

Sustainable, Low-Cost Critical Materials for America

Corporate Presentation

November 2021

Disclaimers

Forward Looking Statements

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, and “guidance”, or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance, and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

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Competent Persons Statements

The information in this announcement that relates to Exploration Results and Mineral Resources is extracted from Hyperion’s ASX Announcement dated October 6, 2021 (“Original ASX Announcement”) which is available to view at Hyperion’s website at www.hyperionmetals.us.

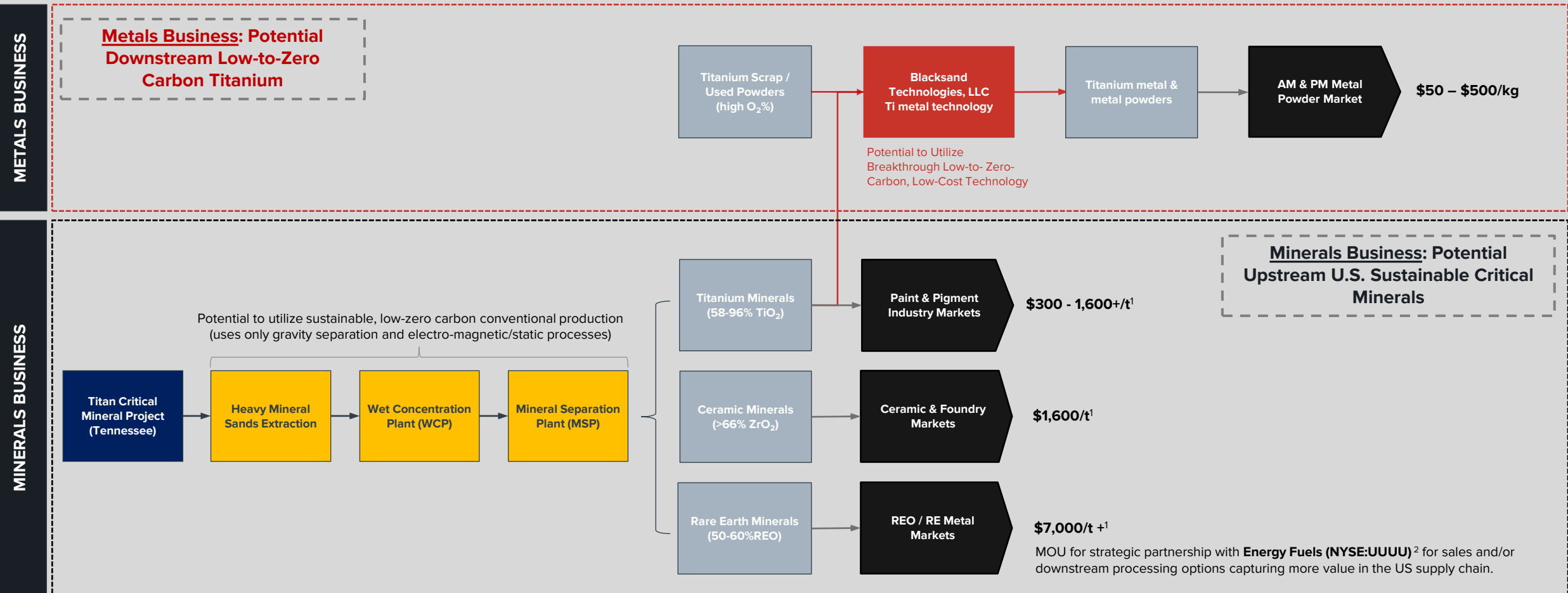
The Company confirms that a) it is not aware of any new information or data that materially affects the information included in the Original ASX Announcement; b) all material assumptions included in the Original ASX Announcement continue to apply and have not materially changed; and c) the form and context in which the relevant Competent Persons’ findings are presented in this report have not been materially changed from the Original ASX Announcement.



OUR MISSION IS TO BE THE LEADING DEVELOPER OF LOW-TO-ZERO CARBON, SUSTAINABLE AND LOW-COST CRITICAL MATERIALS FOR THE U.S.



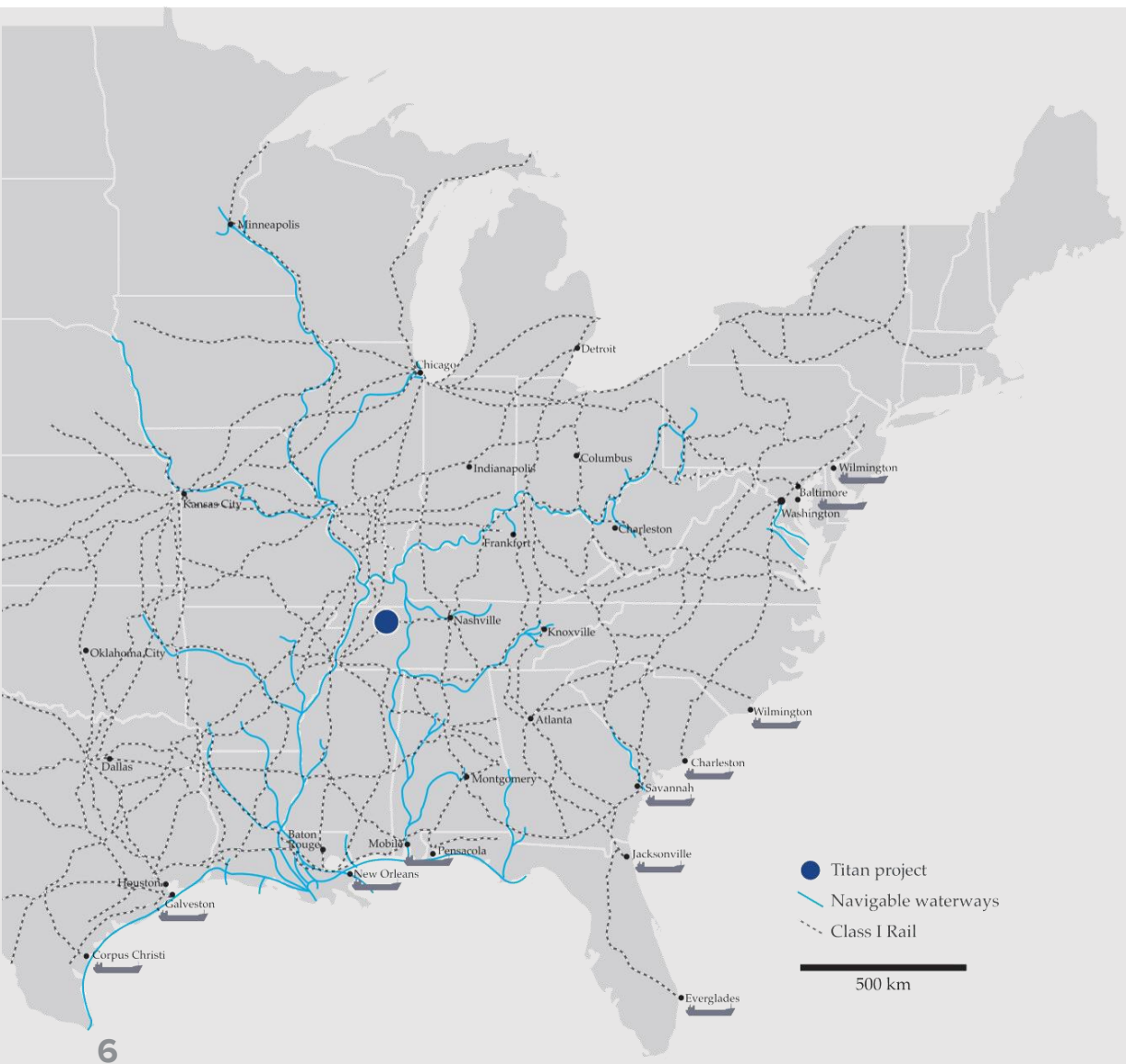
TWO CORE BUSINESSES: POTENTIAL TO COMBINE BREAKTHROUGH TECHNOLOGY FOR METAL PRODUCTION WITH U.S. CRITICAL MINERALS SUPPLY





MINERALS BUSINESS: OUR **TITAN PROJECT** PROVIDES THE BUILDING BLOCKS TO SOLVING TWO OF THE MOST CRITICAL MATERIAL SUPPLY CHAINS IN THE U.S. TODAY – RARE EARTHS & TITANIUM

WORLD CLASS LOCATION WITH ACCESS TO INFRASTRUCTURE REQUIRED FOR LOW-COST OPERATIONS



Power & Gas
High-capacity transmission lines near project



Freight Rail
Norfolk Southern mainline running through Camden, TN



Major Highways
I-40 10 miles south of Camden, TN

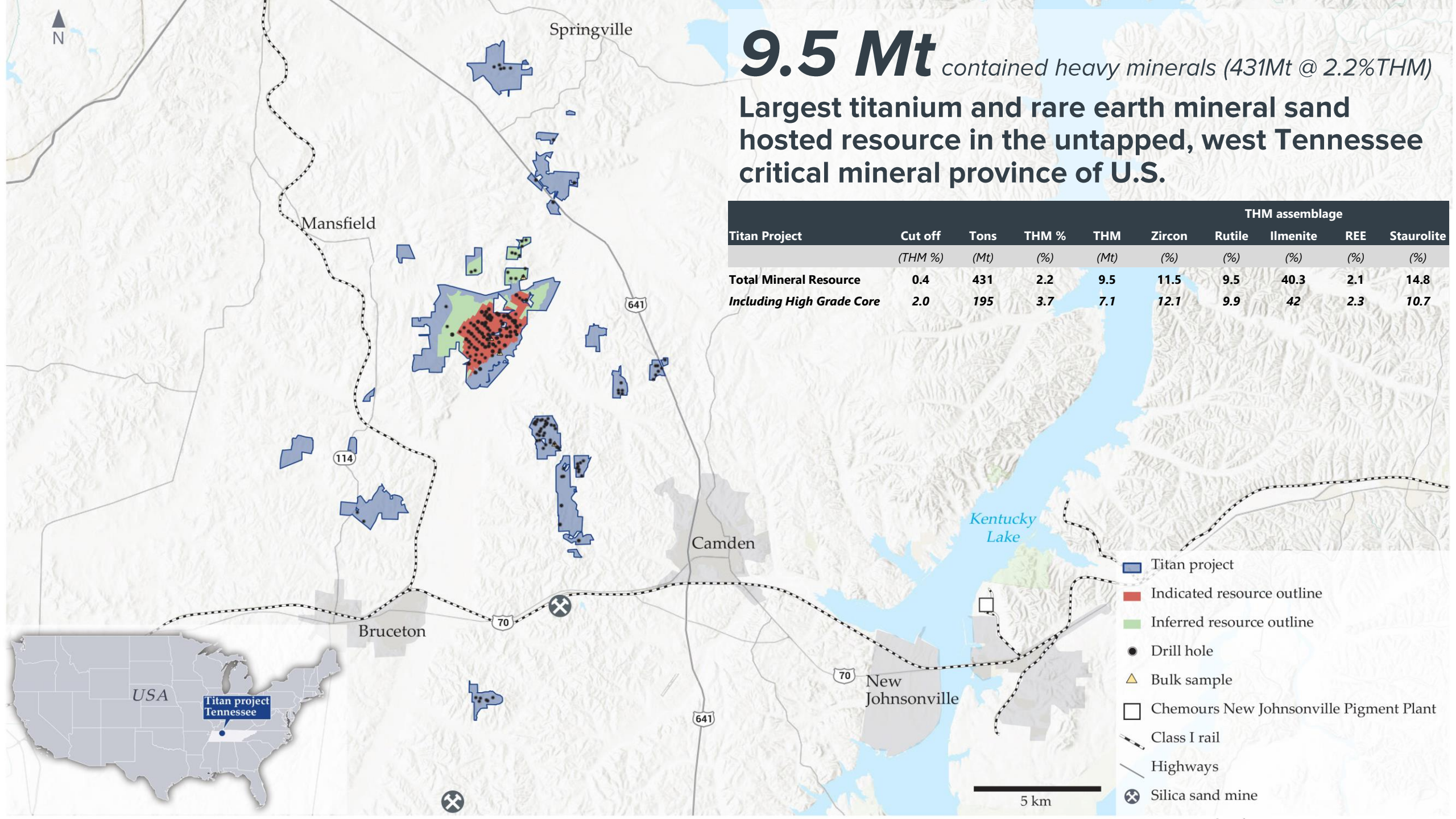


Skilled Workforce
Camden, TN (pop. ~3,500)
~3 million pop. <90 min drive
Skilled in HME and plant operations



Ports
Major barge-loading point 15 miles from Project connecting to all major U.S. customers and export ports



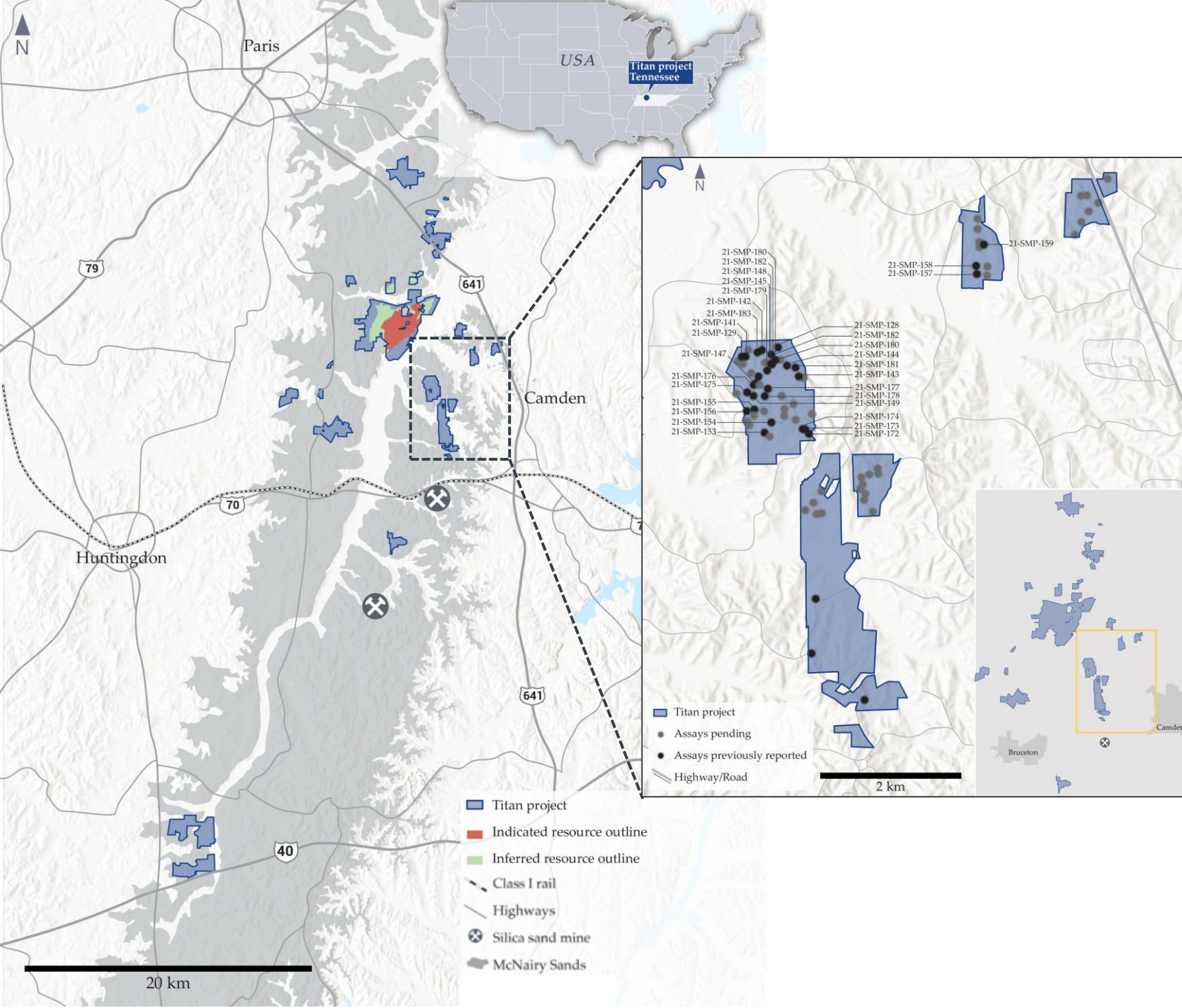


9.5 Mt contained heavy minerals (431Mt @ 2.2%THM)

Largest titanium and rare earth mineral sand hosted resource in the untapped, west Tennessee critical mineral province of U.S.

Titan Project	Cut off	Tons	THM %	THM	THM assemblage				
					Zircon	Rutile	Ilmenite	REE	Staurolite
	(THM %)	(Mt)	(%)	(Mt)	(%)	(%)	(%)	(%)	(%)
Total Mineral Resource	0.4	431	2.2	9.5	11.5	9.5	40.3	2.1	14.8
Including High Grade Core	2.0	195	3.7	7.1	12.1	9.9	42	2.3	10.7

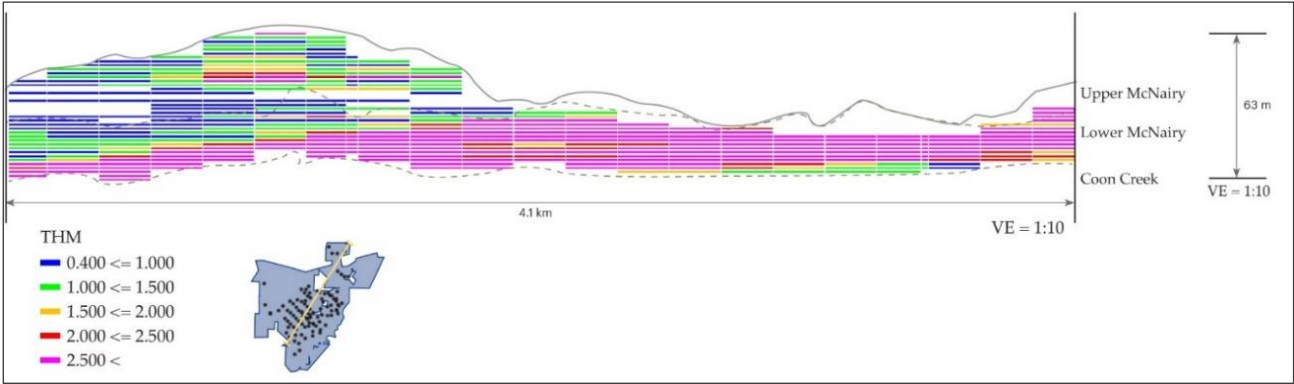
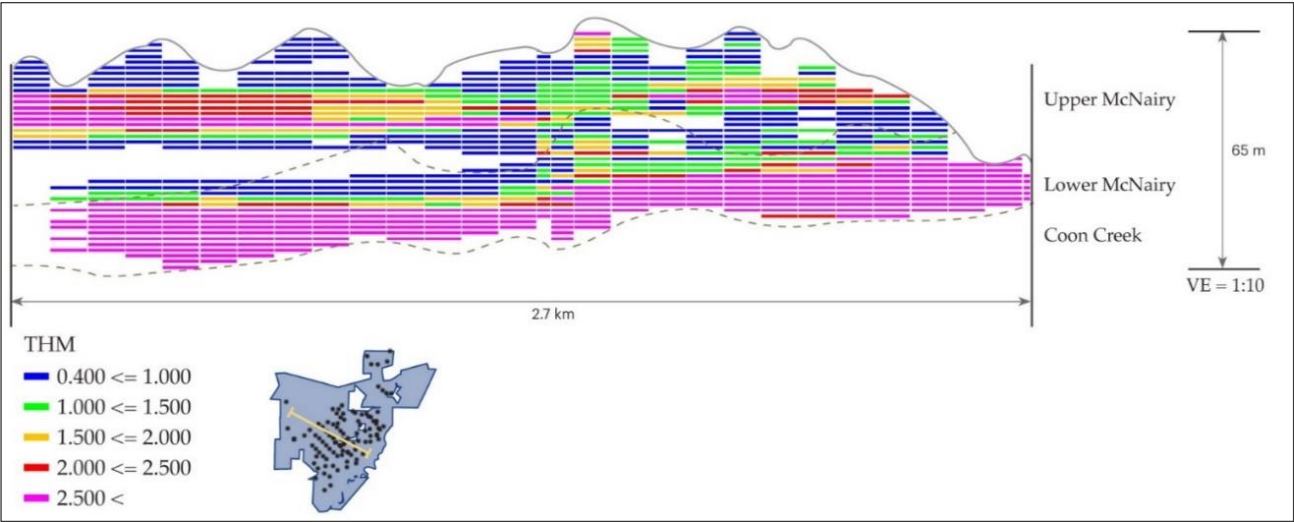
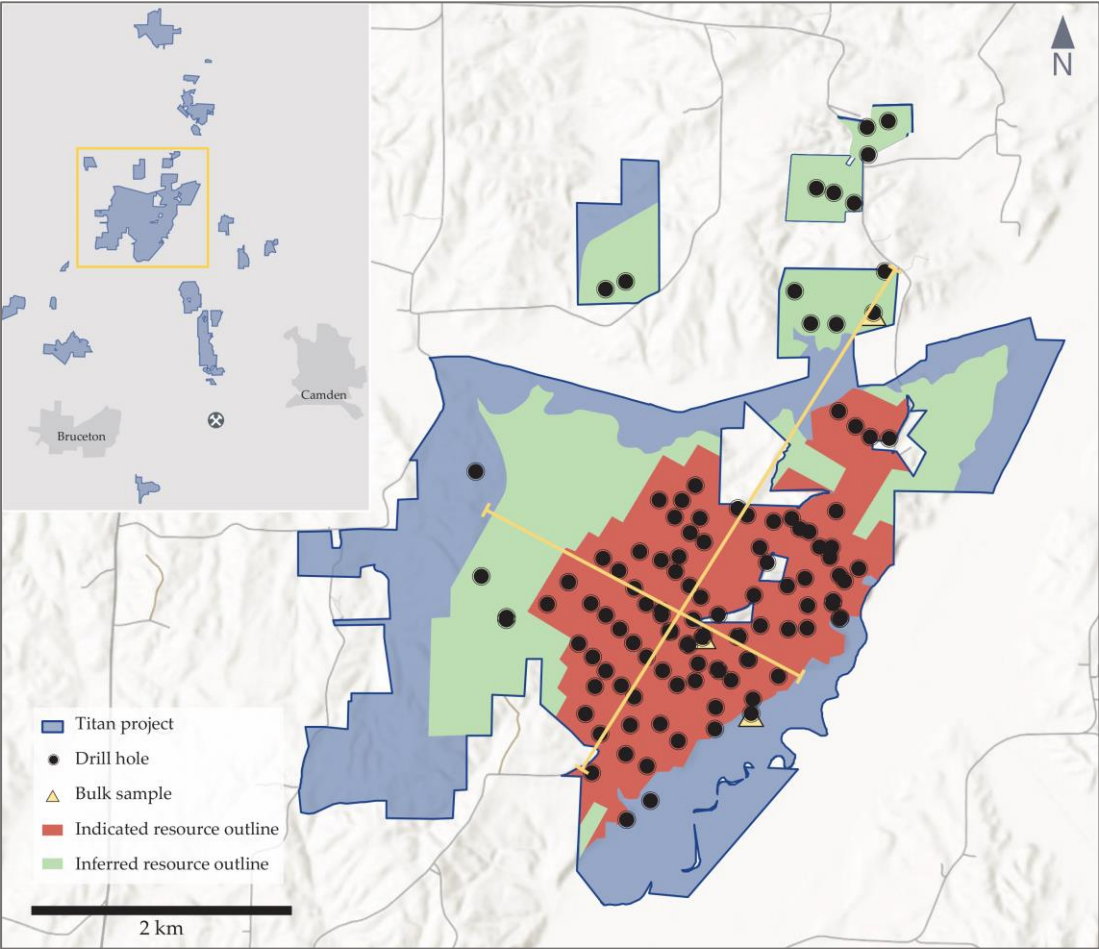
- Titan project
- Indicated resource outline
- Inferred resource outline
- Drill hole
- Bulk sample
- Chemours New Johnsonville Pigment Plant
- Class I rail
- Highways
- Silica sand mine



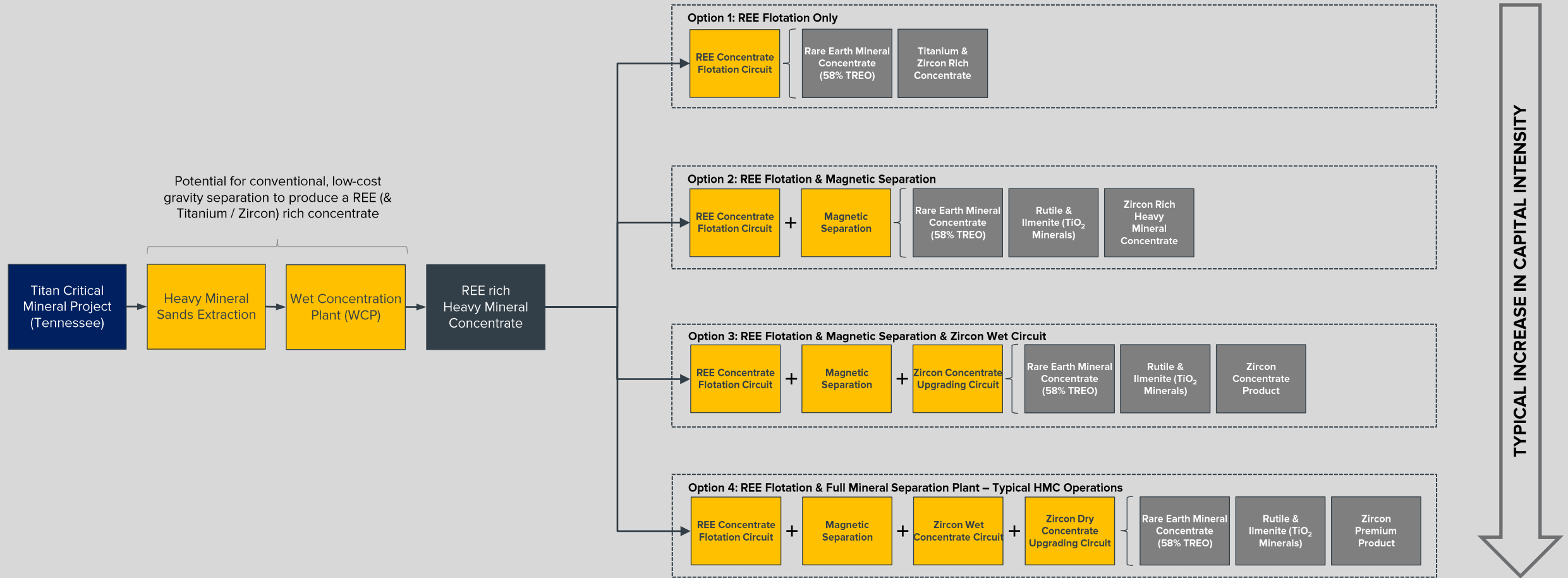
WEST TENNESSEE IS AN UNTAPPED CRITICAL MINERAL PROVINCE

- McNairy Sand remains completely untapped
- Hyperion Maiden Resource covers less than 1% of the McNairy Sand
- Further land negotiations in process
- Hyperion continues to receive exceptional exploration results in the province

MINERALIZATION IS CONTAINED IN A SIMPLE, THICK, SHALLOW AND UNCONSOLIDATED SAND AMENABLE TO LOW-COST, LARGE-SCALE MINING TECHNIQUES



POTENTIAL FOR A RANGE OF CONVENTIONAL PROCESSING TECHNIQUES, INCLUDING OPERATIONAL AND PRODUCT OPTIONALITY



DEVELOPMENT OF THE TITAN PROJECT WOULD RESHORE THE RARE EARTH AND TITANIUM MINERAL SUPPLY CHAINS IN THE U.S.

Rare Earth Minerals

Aerospace, Space, Defense, EV & Renewable, Advanced Industries



Titanium Minerals

Renewables, Housing, Manufacturing, Consumer Goods



HYPERION HAS AN MOU WITH ENERGY FUELS TARGETING THE DEVELOPMENT OF A LOW-COST, U.S. RARE EARTH PARTNERSHIP

- MoU to evaluate supply of monazite to **Energy Fuels** (NYSE: UUUU)¹
- Energy Fuels operates one of the only processing facilities outside of China capable of processing monazite
- Collaboration in the potential development of an integrated U.S. rare earths supply chain



HYPERION & ENERGY FUELS AIM TO PROVIDE A REAL, NEAR-TERM SOLUTION TO THE U.S. RARE EARTH SUPPLY CHAIN



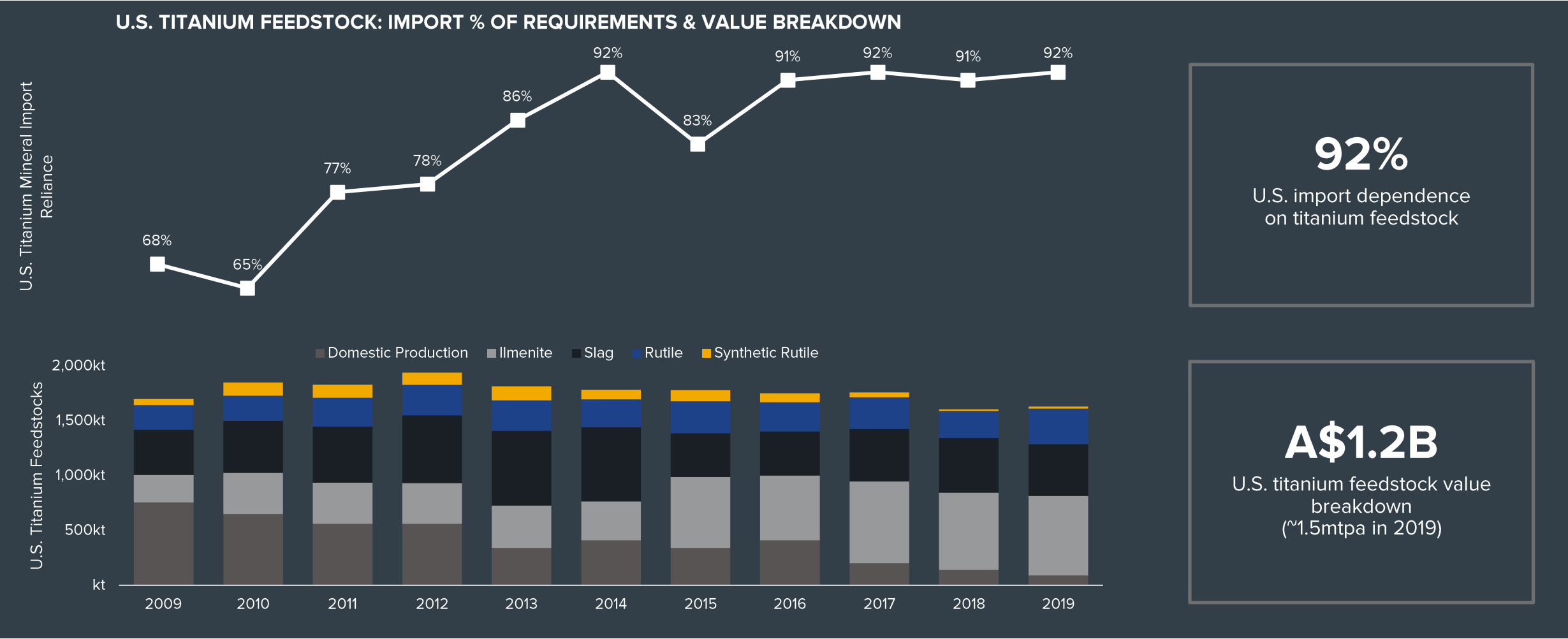
Potential U.S. long-term, low-cost REE mineral feedstock supply

Existing large-scale cracking & leaching capacity / Build-out of separation capacity

Potential downstream metal production to allow component manufacturing in the U.S.



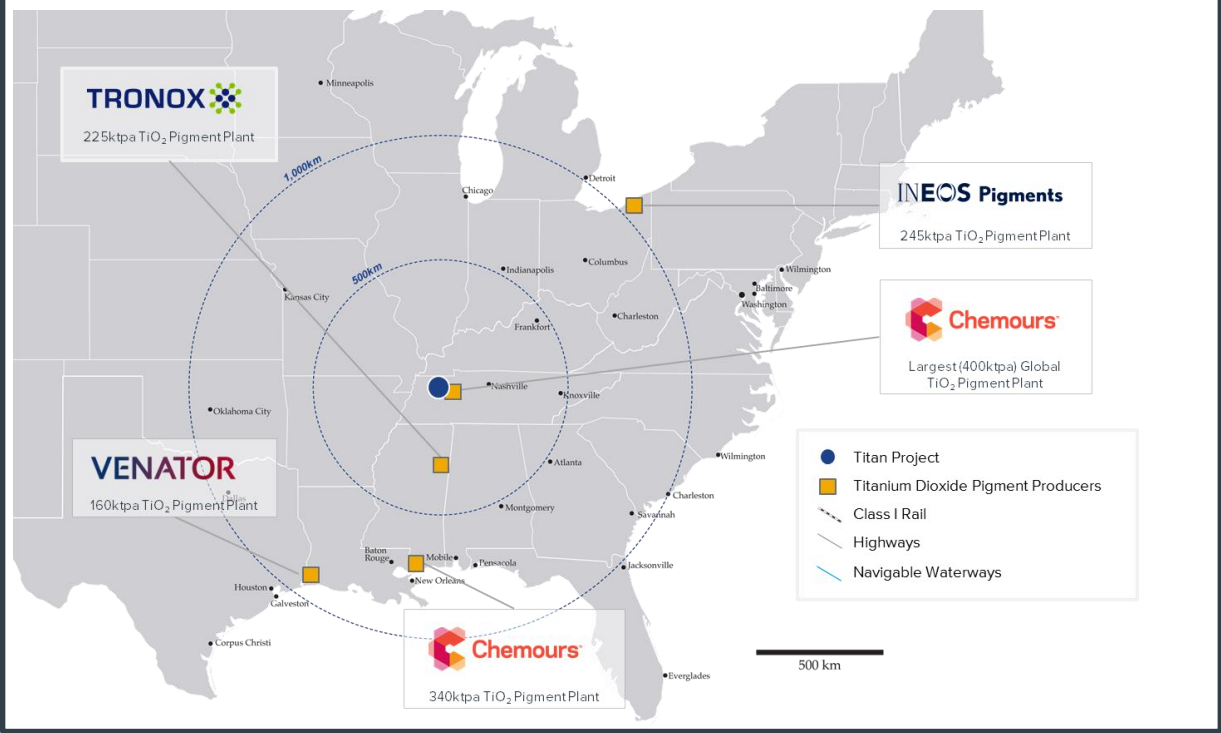
THE U.S. SUPPLY CHAIN FOR THE PAINT AND PIGMENT INDUSTRY IS ALSO IN NEED OF REPAIR



HYPERION AIMS TO SOLVE THESE SUPPLY CHAIN ISSUES AND PROVIDE LOW-COST, SUSTAINABLE TITANIUM FOR THE 2ND LARGEST GLOBAL PAINT AND PIGMENT INDUSTRY

In the heart of the U.S. Pigment Industry

Low-cost shipping to all pigment producers



Major Logistical Advantage

Huge competitive advantage in US\$1 billion market





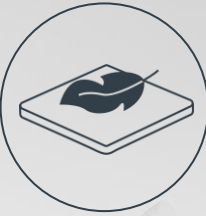
METALS BUSINESS: OUR PATENTED **TITANIUM METAL TECHNOLOGIES** HAVE THE POTENTIAL TO NOT ONLY RESHORE THE U.S. TITANIUM METAL SUPPLY CHAIN BUT ALSO DISRUPT THE STRUCTURAL METALS MARKET



WHY TITANIUM?

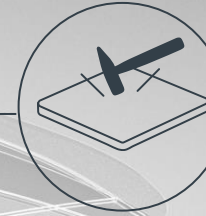
LIGHTWEIGHT

40% lighter than stainless steel and the highest strength to weight ratio of any structural metal



STRONG

Stronger than aluminum and comparable to stainless steel



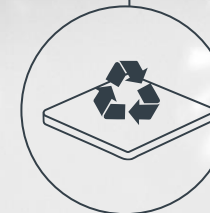
LONGEVITY

Higher corrosion resistance than aluminum and stainless steel



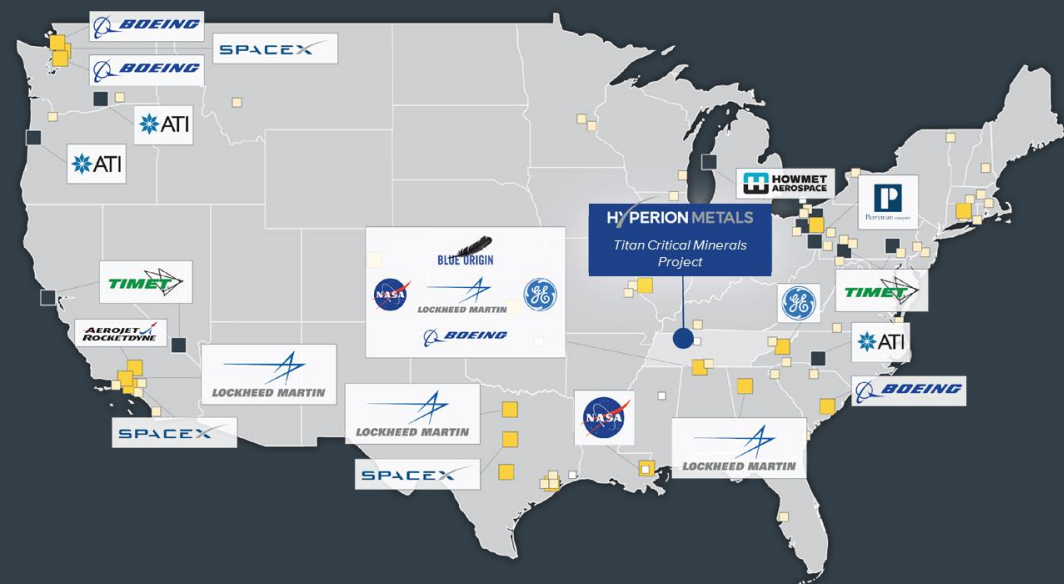
RECYCLABLE

Potentially **100% recyclable** with Hyperion's technology¹



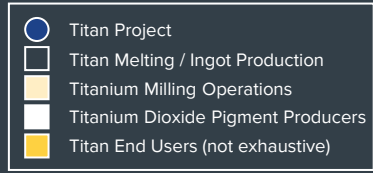
THE U.S. IS THE LARGEST CONSUMER OF TITANIUM METAL DRIVEN BY AEROSPACE & DEFENSE SECTORS BUT HAS NO DOMESTIC PRIMARY TITANIUM METAL PRODUCTION

U.S. TITANIUM MARKET

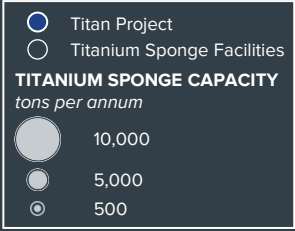
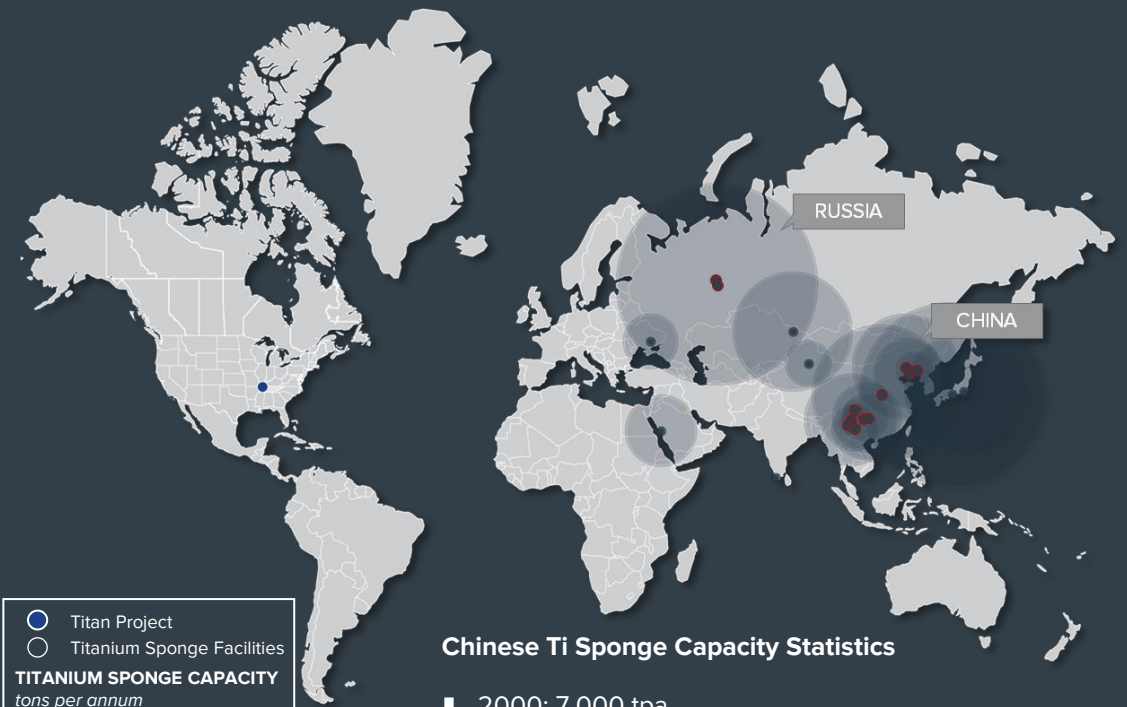


2019 U.S. Consumption Statistics

- Titanium Melt Products: 82ktpa
- Titanium Mill Products: 44ktpa



2020 GLOBAL PRIMARY TITANIUM METAL SUPPLY

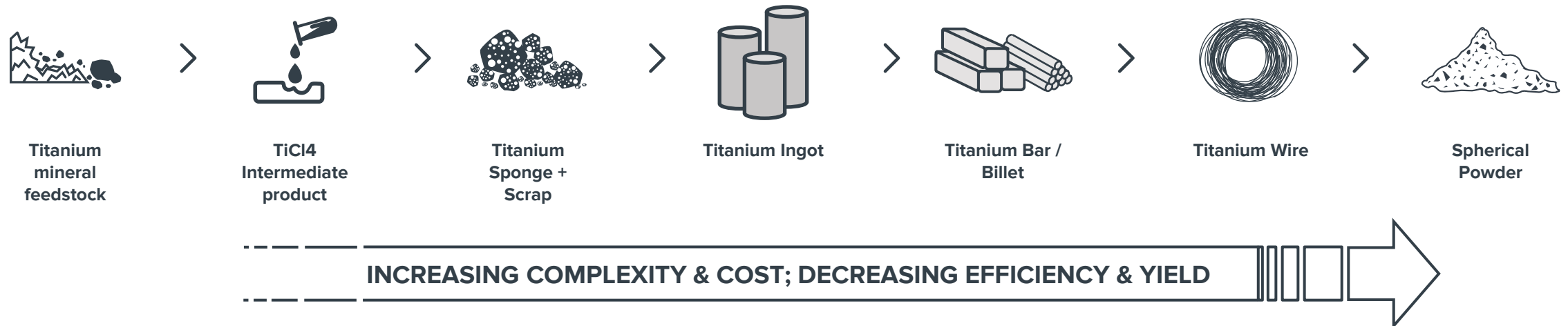


Chinese Ti Sponge Capacity Statistics

- 2000: 7,000 tpa
- 2020: 158,000 tpa

THE EXISTING CHALLENGE WITH TITANIUM IS A HIGH-COST, COMPLEX SUPPLY CHAIN

THESE CHALLENGES HAVE TRADITIONALLY LED TO A HIGH COST TO PRODUCE TITANIUM PRODUCTS, INCLUDING LOW-OXYGEN SPHERICAL TITANIUM METAL POWDERS

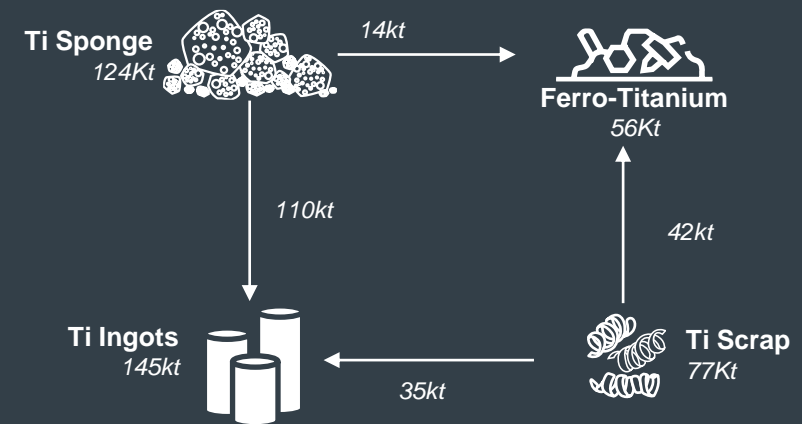


TITANIUM IS NOT 100% RECYCLABLE WITH THE CURRENT INDUSTRY PROCESS

TITANIUM RECYCLING CHALLENGES

RECIRCULATION RATE AND RE-MELTING

- Titanium scrap has a <50% recirculation rate, with most scrap being sold into the Ferrotitanium market
- 10-20% of Titanium sponge production is “off-grade” and sold as Ferrotitanium
 - Current technology does not allow for the iron impurities to be removed from Titanium
- Titanium scrap readily absorbs oxygen and therefore remelting requires a mix of new Ti sponge (from the Kroll process) and recycled titanium to maintain homogeneity



HYPERION'S BREAKTHROUGH HAMR TECHNOLOGY HAS THE POTENTIAL TO RESHORE A LOW-TO-ZERO CARBON, LOW-COST TITANIUM METAL SUPPLY CHAIN IN THE U.S.

PATENTED TECHNOLOGIES DEVELOPED WITH LEADING PARTNERS



Invented by Dr. Zak Fang, Professor of Metallurgy within the University of Utah



Majority of funding provided by ARPA-e from within the U.S. Department of Energy



Boeing and Arconic participation as industry partners validating the end-product

HAMR TECHNOLOGY HAS BEEN TAKEN THROUGH PILOTING AND PROVEN AS A TECHNOLOGY, NOW READY FOR SCALE-UP AND FULL COMMERCIALIZATION

LAB SCALE DEVELOPMENT



PILOT SCALE PLANT



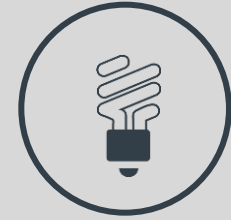
DR. FANG'S SCIENTIFIC BREAKTHROUGH FOR TITANIUM METAL MANUFACTURING

HYDROGEN ASSISTED MAGNESIUM REDUCTION / DEOXYGENATION OF TITANIUM ("HAMR")

- Dr. Fang's breakthrough was the discovery that hydrogen destabilizes the Ti-O bonds making it thermodynamically favorable to reduce Ti-O with Mg
- US\$10m invested by ARPA-E and others to develop the technology from lab scale to pilot scale
- Pilot scale Ti metal and powder plant in Salt Lake City is currently producing Ti metal from 100% scrap Ti feedstock
- Allows for reduction and de-oxygenation of titanium oxides from titanium concentrate and scrap metals and revolutionizes:
 - Primary / virgin mineral to metal production
 - Scrap titanium recycling to metal production



Sustainable



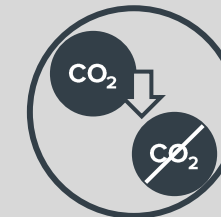
Energy Efficient



Low Cost

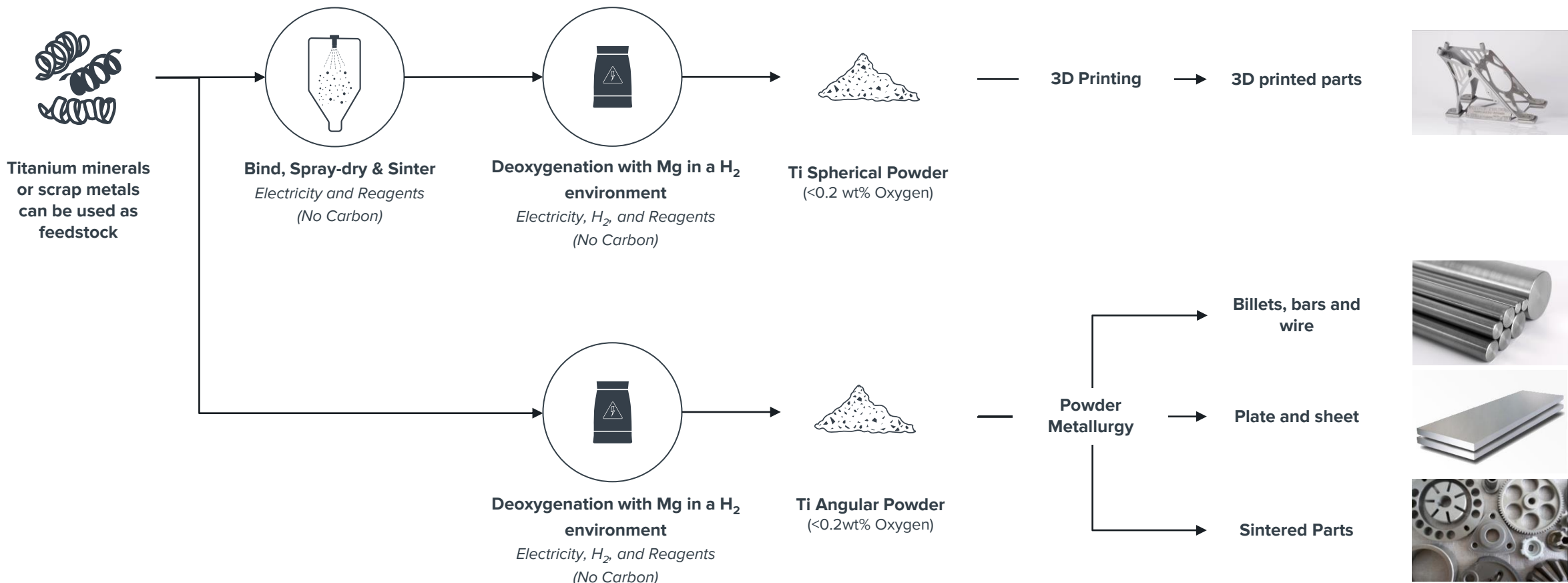


Superior Product



Low-to-Zero Carbon

HYPERION'S PATENTED TECHNOLOGIES HAVE THE POTENTIAL TO BE A STEP CHANGE IN THE PRODUCTION OF TITANIUM METAL AND METAL POWDERS



COMMERCIALISING THIS TECHNOLOGY HAS THE POTENTIAL TO DELIVER A SUPERIOR & SUSTAINABLE STRUCTURAL METALS SUPPLY CHAIN

HYPERION TITANIUM¹

- ✓ Superior product
- ✓ Potential for 100% recycled finished product
- ✓ Low-to-Zero carbon
- ✓ Low-cost 3D printing feed
- ✓ Lower energy
- ✓ Low-cost potential
- ✓ Lower environmental impact (potential for 100% recycled feed)

KROLL TITANIUM

- ✓ Superior product
- ✗ 5% recycled finished product
- ✗ High carbon
- ✗ High-cost 3D printing feed
- ✗ Very high energy
- ✗ High cost
- ✗ High environmental impact (high-energy, low-efficiency brute-force processing)

STAINLESS STEEL

- ✓ Good product
- ✗ 25% recycled finished product (average)
- ✗ High carbon
- ✗ High-cost 3D printing feed
- ✓ Low energy
- ✓ Low cost
- ✗ High environmental impact (coal, iron mining & smelting)

ALUMINUM

- ✓ Good product
- ✗ 40% recycled finished product (average)
- ✗ High carbon
- ✗ High-cost 3D printing feed
- ✗ Very high energy
- ✓ Low cost
- ✗ High environmental impact (high energy + significant red mud tails)

COMMERCIALIZING OUR TECHNOLOGY HAS THE POTENTIAL TO DISRUPT THE STRUCTURAL METALS MARKET - ESPECIALLY THE STAINLESS STEEL AND ALUMINUM MARKETS

Decarbonizing and enabling our aerospace sector



Light weighting and decarbonizing EV's



Reshoring and advancing a U.S. military advantage



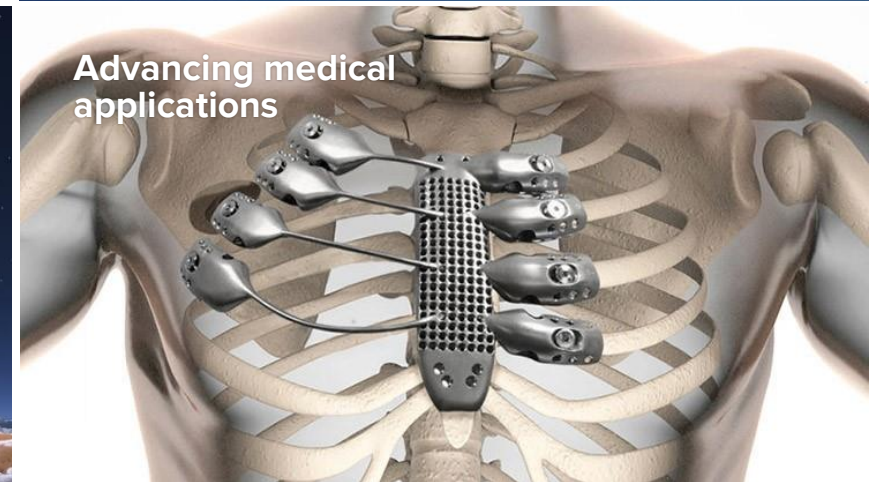
Strengthening and Decarbonizing our modern consumer products



Enabling space exploration



Advancing medical applications



HYPERION HAS REAL VALUE-ADDED MILESTONES THAT WILL BUILD THE STORY AND EDUCATE THE MARKET IN THE COMING QUARTERS

<input checked="" type="checkbox"/>	Secure Opportunity in USA critical mineral supply chain & build core team	4 th Quarter 2020
<input checked="" type="checkbox"/>	Secure HAMR & GSD technology for zero carbon titanium metal production	1 st Quarter 2021
<input checked="" type="checkbox"/>	MoU with Energy Fuels to develop integrated U.S. rare earths supply chain	2 nd Quarter 2021
<input checked="" type="checkbox"/>	MoU with EOS (largest German 3D printing OEM) to develop U.S. titanium metal powder supply chain	3 rd Quarter 2021
<input checked="" type="checkbox"/>	1 st , 2 nd & 3 rd Phase drill programs and 1.5 tonnes metallurgical bulk sample test work	1 st – 3 rd Quarter 2021
<input checked="" type="checkbox"/>	JORC Compliant Mineral Resource	4 th Quarter 2021
<input type="checkbox"/>	REE mineral concentrate & Camden metallurgical process plant flowsheet options	4 th Quarter 2021
<input type="checkbox"/>	Titanium metal powder production, metallurgical and mechanical testing update	4 th Quarter 2021
<input type="checkbox"/>	JORC mineral resource upgrade	1 st Quarter 2022
<input type="checkbox"/>	Scoping study on mine and mineral process plant	1 st – 2 nd Quarter 2022
<input type="checkbox"/>	Strategic partnerships and offtakes (titanium metal / minerals / zircon / monazite)	1 st – 4 th Quarter 2022

A WORLD CLASS, HIGHLY EXPERIENCED TEAM

Board of Directors

ANASTASIOS ARIMA
Managing Director

VAUGHN TAYLOR
Non-Executive Director

LORRAINE MARTIN
Non-Executive Director



TODD HANNIGAN
Chairman

MELISSA WALLER
Non-Executive Director

BEVERLY WYSE
Non-Executive Director



Management Team

TOBY SYMONDS
Chief Strategy Officer

LAMONT LEATHERMAN
Chief Geologist

PATRICK BRINDLE
Project Development Advisor



DOMINIC ALLEN
Corporate Development

JONATHAN LORD
Senior Project Geologist

TIM MCKEON
Mineral Processing Advisor



JEANNE MCMULLIN
General Counsel

DELING XIAN
Senior Project Manager

ADAM KARST
Geology Advisor



GREG SWAN
Company Secretary

HYRUM LEFLER
Senior Project Metallurgist

SCOTT SPARKS
Operations Advisor

KAYLA LUTHER
Financial Controller

STEPHANIE HARCLEROAD
Community Relations Manager

Advisory Board

TODD RUPPERT
Capital Markets Advisory Board

DR. ELIANA FU
Scientific & Tech. Advisory Board

DR. ALI YOUSEFIANI
Scientific & Tech. Advisory Board



ANDY STEWART
Capital Markets Advisory Board

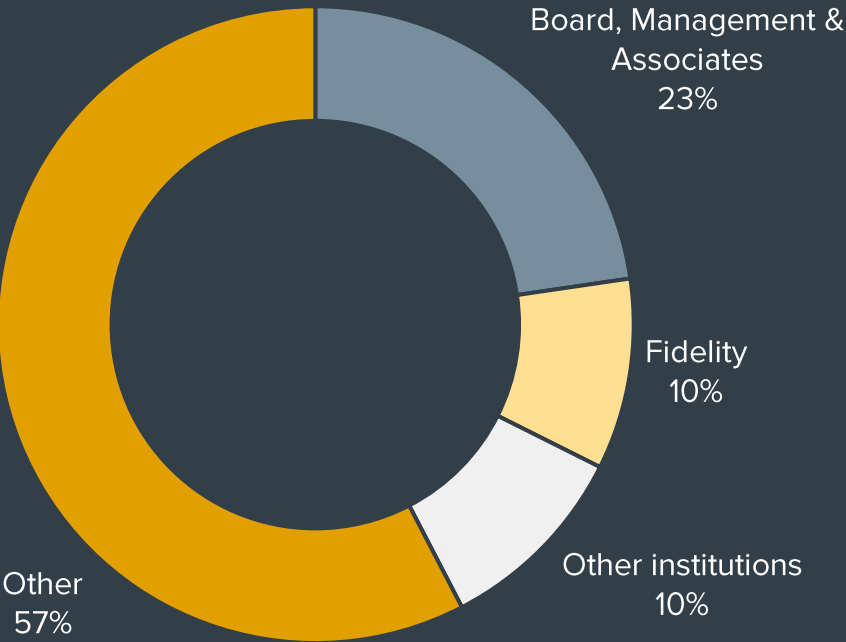
TOM WITHEFORD
Scientific & Tech. Advisory Board

DR. KESH KESHAVAN
Scientific & Tech. Advisory Board

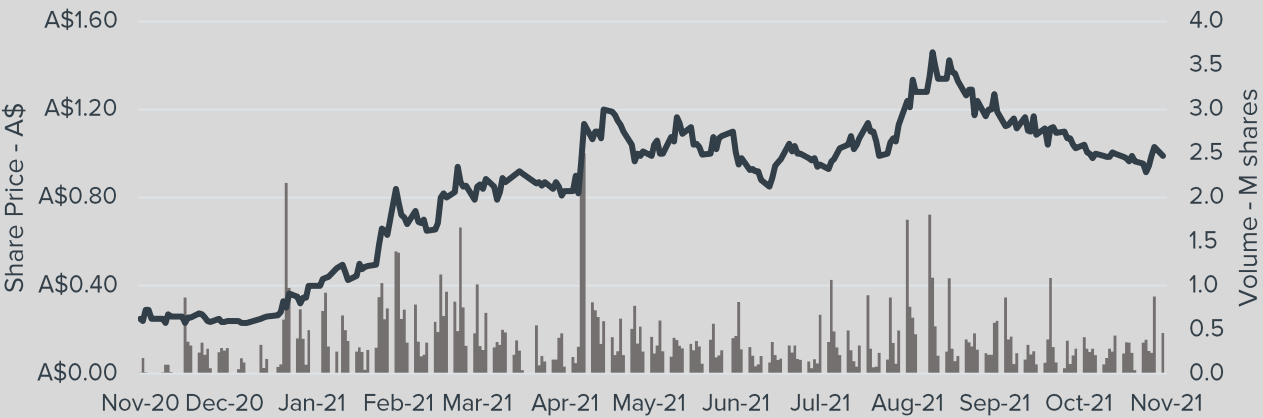


CAPITAL STRUCTURE

COMPANY OWNERSHIP



TRAILING TWELVE-MONTH SHARE PRICE & VOLUME



SUMMARIZED CAPITAL STRUCTURE

HYM shares on issue	139.1M
Price (14 November 2021)	A\$0.99
Market capitalisation	A\$137.7M
Cash (pro-forma, 30 June 2021 + placement proceeds)	A\$24.2M
Enterprise value	A\$113.5M
Unlisted options	25.0M
Performance rights / shares & RSUs	56.5M