



FALCON

Energy Materials PLC

Investor Presentation
August 2024



Forward-Looking Statement

This presentation contains forward-looking statements. Forward-looking statements involve known and unknown risks, uncertainties and assumptions and accordingly, actual results and future events could differ materially from those expressed or implied in such statements. You are hence cautioned not to place undue reliance on forward-looking statements. Forward-looking statements include words or expressions such as “provide”, “objective”, “become”, “committed”, “dedicated”, “ensures”, “growing”, “prospective”, “positive”, “through”, “contributes”, “low”, “easier”, “continue”, “excellent”, “very”, “valuable”, “expected”, “adequately”, “ongoing”, “expand”, “plan”, “expedite”, “to be”, “improve”, “complete”, “as much as”, “set to”, “rise”, “significant”, “is required”, “forecast”, and other similar words or expressions. Except for statements of historical fact relating to the Corporation, information contained or incorporated by reference herein constitutes forward-looking information, including, but not limited to, the future price of, and demand for, minerals including graphite, nickel and cobalt, as well as the Corporation’s strategy, plans or future financial or operating performance. Forward-looking information is based upon assumptions that were applied in drawing a conclusion or making a forecast or projection that are believed to be appropriate in the circumstances, including the following: the Corporation will be able to obtain additional financing on reasonable terms or at all; the Corporation will be able to recruit and retain the services of its key technical and management personnel; the Corporation’s management will not identify and pursue other business objectives in future; there will be no unexpected technological, economic, political or other disruptions that will affect supply or demand for minerals in manner that would have a material adverse effect on the Corporation; the Corporation will be able to obtain all required regulatory approvals without undue delay or subject to excessively burdensome conditions; the results of current exploration activities will be favorable; the price of minerals will remain sufficiently high and the costs of advancing the Corporation’s projects sufficiently low so as to permit it to successfully implement its business plans; and that the risks referenced above, collectively, will not have a material impact on the Corporation. While management considers these assumptions to be reasonable based on currently available information, they may prove to be incorrect.

Risk factors that could cause future results or events to differ materially from current expectations expressed or implied by the forward-looking statements include, but are not limited to, exploration results, revenue, fluctuations in the price of currencies or minerals or of local operating costs, mining industry risks, delays, political and social stability in Africa including our ability to maintain or renew permits and other risks as described in our documents filed from time to time with Canadian securities regulatory authorities. Information with regards to these and other risk factors can be found in Falcon’s MD&A for the year ended December 31st, 2023.

These forward-looking statements are dated as of March 13th, 2024 and we disclaim any obligation to update or revise these forward-looking statements, except as required by applicable law.

All amounts are in US dollars unless otherwise specified.

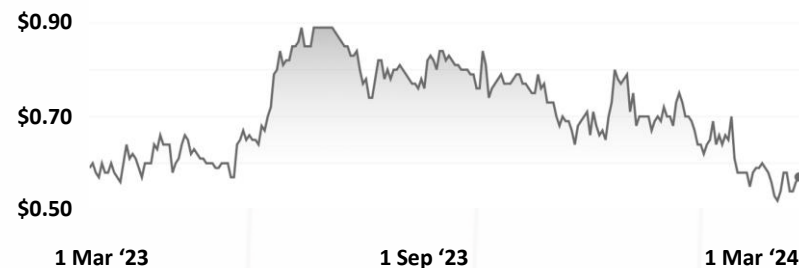
Company Highlights

Capital Structure ⁽¹⁾

Basic Shares Outstanding (M)	117.4
Options (M)⁽²⁾	8.5
RSU and DSU's (M)	2.5
Fully Diluted Shares Outstanding (M)	128.4
Market Capitalisation (C\$)	\$67M
Cash (C\$)	\$9.5M
Liabilities (C\$)	\$600K

- Note:
1. As of March 13th, 2024
 2. Average strike price of C\$0.71

Share Price Performance



Major Shareholders

La Mancha Fund	23.5%
Sama Resources	13.0%
Coris Bank	10.8%

Research Coverage

Eight Capital	C\$1.25
----------------------	---------

Falcon is Well Capitalized and Focused on Redomiciliation to UAE

Investment Highlights



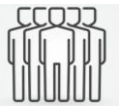
GRAPHITE

- ❖ Graphite has significant and well-established traditional usage (refractory bricks, lubricants, etc.)
- ❖ Active Anode Material (“**AAM**”) is a growth market as an essential input for lithium-ion batteries
- ❖ Offtakers seeking diversity of supply as China dominates current supply chain



NEW STRATEGY

- ❖ Management team has unique development and financing strategy
- ❖ Increased capital efficiency by doubling proposed mine production to 94ktpa graphite concentrate
- ❖ Integrated partnership business model to create a mine-to-market producer of anode material



TEAM

- ❖ Strong track record of de-risking, engineering, financing and construction of African mining projects
- ❖ La Mancha cornerstone investment validates development strategy
- ❖ Strong in-country support from Guinean authorities and local communities

LOLA PROJECT



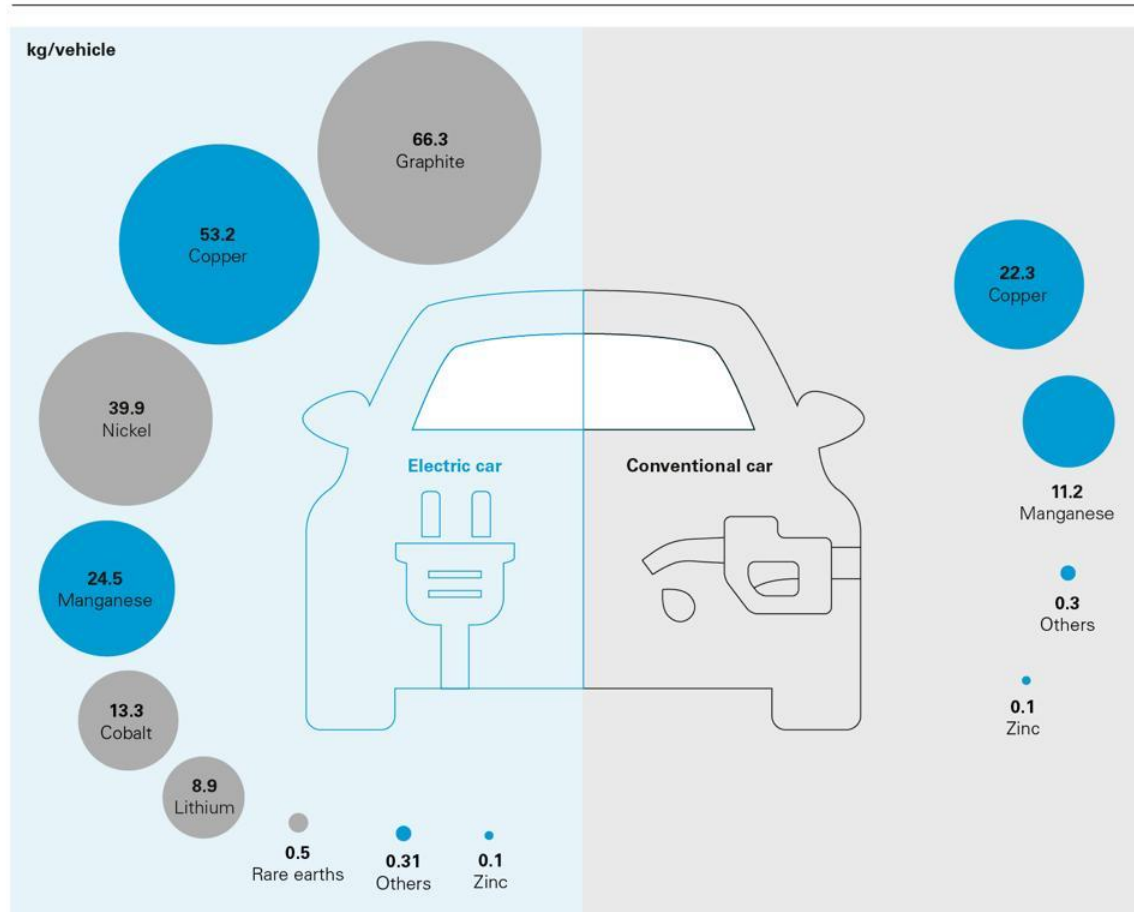
ANODE ALLIANCE

- ❖ Long-life, world-class project with low operating costs and low capital intensity
- ❖ Updated Feasibility Study complete, “turn-key” EPC proposals solicited
- ❖ Morocco identified as preferred host government for 2nd transformation (Anode Alliance)

Falcon is Well Positioned to Become a Mine-to-Market AAM Producer

The Role of Graphite

Minerals used in electric cars compared to conventional cars

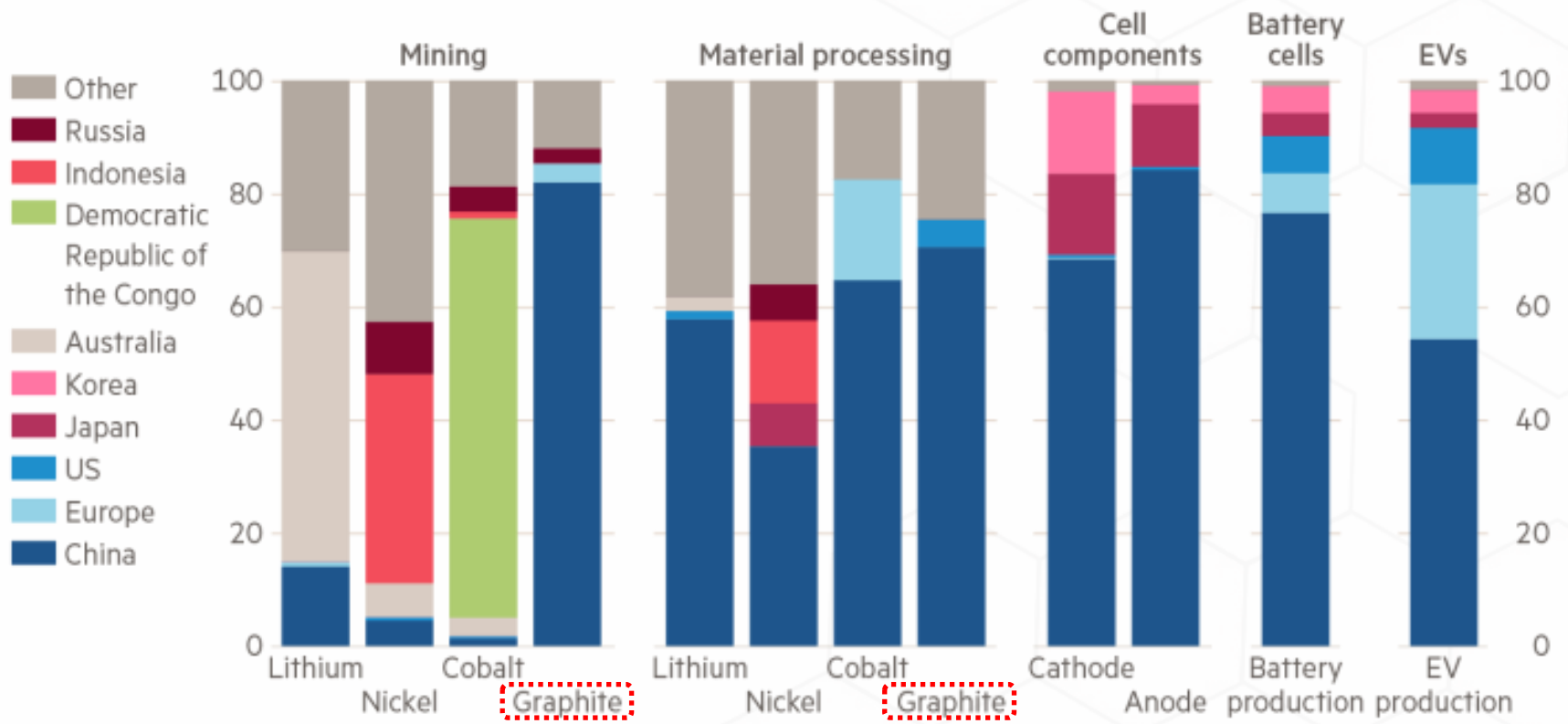


Source: IEA

The Anode is Almost Exclusively Made from Graphite

The Double Graphite Problem

Geographical distribution* of the global EV battery supply chain, 2022 (%)



Note: Percentages for mining and EV output based on actual production. All other percentages are based on production capacity

1. Refers to the country where production occurs

Source: IEA, FT


China Dominates Downstream EV Battery Supply Chain, Especially in Graphite

Decoupling vs. De-risking

Ford Motor Co [Add to myT](#)

Ford to license electric vehicle battery tech from China's CATL

Carmaker cites US Inflation Reduction Act in deciding location of \$3.5bn Michigan factory



Ford F-150 Lightning electric truck may use iron phosphate batteries licensed to CATL © Bloomberg

Clara Baskin in Chicago FEBRUARY 13 2023

Ford plans to license technology from Chinese battery group CATL to use in a \$3.5bn factory it plans to build in Michigan as it accelerates a push into electric vehicles.

Financial Times, 13 February 2023

Mercedes-Benz AG [Add to myT](#)

Mercedes-Benz chief says cutting China ties would be 'unthinkable'

Ola Killienius's comments come amid political debate over the best approach to Beijing



Mercedes-Benz AG CEO Ola Killienius. The image shows the 'greenhouse' in Berlin, the USA and China - are so close, international that disengaging from China makes no sense © Gita Shekhar/Bloomberg

Laura Pohl in Berlin APRIL 30 2023


Cutting ties with China would be "unthinkable for almost all of German industry", the chief executive of automaker Mercedes-Benz has said, as Europe's largest economy grapples with its deep reliance on Beijing.

Financial Times, 30 April 2023

Batteries [Add to myT](#)

Chinese group Putalaitai to build Europe's largest anode factory in Sweden

The \$1.3bn plant is the latest Asian-owned facility that has set up shop in the Nordic country



The Sweden start-up Northvolt will be the factory's first main customer © Reuters/Adam Osborn

Richard Hulse in Oslo, Edward White in Seoul and Gloria Li in Hong Kong MAY 4 2023

A large Chinese supplier to the battery industry is investing \$1.3bn in a Swedish factory in the latest sign of western countries deepening their reliance on the Chinese clean tech sector.

Financial Times, 4 May 2023

Volkswagen AG [Add to myT](#)

Volkswagen picks Canada for battery plant after being lured by US green incentives

Washington's subsidy rules benefit northern neighbour as German carmaker puts European plant on hold



Volkswagen AG CEO Matthias Weand. The image shows the first plant under construction at Toronto, Ontario © Reuters/BBC/Bloomberg

Patricia Nilsson in Salzburg MARCH 13 2023

Volkswagen will build its first North American battery plant in Canada, as US president Joe Biden's multibillion-dollar package of green incentives speeds up

Financial Times, 13 March 2023

Tesla Pursues Building a New US Plant With China's Dominant Battery Maker

- Automaker discussed plans recently with White House officials
- Texas under consideration for factory; location not finalized



Bloomberg, 30 March 2023

Mercedes, CATL Partner on \$7.6 Billion Hungary Battery Plant

- BMW, Stellantis, VW set to take cells from Hungary project
- New facility will be CATL's second in Europe following Germany



Bloomberg, 12 August 2023

VOLVO

Volvo Cars and Northvolt accelerate shift to electrification with new, 3,000-job battery plant in Gothenburg, Sweden

Volvo Cars and Northvolt have selected Gothenburg, Sweden to establish a new battery manufacturing plant which will commence operations in 2025, create up to 3,000 jobs and complement the planned R&D centre that both companies announced in December as part of an investment of approximately SEK 20 billion.

The two companies will jointly host a live webcast to mark the announcement at 09:00 CET today (Friday 4 February), accessible [here](#)

The new plant and close ties with Northvolt will significantly strengthen Volvo Cars' electrification strategy as the company aims to produce and sell only fully electric cars by 2030.

Construction of the plant will start in 2023 and it will produce state-of-the-art battery cells, specifically developed for use in next generation pure electric Volvo and Polestar cars.

Volvo, 4 February 2023

Auto & Transportation | Technology | Energy Storage | Clean Energy | ADAL AI's Safety

Chinese EV battery maker Gotion mulls factory in Morocco

Reuters

June 1 2023 7:07 AM GMT+1 · Updated 2 months ago

Companies

[Gotion High Tech Co Ltd](#) [Follow](#)

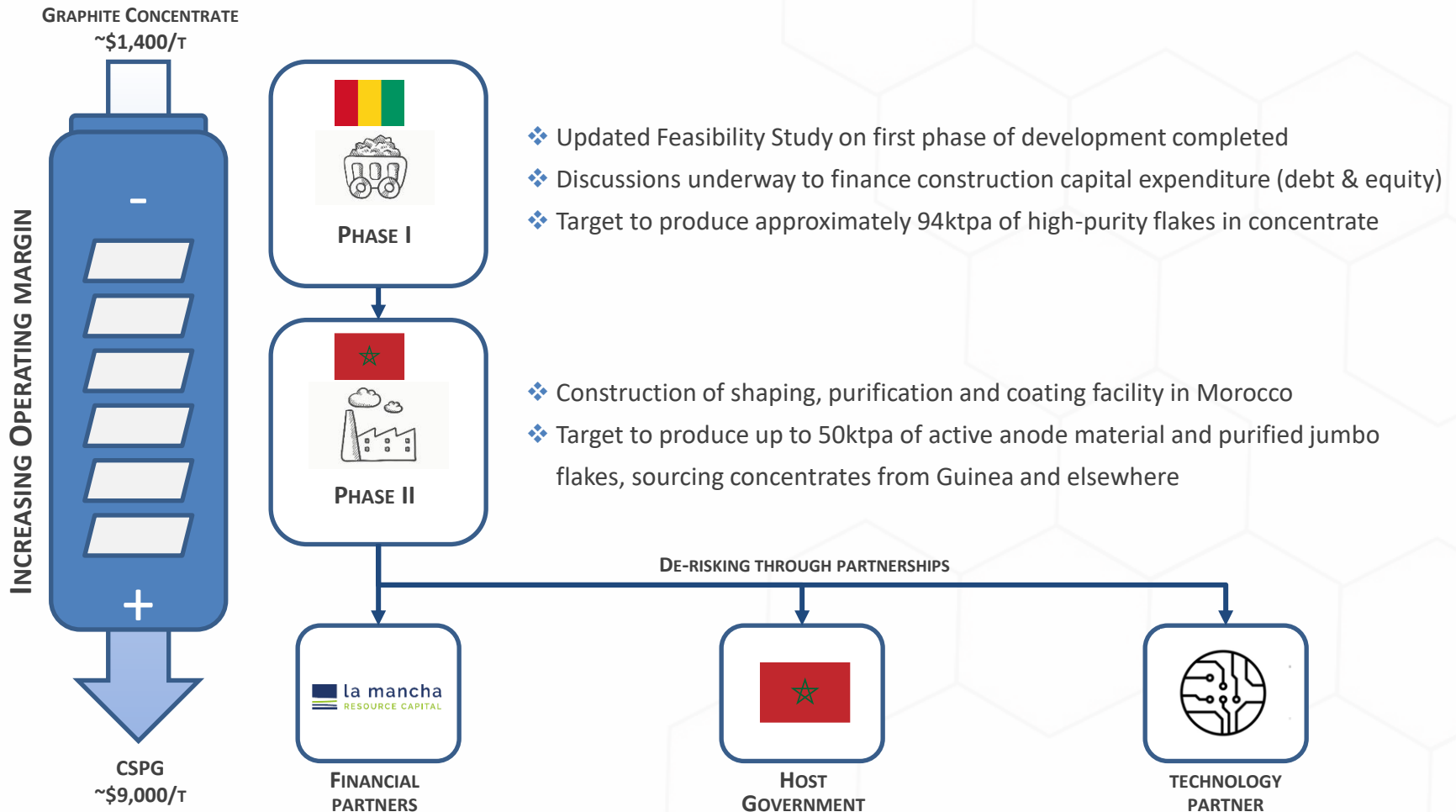
RABAT, June 1 (Reuters) — Morocco's government and China-based battery maker Gotion High Tech have agreed to look into setting up an electric vehicle battery plant in the kingdom with up to \$8.3 billion in eventual investment, Morocco's investment agency said.

The agency, ANIC, gave no details on when a final decision on the plant would go ahead but said the two sides were looking at a factory with a production capacity of 100 gigawatts.

Reuters, 1 June 2023

De-risking is the Solution to Complex Supply Chain Realignment

Vertical Integration Strategy



Source: Benchmark Mineral Intelligence (+80 mesh, 94-95%), Fastmarkets

Mine-to-Market Solution to Create Leading AAM Supplier Ex-China

“La Mancha has seen significant successes in the gold industry, and this investment in Falcon is a logical continuation of the Fund’s strategy to invest in commodities necessary to shift the energy system away from one dominated by hydrocarbons. The supply-demand dynamics for clean, future facing 2 metals and minerals could mean we are at the dawn of a new commodity supercycle.

La Mancha is pleased to support Falcon with this initial investment and, depending on the outcomes of the development programme, there is the potential for up to C\$50 million in subsequent financings to fund Falcon through to production.”



Transaction Overview ([Link](#))

- ❖ Initial investment of C\$12.5M for 19.9% interest
- ❖ Right to nominate two Directors to the Falcon Board
- ❖ Anti-dilution rights
- ❖ Subsequent acquisition from Sama Resources



A Strong Endorsement from A Sophisticated Mining Investor

Executive Team



Benoit La Salle, FCPA, FCA, MBA – Director and Chairman of the Board: Founder, President & CEO of Semafo, Current President & CEO of AYA Gold & Silver Inc. and Executive Chairman of Sama Resources Inc.



Matthieu Bos, MSc – President and Chief Executive Officer: Former Executive Vice President, Africa for Ivanhoe Mines; Previously worked for BMO Capital Markets in the Metals and Mining Division in London. Current Chairman of Sama Resources Quebec Inc.



Patrick Moryoussef, P.Eng – Chief Operating Officer: Former VP, Mining Operations of Semafo; Senior Vice-President Technical Services and Operational Performances at Endeavour Mining. Previously worked for Noranda, Falconbridge, Placer Dome.

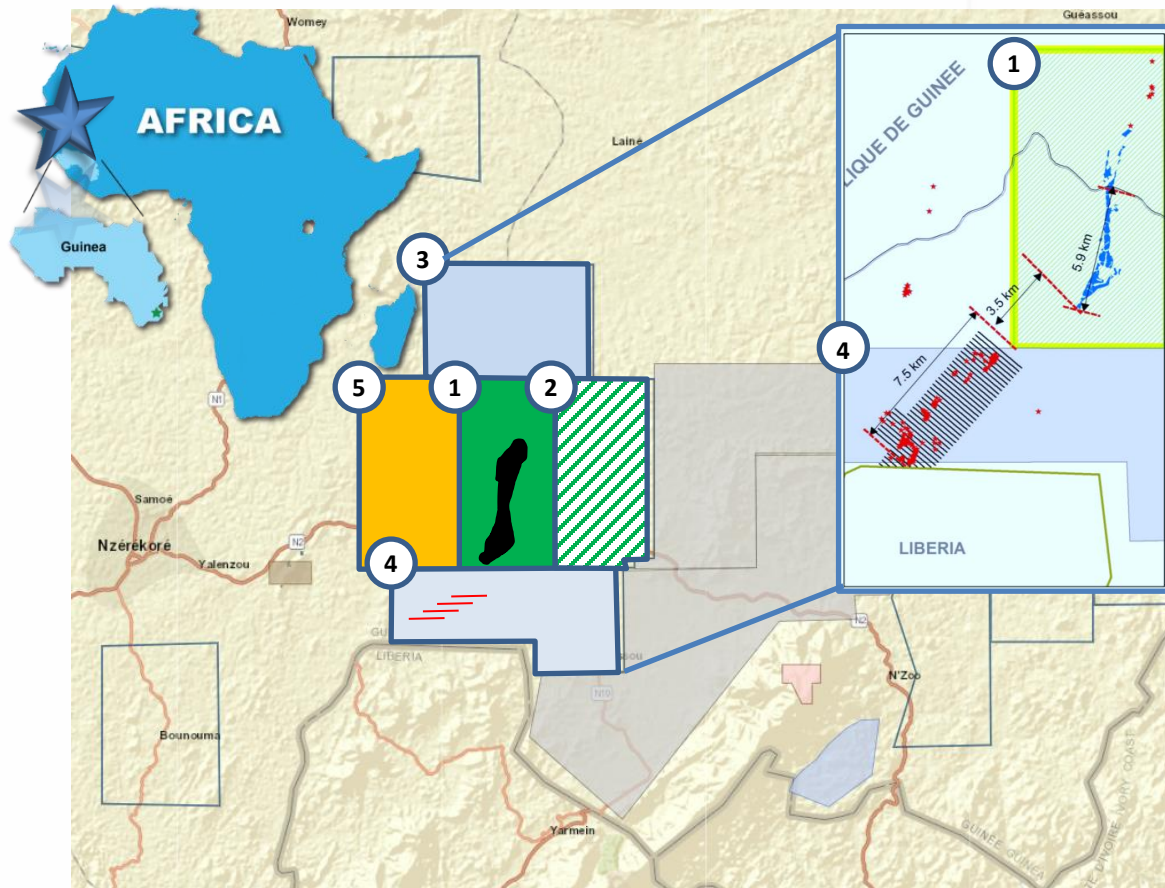


Jean-Daniel Joly, CFA – Chief Financial Officer: Former Vice-President, Finance Shared Services at BNP Paribas and head of FP&A for Averno Technologies Inc.



Dr. Marc-Antoine Audet, BSc, MSc and Ph.D (Geology), P.Geo – Founder, Director (Lead Geologist): Founder President & CEO of Sama Resources; Former Director of International Exploration at Xstrata Nickel; Director of Exploration at Falconbridge.

Lola Graphite Project Mining License



- ① Mining Permit (#22709)
Falcon Energy Materials plc
94 km²
Lola Graphite Project
- ② Exploration Permit (#23178)
Falcon Energy Materials plc
92 km²
Gogota Nickel-Cobalt Project
- ③ “Zone Stratégique”
Guinea Ministry of Mines
99 km²
- ④ “Zone Stratégique”
Guinea Ministry of Mines
100 km²
- ⑤ Exploration Permit (#22573)
AIS Int’l Guinee SAS
100 km²

 Existing Resource Base  Grab samples, pitting and trenching

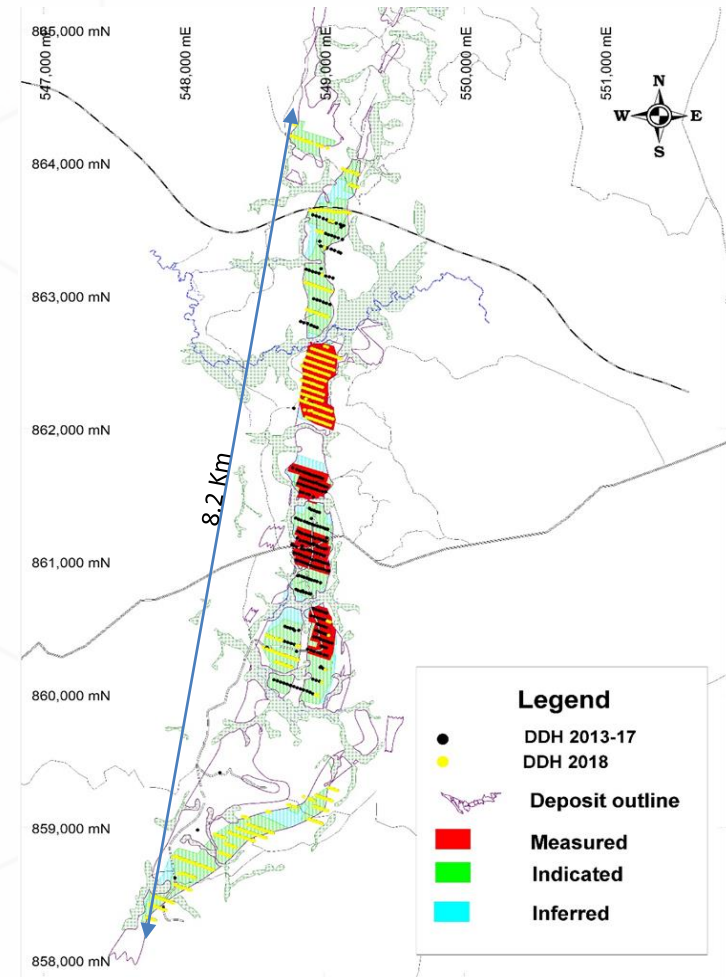
Significant Exploration Potential to the North and South

Lola Graphite Project

- ❖ Completed NI 43-101 compliant Bankable Updated Feasibility Study March 2023 by DRA
- ❖ Environmental and mining permit received from Government of Guinea
- ❖ 15 year mining permit awarded on Nov. 2019 for 94 Km²

Resource Statement (Cut-Off Cg 1.0% oxides, 1.4% FR)

Category	Tonnage (Mt)	Grade (% Cg)	Contained Cg (kt)
Oxide	7.78	4.04	314.6
Fresh Rock	0.47	4.01	19.0
Measured Resources	8.26	4.04	333.6
Oxide	25.40	3.83	972.6
Fresh Rock	20.29	4.14	839.3
Indicated Resources	45.70	3.97	1,812.0
Total M&I Resources	53.96	3.98	2,145.6
Oxide	10.97	3.52	386.4
Fresh Rock	1.33	4.23	56.1
Inferred Resources	12.30	3.60	442.5



Open along strike and at depth

1. Pit shell was developed using a 34-degree pit slope in oxide and 42-degree pit slope in fresh rock, concentrate sales price of US\$1,389/t concentrate, mining costs of US\$2.75/t oxide, US\$3.25/t fresh rock, processing costs of US\$10.25/t oxide and US\$15.18/t fresh rock processed, G&A cost of US\$1.52/t processed and transportation costs of US\$50/t concentrate, 84.2% process recovery and 95.4% concentrate grade and an assumed 100,000 tpa concentrate production.
2. Mineral resources are not mineral reserves and have no demonstrated economic viability. The estimate of mineral resources may be materially affected by mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors
3. Effective Date of Resource Estimate is February 27, 2023.
4. Please refer to the technical report filed on SEDAR for full details.

The 4 Key Resource Qualities

1&2

Size Distribution & Grade

Parameter	Head Grade		
	Overall Recovery	4.14% Cg	
	Mass Recovery	84.2%	
	Concentrate Grade	84.5%	
Flake Distribution & Grade	Distr.	Grade	
	+48 mesh	13%	97%
	+80 mesh	26%	96%
	+100 mesh	9%	94.5%
	<100 mesh	52%	94.9%

3

SP20 Purification Results

ICP Results Alkaline Roasting (July 2022)		PPM	Limit
	Al	3.4	<20
	Ca	15.1	25.0
	Cr	4.5	<5
	Cu	0.9	<5
	Fe	16.7	<30
	Ni	3.9	<5
	Si	9.8	40
	Final LOI	99.97%	
	PSD (d90:d10)	2.6	

Well below (very strict) limits, customers have own specs

4

Reserve Estimate

Category	Tonnage (Mt)	Grade (% Cg)	Contained Cg (kt)
Oxide	6.15	4.38	269.5
Fresh Rock	0.28	4.34	12.2
Proven Reserves	6.43	4.38	281.8
Oxide	20.38	4.10	835.5
Fresh Rock	14.12	4.08	576.2
Probable Reserves	34.50	4.09	1,411.1
Total Reserves	40.93	4.14	1,694.7

Feasibility Study Results

2023 FS – 94ktpa		
Capex	Direct	\$136M
	Indirect	\$25M
	Contingency	\$17M
	Owner's Cost	\$6M
	Total	\$185M
Opex (LoM Avg.)	Direct	\$545 / t
	Transport	\$40 / t
	Total	\$585 / t
Results (Post-Tax)	Avg. Selling Price	\$1,400 / t
	NPV _{8%}	\$218M
	IRR	25%
	Pay-Back	3.2 years
	Mine Life	17 years

Sensitivity Analysis						
Price		\$1,120	\$1,260	\$1,400	\$1,540	\$1,681
Sensitivity (Post-Tax)	Avg. CFO	\$36M	\$45M	\$53M	\$62M	\$71M
	NPV _{8%}	\$78M	\$148M	\$218M	\$287M	\$357M
	IRR	15%	20%	25%	29%	33%

Highlights

- ❖ Construction period of 14 months, followed by 3 months commissioning and 3 months ramp-up
- ❖ Simple, open pit mining of 2.5Mtpa of oxides and fresh rock
- ❖ Low LoM average strip ratio of 0.88
- ❖ Processing flow sheet based on conventional flotation circuit
- ❖ Export route by road through Liberia
- ❖ Concentrate divided into 4 standard-size fractions (+48 mesh, -48 + 80 mesh, -80 +100 mesh, and -100 mesh)

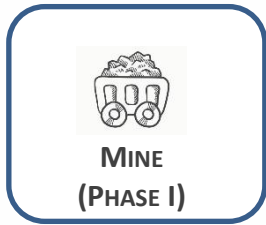
Source: 2023 Lola Feasibility Study
1. All monetary amounts in USD

Capital and Operating Costs

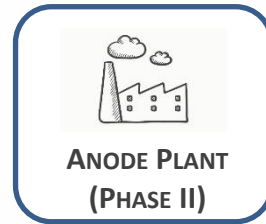
Pre-Production Capital Costs	
Mining	\$8M
Process Plant	\$62M
Tailings & Water Management	\$4M
Site Infrastructure	\$11M
Power Plant & Distribution	\$36M
Preliminary & General	\$16M
Total Direct Costs	\$136M
Indirect	\$25M
Owners Costs	\$6M
Contingency	\$17M
Total	\$185M

Operating Costs (US\$/t)	
Mining (contract mining)	\$171
Process	\$323
Site General & Administrative	\$51
Direct	\$545
Concentrate Transportation to Port	\$40
Total FOB Monrovia	\$585
Sustaining Capital Costs	\$63
All-in Sustaining Costs	\$648

Key Focus Areas & Opportunities



- ❖ Increased plant production to 100ktpa graphite concentrate (from 50ktpa in 2019 FS)
- ❖ NI 43-101 compliant Feasibility Study (“FS”) completed in March 2022
- ❖ Solicited EPC proposals for mine development, aim to reduce development capital



- ❖ Development & engineering of the flow sheet underway, develop Anode Plant FS
- ❖ Cornerstone offtake discussions
- ❖ Advance discussions to secure plant location in Morocco



- ❖ Falcon redomiciliation to United Arab Emirates completed in Q2 2024
- ❖ Financing & strategic discussions underway for mine (Phase I) and anode plant (Phase II)
- ❖ Fiscal framework discussions underway (focused on government support)



- ❖ Deepen relationships with local, regional and national authorities
- ❖ Negotiate connection of Lola Graphite Project to national power grid and export permits
- ❖ Negotiate fiscal framework with the Republic of Guinea
- ❖ Refresh Liberia three-party agreement to export concentrate



2024 Will be a Pivotal Year for Falcon



FALCON

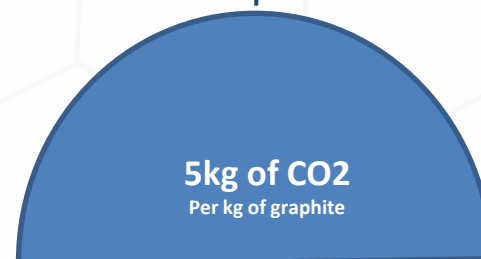
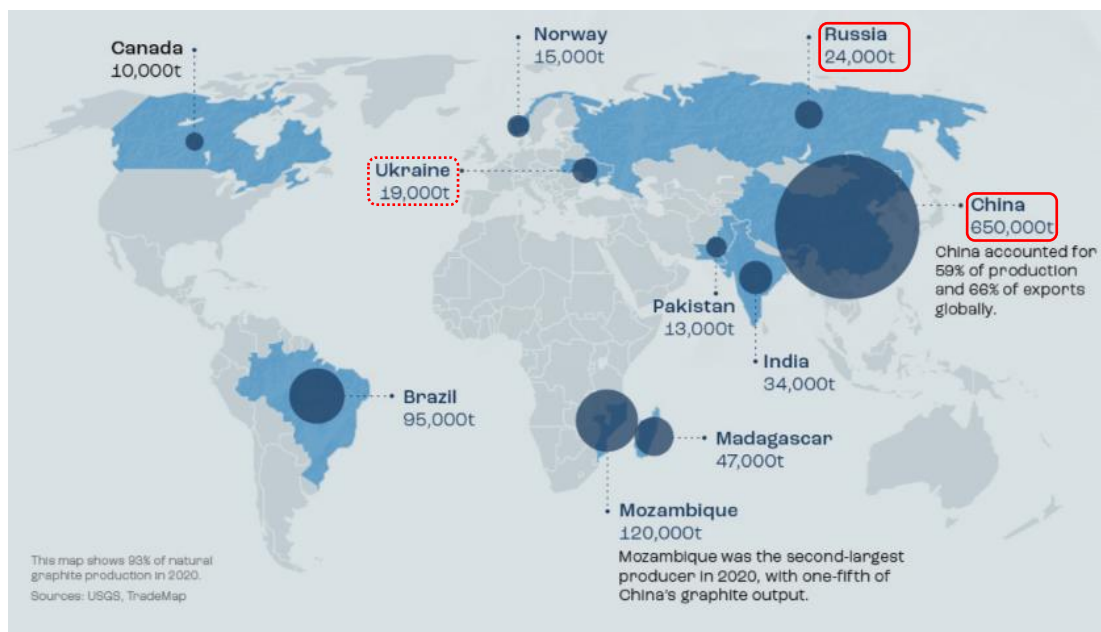
Energy Materials PLC

APPENDICES

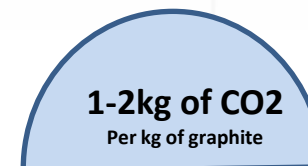


Synthetic vs. Natural Graphite


TOP 10 PRODUCERS OF NATURAL GRAPHITE (2020E, tonnes)




SYNTHETIC GRAPHITE




NATURAL GRAPHITE



SYNTHETIC GRAPHITE
Produced by high temperature treatment of petroleum coke and coal tar



NATURAL GRAPHITE
Produced by mining naturally occurring mineral deposits



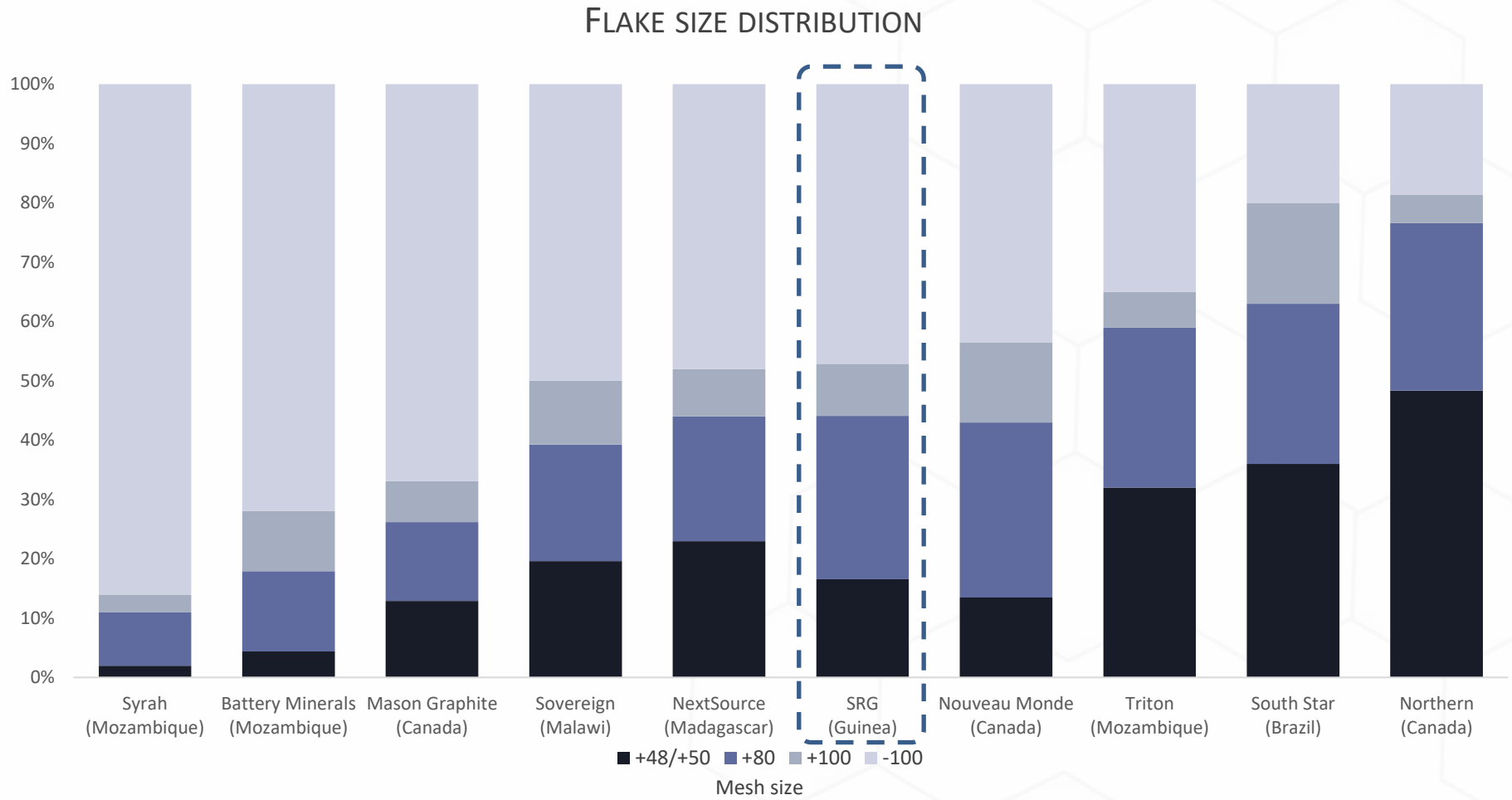
Water and air pollution due to graphite dust from factories

Environmental and health hazards from chemical usage; Sulfur oxide and nitrogen oxide emissions from synthetic graphite plants

Source: Washington Post

Focus Expected to Shift to Cost and Reduced Carbon Footprint

Flake Size Distribution Comparison



Source: Company filings



FALCON

Energy Materials PLC

**Level 7, Al Maryah Tower
Al Maryah Island, Abu Dhabi
United Arab Emirates**

TSX.V: SRG

