained for industrial minerals*
- > *Mining Commission established in April 2018 to facilitate grant, renewal and transfer of licences*



# INVESTMENT CASE





## INVESTMENT CASE

- > *Established Mahenge Liandu as a significant high-grade graphite mine*
- > *Potential to support a 400,000tpa operation over a 32-year mine life*
- > *Ability to generate meaningful value with an NPV of US\$US349m and IRR of 122%*
- > *Advancing towards a decision to mine in H2 2019*
- > *Significant further upside - 32 year mine life is based on ¼ of the Resource*



[armadalecapitalplc.com](http://armadalecapitalplc.com)

