



GREENLAND MINING PORTFOLIO

February 2021



DISCLAIMER

This presentation is made on behalf of Alba Mineral Resources PLC (“the Company”). It does not constitute an admission document relating to the Company nor does it constitute an offer or invitation to purchase or subscribe for any securities in the Company. No reliance may be placed whatsoever on the information or opinions contained in this presentation and the completeness, accuracy or fairness thereof. No representation or warranty, express or implied, is given by or on behalf of the Company, its directors, officers, employees or contractors as to the accuracy or completeness of the information or opinions contained in this presentation, and no liability is accepted for any such information or opinions to the maximum permitted by law.

This presentation is not a recommendation regarding any decision to sell or buy securities in the Company. Persons wishing to obtain advice as to the investment merits of the Company’s securities should seek independent advice from an authorised financial services provider. This presentation is not for distribution in, nor does it constitute an offer of securities for sale in, any jurisdiction where such distribution or offer is unlawful.

All statements (other than statements of historical fact) in this presentation, including without limitation, the strategies, plans, expectations and objectives of the Company as well as all resource and reserve estimates, targets and production forecasts, are forward-looking statements and have not been verified by the Company. Many factors could cause actual results/expectations to differ materially from anticipated results/expectations. These forward-looking statements are illustrative only and are not a representation that they will be achieved as they involve risks and uncertainties, events and circumstances which may or may not occur in the future. There is no guarantee of future performance.

The information in this presentation that relates to Exploration Results has been reviewed by Mr Mark Austin. Mr Austin is a member of SACNASP (Reg. No. 400235/06), Fellow of The Geological Society and Fellow of the Geological Society of South Africa. He has a B.Sc. Honours in Geology with 38 years’ experience. Mark Austin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration targets, Exploration Results, Mineral Resources and Ore Reserves’, also known as the JORC Code. The JORC code is a national reporting organisation that is aligned with CRIRSCO. Mr Austin consents to the inclusion in this presentation of the matters based on his information in the form and context in which they appear.

ALBA'S BOARD AND MANAGEMENT

George Frangeskides	Executive Chairman	More than 25 years' experience in natural resources, corporate advisory & legal sectors in the UK, Europe, Africa and Australia
Michael Nott	Non-Executive Director	Geologist and mining engineer with over 40 years' experience
Elizabeth Henson	Non-Executive Director	12 years as a senior international tax partner for PwC; a leader in her field with an extensive contact base
Lars Brünner	Non-Executive Director	Over 25 years' experience in environmental consulting, with a focus on the Greenland mining sector
Mark Austin	COO and Senior Geologist (Mining)	37 years' experience in the exploration and mining industry, with a particular focus on gold
Feroz Sultan	Technical Director (Oil & Gas)	Petroleum geologist, 40 years' experience; including managing onshore/offshore fields
Sarah Potter	Head of Finance	Over 10 years' of industry experience (Jaguar-LR, Anglo American)

ALBA SNAPSHOT

Diversity

- Mining Assets and Oil & Gas Investments

Stability

- Operating only in Low-Risk, Resources-Friendly Jurisdictions

Production Potential

- Clogau-St David's: High-Grade Gold
- Thule Black Sands: High-Grade Ilmenite
- Amitsoq: High-Grade Graphite
- Inglefield Polymetallic: High-Value Metals
- Limerick Base Metals: World-Class Ore Field
- Horse Hill: Oil Production
- Melville Bay: JORC Resource

Market	AIM	Share Price	0.35p*
Symbol	ALBA	Market Cap	£22 mil

* At 08/02/2021



ALBA'S OPERATIONS



ALBA'S GREENLAND ASSETS: OVERVIEW

A portfolio of projects in high-value minerals

- JORC Resources
 - Thule Black Sands (“TBS”)
 - Melville Bay
- High-grade projects
 - TBS
 - Amitsoq
- Greenland authorities committed to resource extraction
 - Established mining economy: logistics, training, services
 - World-class deposits



High-grade ilmenite from Thule Black Sands

COMMODITIES IN DEMAND

GRAPHITE (AMITSOQ)

MODERN USES: Lithium-ion batteries (EV sector), fuel cells, graphene, nuclear reactors, aluminium anodes

TRADITIONAL USES: Steel manufacture, refractory bricks, brake linings, fire retardants

IRON ORE (MELVILLE BAY)

STEEL: 98% of mined iron ore used to make steel

DSO: Iron ore containing high-grade haematite or magnetite (>60% iron) is known as "direct shipping ore" or DSO and can be fed directly into blast furnaces

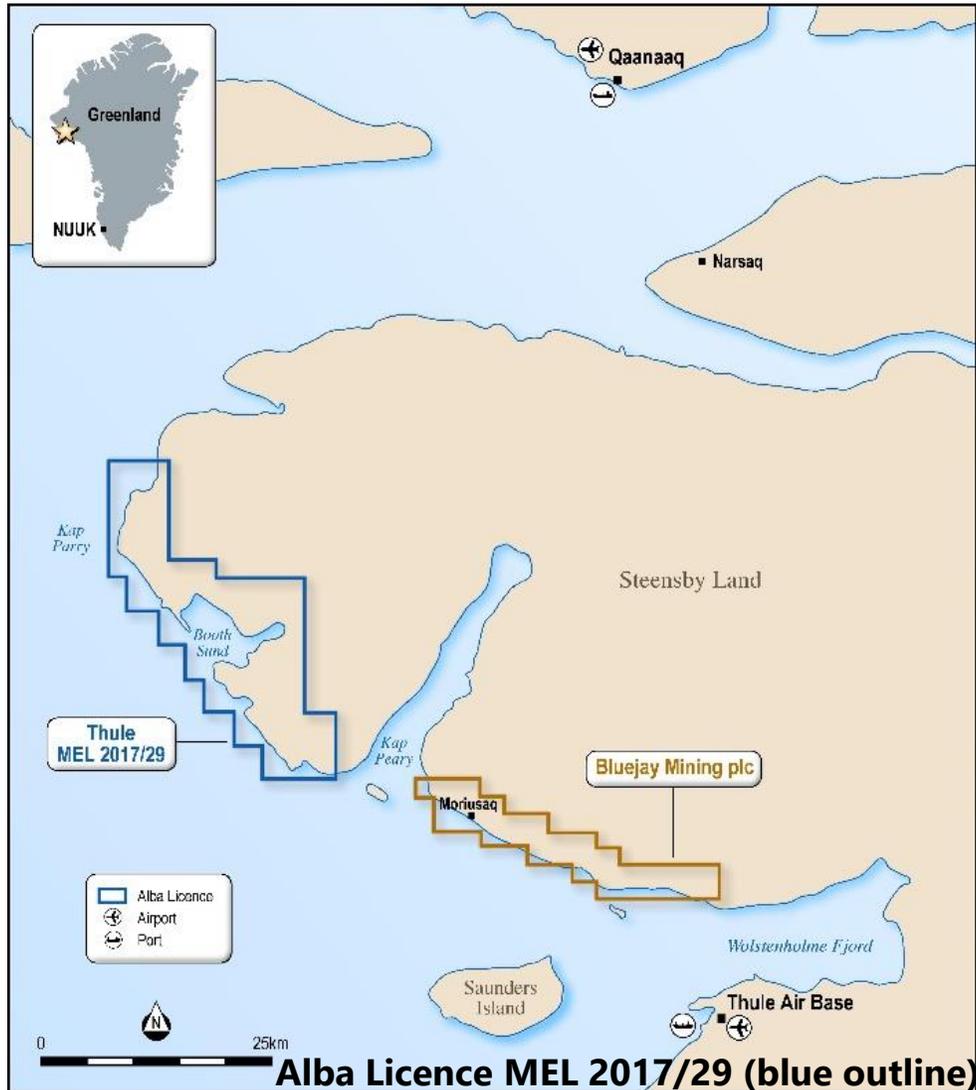
ILMENITE (TBS)

Titanium Dioxide (TiO₂): Principal feedstock for pigment production for paints, coatings & plastics

TITANIUM: Alloy in aerospace & military applications



THULE BLACK SANDS (“TBS”)



High-grade ilmenite on the coastline of north-west Greenland

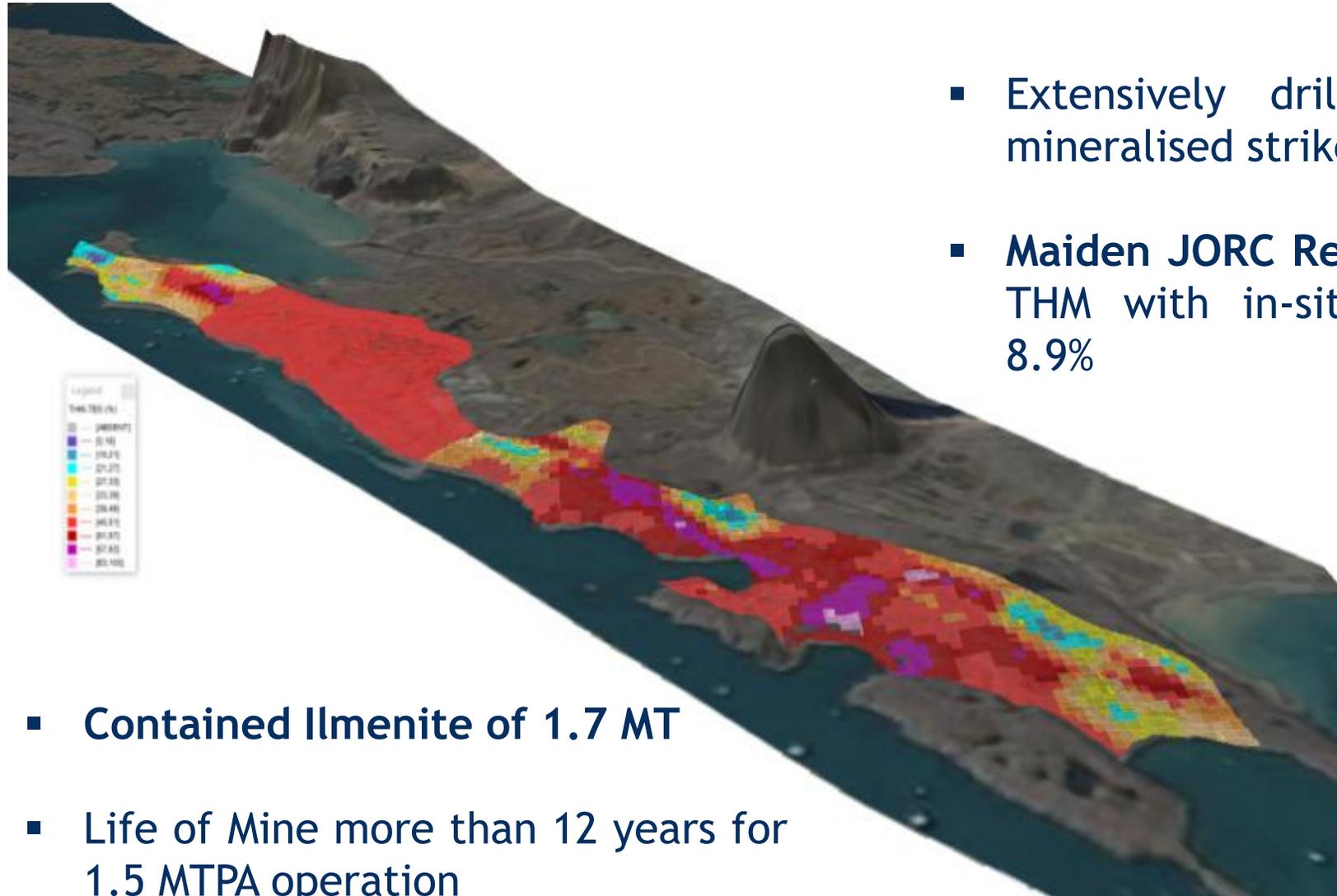
- Mineral sands rich in ilmenite, primary source of titanium dioxide
- High in-situ ilmenite and Total Heavy Mineral (THM) content
- Ilmenite ranges from 45.6% to 47.4% TiO_2 with very low contaminant levels
- Same mineralised coast as Bluejay Dundas Project (117Mt @ 6.1% ilmenite)

TBS: INFRASTRUCTURE

Existing local infrastructure to support exploration and exploitation



TBS: MAIDEN JORC RESOURCE



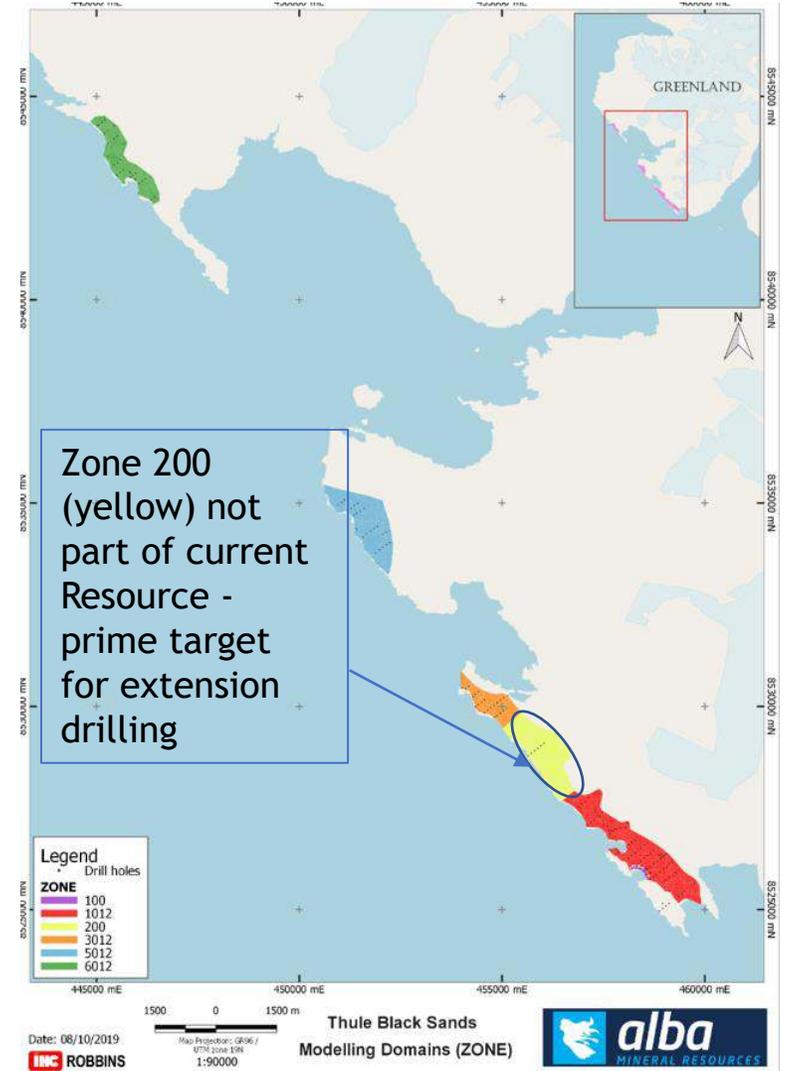
- Extensively drilled, with 10km of mineralised strike length confirmed
- Maiden JORC Resource: 19MT@ 43.6% THM with in-situ ilmenite grade of 8.9%

- Contained Ilmenite of 1.7 MT
- Life of Mine more than 12 years for 1.5 MTPA operation

*Modelled southern Resource area
(courtesy IHC Robbins)*

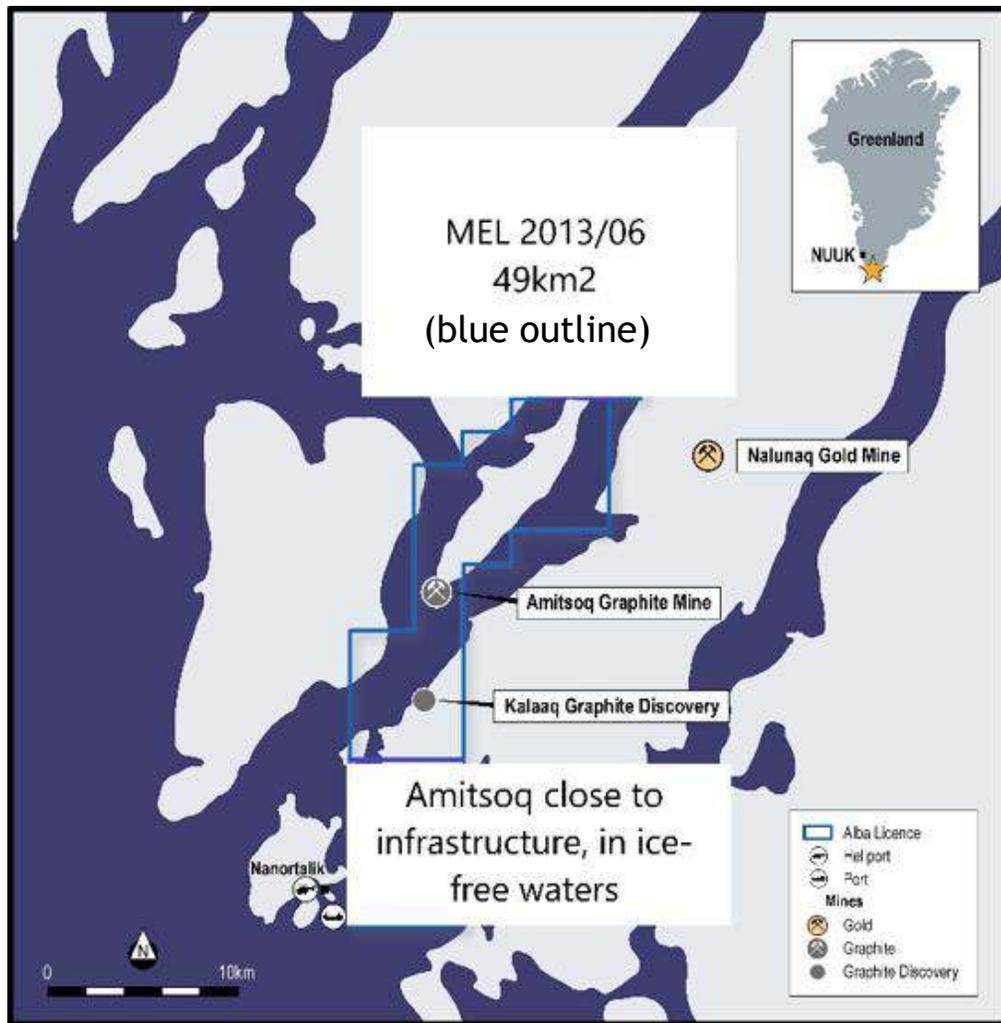
TBS: PATH TO PRODUCTION

- Increase Resource tonnes (and move Resource from inferred to indicated category) by extension drilling & drilling deeper
- Sample and drill near-offshore mineralisation
- Complete final year of environmental baseline studies
- Commission Pre-Feasibility Study



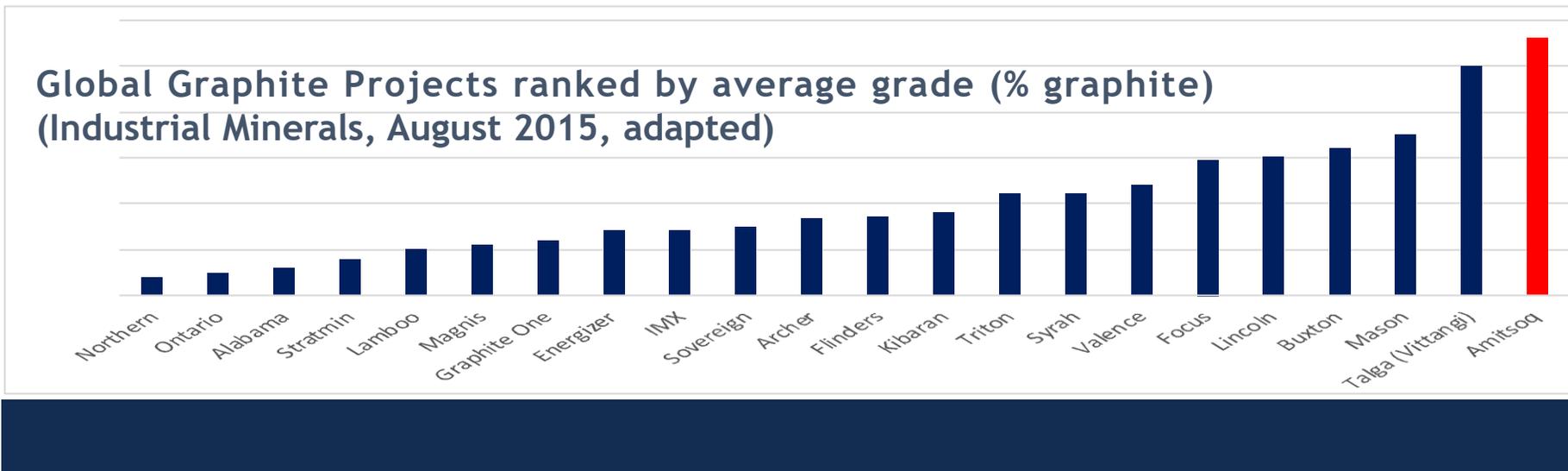
AMITSOQ: HIGH-GRADE GRAPHITE

An exceptionally high-grade graphite deposit and former mine



AMITSOQ: HIGH-GRADE GRAPHITE

- Two graphite deposits with the world's highest average graphite grades
 - (Amitsoq: 28.7%, Kalaaq: 25.6%)
- Amitsoq Mine operated until the 1920s
- Graphite beds traced over ~1 km at Amitsoq and over ~0.5 km at Kalaaq
- Metallurgical testwork has confirmed saleable concentrate (97.2% graphitic carbon)



AMITSOQ: ON TRACK FOR BATTERY GRADE GRAPHITE

- Latest round of metallurgical testwork completed by ProGraphite GmbH (Feb 2021)
 - Saleable concentrate produced (97.2% Fixed Carbon (FC))
 - Very high carbon content (one of highest globally)
 - 98% carbon for some fractions likely achievable by flotation
 - Significant advantage - no purification needed
- Particle size distribution suitable for Lithium-Ion Batteries (LIBs)
 - Standard feed material for LIBs is -195 grade (minimum 80% below -150 micron, minimum 95% FC)
 - Sale route for Amitsoq graphite
 - (1) screen concentrate at 150 micron to sell +150 micron flakes separately
 - (2) use remaining material (85% of concentrate), which is a typical -195 grade, for spherical graphite production for LIBs
- Next steps
 - Confirm impurities can be lowered to typical values for LIB

AMITSOQ: ON TRACK FOR BATTERY GRADE GRAPHITE

Summary of Flotation and Advanced Test Work of Amitsoq Flake Graphite (ProGraphite GmbH, Feb 2020)

Measurement	Result	Comment
Fixed Carbon	25.97%	One of highest grade graphite ores globally
Concentrate Grade	97.2%	+96% considered saleable
Carbon Distribution	Carbon content very homogenous across all size fractions	Significant benefit = all fractions saleable with high carbon content (so higher prices)
Particle Size Distribution	16.5% in >150 micron size category	In line with some Chinese or African deposits
Volatiles	Between 0.38% and 0.71%	Volatiles in Amitsoq graphite concentrate low which is a positive
Bulk Density	480 g/l	Medium value, comparable with Chinese graphite
Specific Surface Analysis (SSA)	7.5 m ² /g	Result shows quite high BET value, meaning high absorptivity of the material
Thermogravimetric Analysis (TGA)	Very stable at temperatures up to over 400°C	Very positive. When temp. further increased, oxidation rate quite high
XRF Analysis (XRF)	Main impurity = silicon. Also iron, sulphur, zinc and potassium	Presence of silicon typical for flake graphite
X-Ray Diffraction (XRD)	0.98	Good flake graphite

EV SECTOR INCREASINGLY UNDERPINNED BY STATE REGULATION



¹The 12 cities that signed the Fossil-Fuel-Free Street Declaration are Auckland, Barcelona, Cape Town, Copenhagen, London, Los Angeles, Mexico City, Milan, Paris, Quito, Seattle, and Vancouver.

Source: C40; China Industry and Information Technology Ministry; *Daily Mail*; Electrek; *Guardian*; *Independent*; International Energy Agency; Harvey; *Il Sole 24 Ore*; London Government; Mairie de Paris; *Spiegel*; Sicilia; *Telegraph*; *Times of India*

McKinsey
& Company

GRAPHITE: EV SECTOR DEMAND

- Benchmark Mineral Intelligence expects double-digit growth in demand from 2022 onwards for LIBs
- Alongside demand from energy storage applications, battery industry due to become largest sector of demand for graphite supply chain – increasing to around 15 times today's demand by 2030
- Demand from lithium-ion market alone expected to rise from nearly 200,000 tpa currently to nearly 3 million tpa by 2030 (source: Benchmark Mineral Intelligence)
- Roskill is also expecting total graphite demand to grow significantly (5-6 % pa over next 10 years).



GRAPHITE: CRITICAL COMPONENT IN LIBs

- Graphite is a key component in a Lithium Ion Battery (LIB) by weight
- Far more so, in fact, than Lithium!
- Spherical graphite used in LIBs commands significant premium over flake graphite prices:
 - Spherical graphite prices for fob China material (99.95% C, 15 microns) were between US\$2,200-2,350/t in July 2020 (source: Fastmarkets IM)

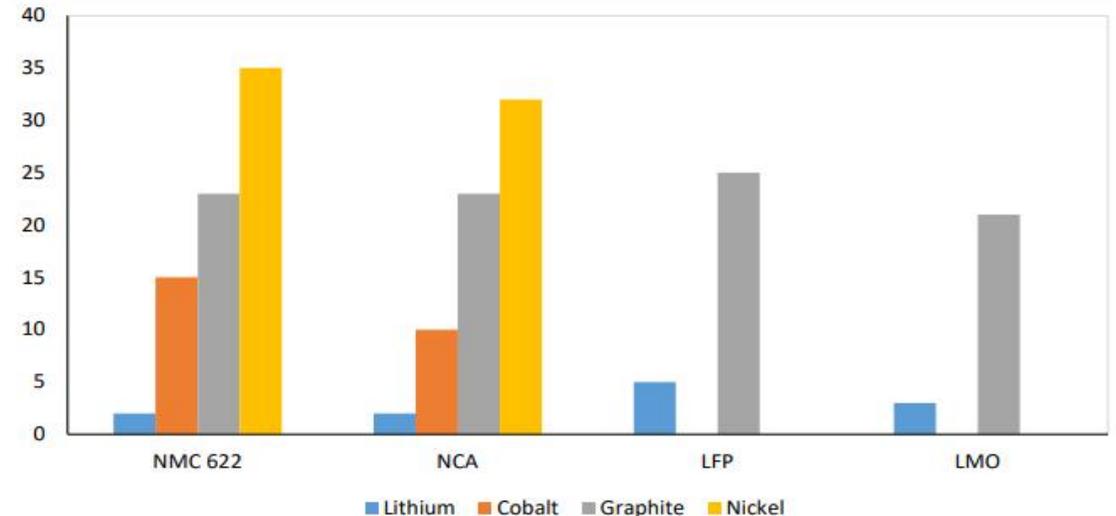
Lithium-Ion Battery Materials for Electric Vehicles and their Global Value Chains

Table 1 LIB types

Name	Chemical term	Short name	EV models and other uses
Lithium Manganese Oxide	LiMn_2O_4	LMO or Li-manganese	EVs (e.g. Nissan Leaf), power tools, medical devices, electric powertrains
Lithium Nickel Manganese Cobalt Oxide	LiNiMnCoO_2	NMC	EVs (e.g. Chevy Bolt, BMW i3), E-bikes, medical devices, other
Lithium Iron Phosphate	LiFePO_4	LFP or Li-Phosphate	Energy storage
Lithium Nickel Cobalt Aluminum Oxide	LiNiCoAlO_2	NCA or Li-aluminum	EVs (e.g. Tesla), other

Sources: Battery University, n.d., "BU-205: Types of Lithium-Ion."; Battery University, n.d., "BU-306: What is the Function of the Separator?"; Battery University, n.d., "BU-307: How Does Electrolyte Work?"

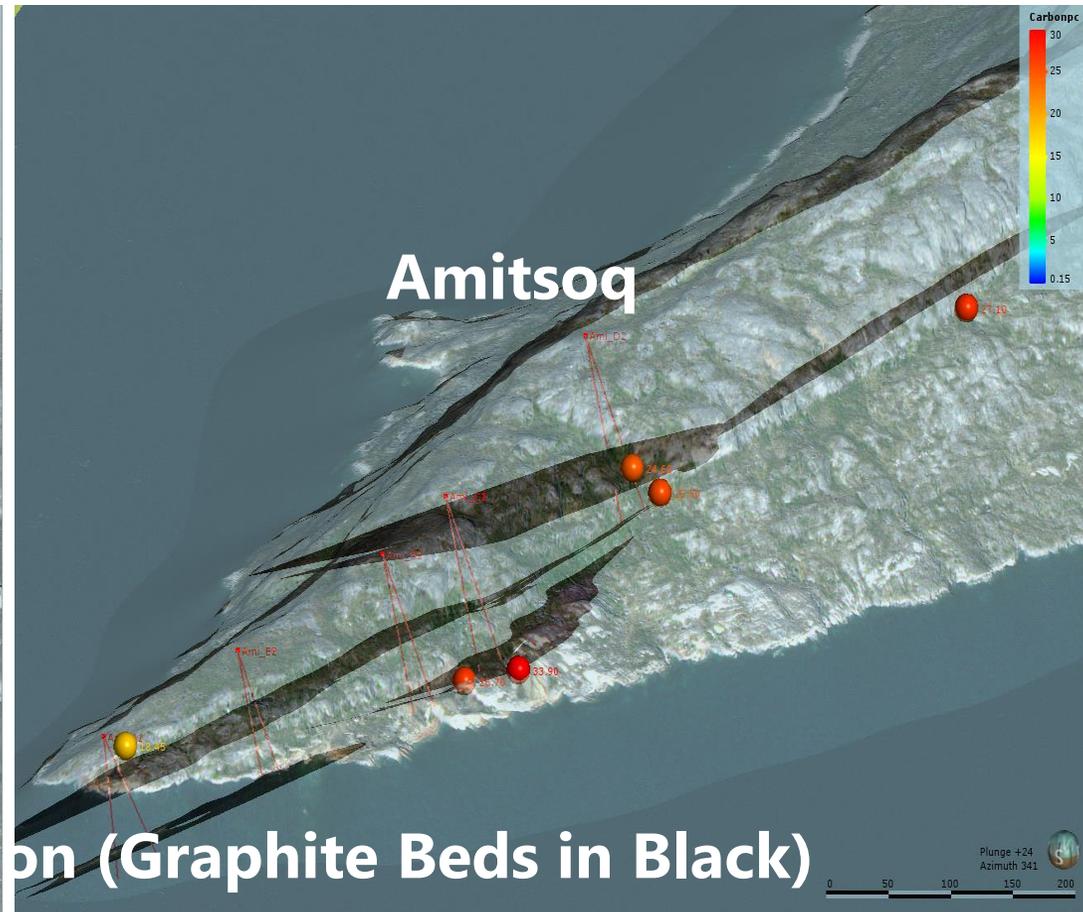
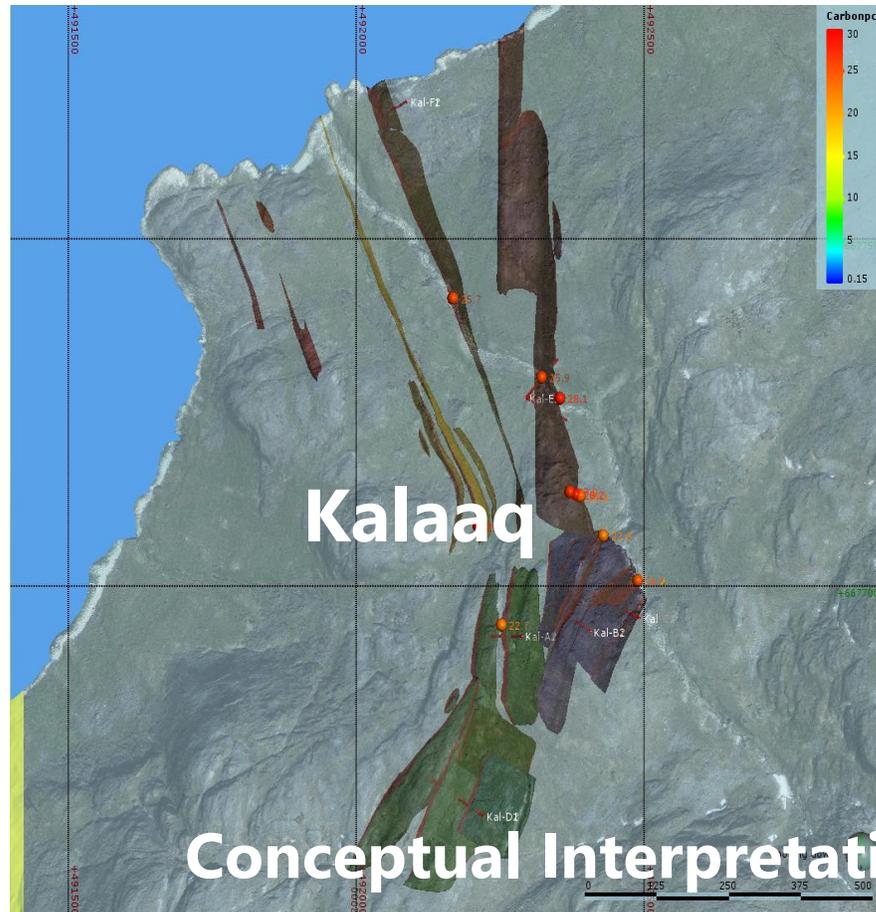
Figure 4 Key material share of common LIB compositions, by weight



Source: Argonne National Laboratory, 2018 and staff calculations.

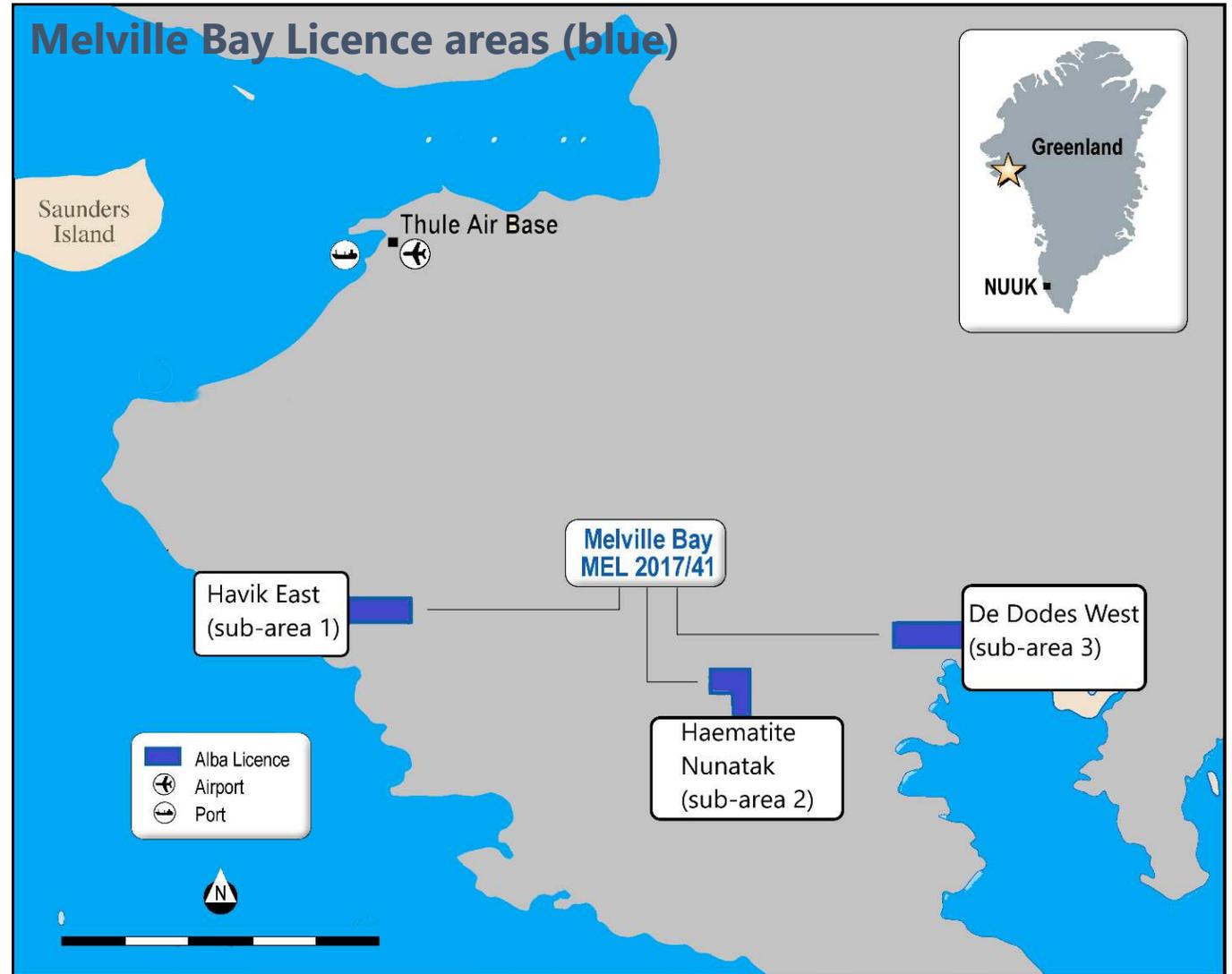
AMITSOQ: DEVELOPMENT PLANS

- Structural and Resource drilling being planned for summer 2021
- Scoping level Mining Study & Technical Economic Model
- Underground mine scanning



MELVILLE BAY IRON ORE

- N-W Greenland
- Close to town & airport of Qaanaaq and Thule airbase and port
- JORC Inferred Resource of 67 Mt @ 31.4% Fe
- On same geological belt as ArcelorMittal Mary River Iron Mine (>350Mt at 64% Fe)

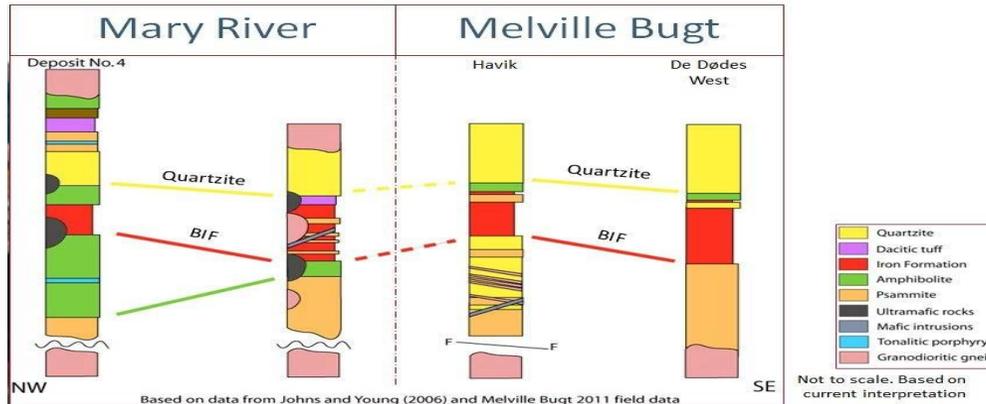


MELVILLE BAY ORE BENEFICIATES TO 70%

- ❑ Representative selection of samples from Havik East Deposit submitted for Davis Tube Recovery (DTR) analysis
- ❑ Results confirm high-grade concentrate can be produced through conventional magnetic separation
- ❑ Concentrate produced grading approximately 70% Fe, 2.0% SiO₂, 0.3% Al₂O₃ and 0.01% P

Specimen of coarse magnetite from Havik East

MARY RIVER IRON ORE MINE: ANALOGY



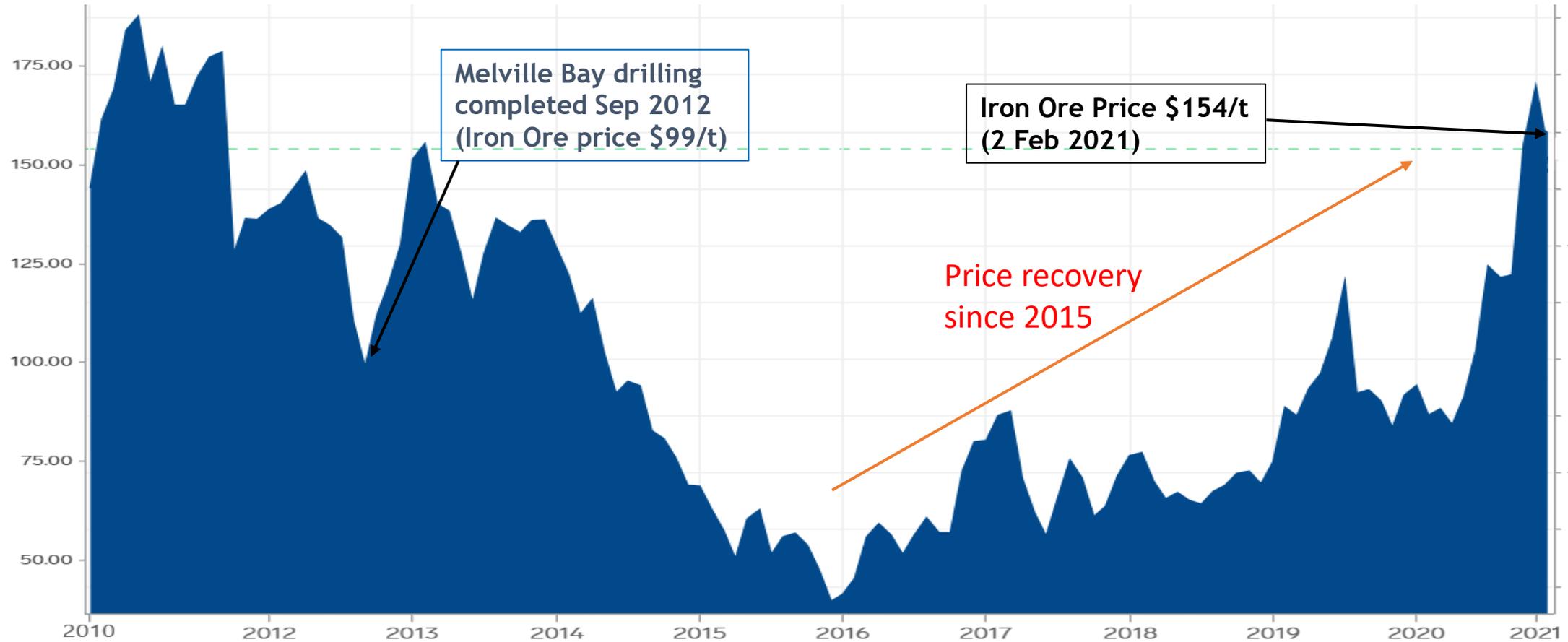
- Mary River Iron Ore Mine, northern Canada
- Ownership: ArcelorMittal and Nunavut Iron Ore
- 9 high-grade DSO iron ore deposits
- Crushing & screening on site, then shipped directly to European markets
- Genesis of Mary River important for finding DSO material at Melville Bay
- Mining commenced 2015 from Deposit No.1 (>350MT @64% Fe)
- 4 MTPA shipped to markets in Germany, UK and Japan



(Loading iron ore at Milne Inlet Port)

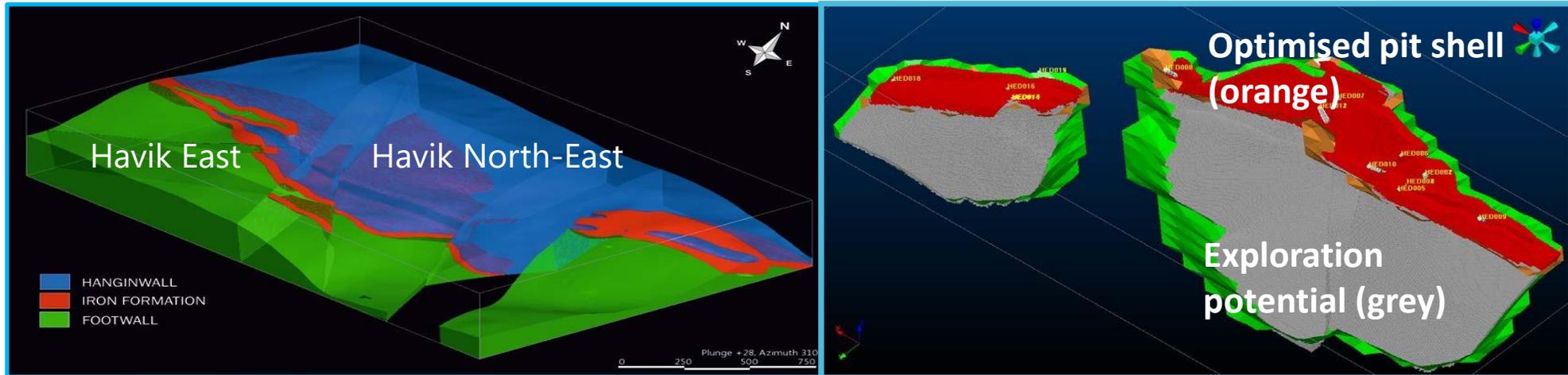
IRON ORE PRICE RECOVERY

Iron ore price now 50% higher than during Melville Bay Resource Drilling



Source: <https://markets.businessinsider.com/commodities/iron-ore-price>

MELVILLE BAY: TONNAGE & DSO UPSIDE

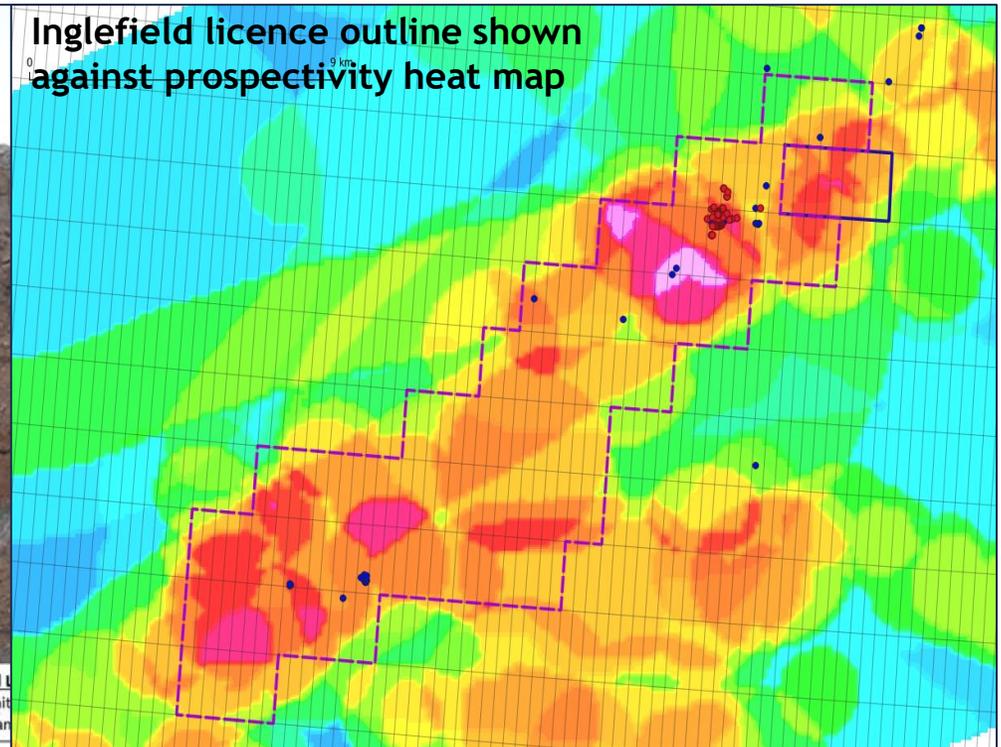
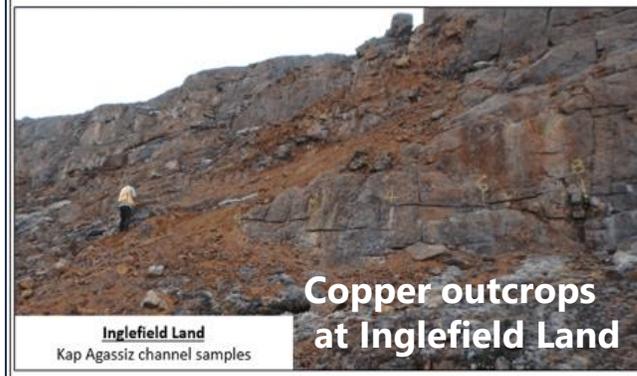


- Potential for additional 100-200 Mt below modelled pit shell due to interpreted down dip extent of mineralisation (see top right)
- Deep drilling required to target BIF mineralisation at depth, using existing drill lines
- Historic Exploration Target (158-474 Mt @27-47% Fe) for non-Resource areas
- DSO grades found in eastern targets:
 - 69.4% Fe from outcrop at Haematite Nunatak and De Dødes Fjord
 - 68.4% Fe from outcrop at De Dødes Fjord
 - Drilling at Haematite Nunatak (48.7m @39.61% Fe with 0.6m @68.2% Fe)

INGLEFIELD: MULTI-ELEMENT POTENTIAL

Targeting large-scale, IOCG style deposits

- N-W Greenland
- High-value commodities: copper, copper, gold, vanadium, nickel
- Copper-Zinc VMS and IOCG potential



GREENLAND VALUE DRIVERS

Near-term growth to be driven by:

- Drilling Maiden JORC Resource at Amitsoq
- Commissioning PEA for Melville Bay
- Drilling to increase JORC Resource at TBS
- Progressing to PEA/PFS at Amitsoq and TBS
- Offtake partners for Amitsoq and TBS
- Firming up on IOCG potential at Inglefield

CONTACT US

Alba Mineral Resources plc

Tel: +44 (0) 20 3950 0725

Email: info@albamineralresources.com

Web: www.albamineralresources.com

Twitter: @AlbaMinerals