MAIDEN RESOURCE CONFIRMS TENNESSEE AS MAJOR UNTAPPED CRITICAL MINERAL PROVINCE

- The Titan Project's maiden Mineral Resource Estimate ("MRE") establishes it as the largest titanium, zircon and rare earth minerals project in the USA, and confirms Tennessee as a major new American critical mineral province.
- The MRE for the Titan Project comprises:
  - ***Total Mineral Resource of 431Mt @ 2.2% Total Heavy Minerals ("THM"), containing 9.5Mt THM at a 0.4% cut-off with 241Mt (56%) classified in the Indicated resource category***;
  - ***Includes high grade core of 195Mt @ 3.7% THM, containing 7.1Mt THM at a 2.0% cut-off***;
  - High value THM assemblage of 12% zircon, 10% rutile, 40% ilmenite and 2% Rare Earth Elements ("REE") concentrate with an excellent ratio of heavy and light rare earths; and
  - Mineralization occurs in a single, large, and coherent near-surface deposit.
- The combination of grade, high value THM assemblage, low-cost jurisdiction and existing infrastructure underwrites the potential to build a low-to-zero carbon, world class critical mineral business in the U.S.:
  - The project is amenable to low-cost and low impact mineral sand extraction techniques (e.g. dozer push) which actively reclaims and rehabilitates the land as the operation progresses;
  - The region is a low-cost jurisdiction for renewable power (US$0.06/kWh), biodiesel (US$0.94/l) and labor (US$50k p.a.) which are major input costs in typical mineral sands operations; and
  - The project is strategically located with low-cost road, rail and water logistics connecting it to world class manufacturing industries and customers.
- The MRE represents the first mineral resource reported in accordance with the JORC Code (2012) within the McNairy Sand in Tennessee and confirms the region as an untapped critical mineral province:
  - The MRE is based on 107 drill holes totaling 4,101 meters;
  - There are another 109 completed drill holes totaling 3,566 meters, which are in the final stages of analysis, and will be incorporated into an upgraded MRE; and
  - Accelerated land consolidation is expected to create a platform for sustained growth of the MRE.
- Hyperion's low carbon critical mineral business and low-to-zero carbon, low-cost titanium metal technologies build a platform to become the leader in the U.S. critical mineral and metal supply chains.

				THM assemblage					
Titan Project	**Cut off**	**Tons**	**THM %**	**THM**	**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***	***42.0***	***2.3***	***10.7***

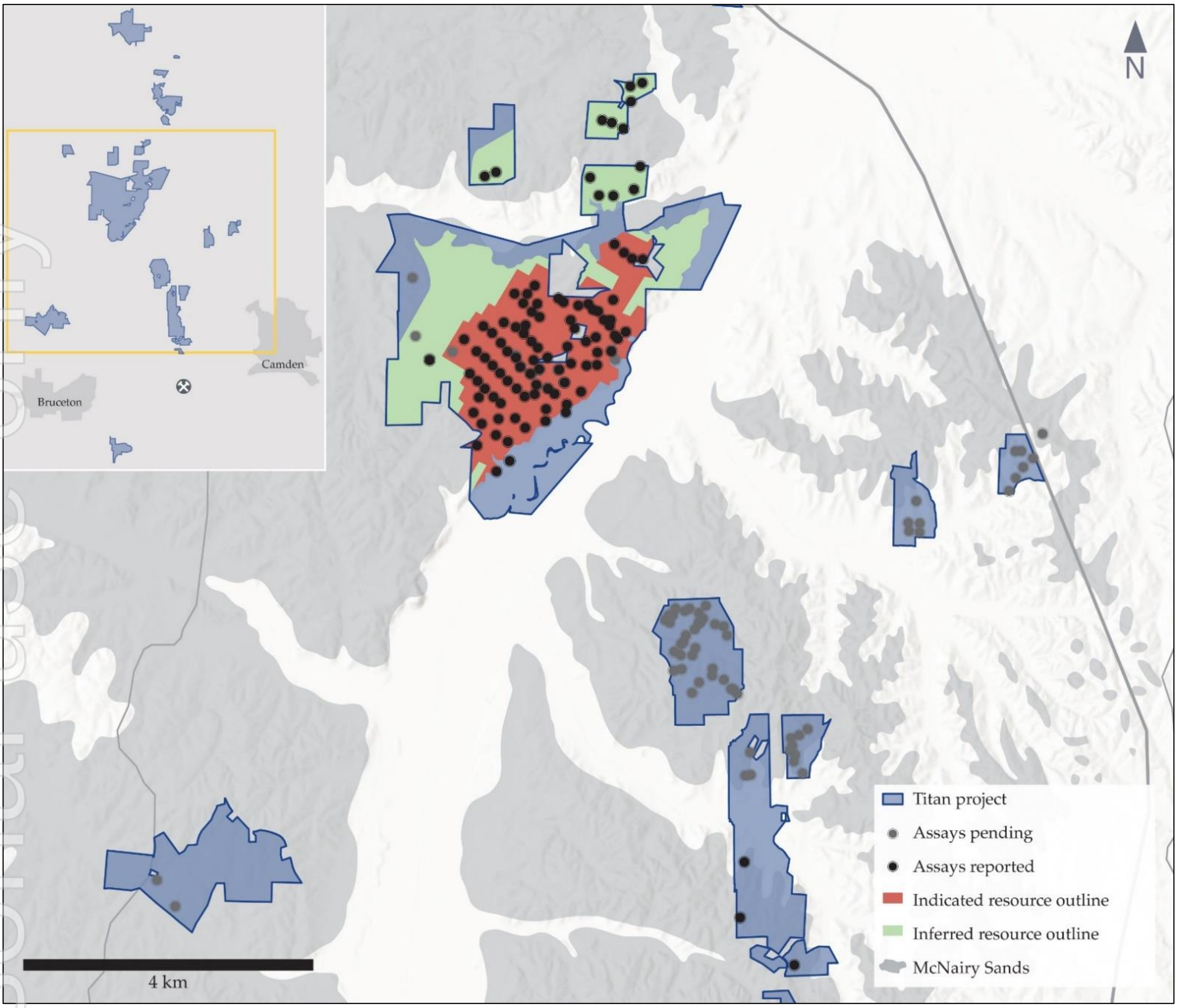

Figure 1: Titan Project MRE drill holes and outline, plus drill holes pending for potential inclusion in an MRE update.

Anastasios (Taso) Arima, CEO and Managing Director said:

"Hyperion's mission is to sustainably re-shore the production of American critical minerals and metals, and this maiden MRE is a crucial step towards this goal.

"The maiden MRE has immediately established the Titan Project as a major, untapped potential source of critical minerals rich in titanium, zircon and heavy and light rare earths. The combination of scale and grade of these high value, critical minerals - in a low risk, low cost and low tax jurisdiction - has the potential to drive significant value creation.

"Together with our breakthrough titanium technologies and the strong partnerships we are building with industry, we believe we can deliver a sustainable U.S. critical supply chain that will create long term value for the communities of west Tennessee, future offtake partners and our shareholders."

This announcement has been authorized for release by the CEO and Managing Director, Mr. Anastasios Arima.

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Hyperion Metals Limited (ASX: HYM) is pleased to announce a maiden Mineral Resource Estimate ("MRE") of 431 million tonnes ("Mt") @ 2.2% Total Heavy Minerals ("THM") containing 9.5Mt THM (at a 0.4% cut off grade) which includes a high-grade core of 195Mt @ 3.7% THM containing 7.1Mt THM (at a 2.0% cut off grade) at its 100% owned Titan Project ("Project") in Tennessee. Approximately 56%, or 241Mt of the MRE, is classified in the Indicated resource category.

Titan Project Summary

Hyperion's mission is to be the leading developer of zero carbon, sustainable, critical material supply chains for advanced American industries including space, aerospace, electric vehicles ("EVs") and 3D printing.

The Company holds a 100% interest in the Titan Project, covering over 6,000 acres of titanium, rare earth minerals and zircon rich mineral sands properties in Tennessee, USA. The Titan Project is strategically located proximal to the town of Camden in the southeast of the USA, with low-cost road, rail and water logistics connecting it to world class manufacturing industries and customers.

The MRE has confirmed that the Titan Project is one of the largest and most important critical mineral deposits in the U.S., with a high in-situ value underpinned by a product assemblage of high value zircon, titanium minerals and heavy and light rare earth elements. The shallow, high grade and unconsolidated nature of the sandy mineralization enables the potential for simple mining operations such as dozer push followed by an industry standard mineral processing flowsheet.

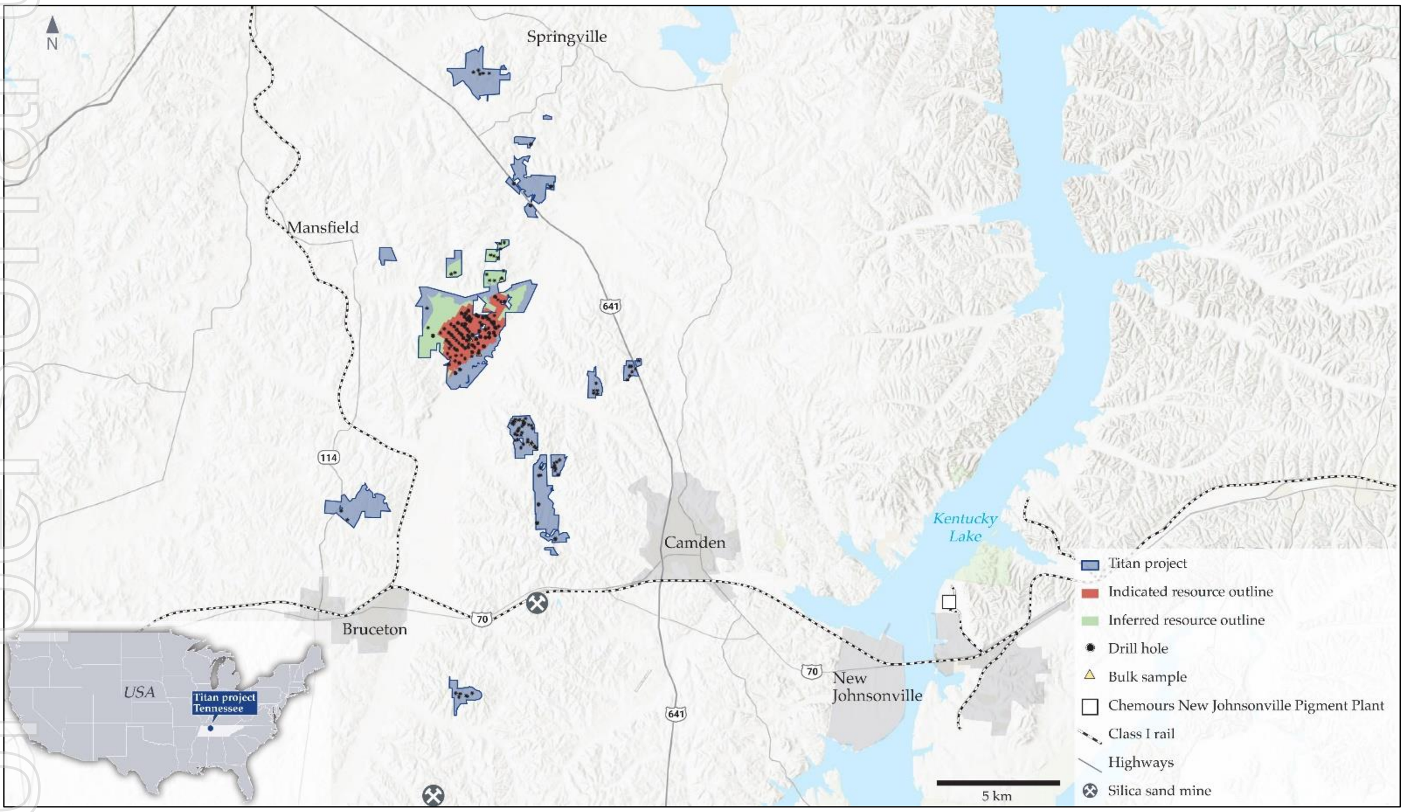

Figure 2: Titan Project and MRE outline.

The delivery of Hyperion's large-scale maiden MRE at the Titan Project is a key step in developing a fully integrated domestic titanium metal and rare earth metal supply chain. This is of strategic importance for the U.S., as the country is one of the largest global consumers of finished products containing these metals, but is currently 100% import reliant. The current focus from both industry and the U.S. government is upon re-shoring these critical minerals and building resilient and long lasting supply chains, which can be achieved by the development of Hyperion's operations.

Untapped Mineral Province

The delivery of Hyperion's maiden MRE has identified west Tennessee as a major province of untapped critical minerals in a low risk, low cost and low tax jurisdiction, with outstanding access to the key variable cost drivers for the operation of a mineral sands operation – electricity and labor. Hyperion continues to consolidate the surrounding land and it is expected that these new areas will create a platform for sustained growth in the mineral resource.

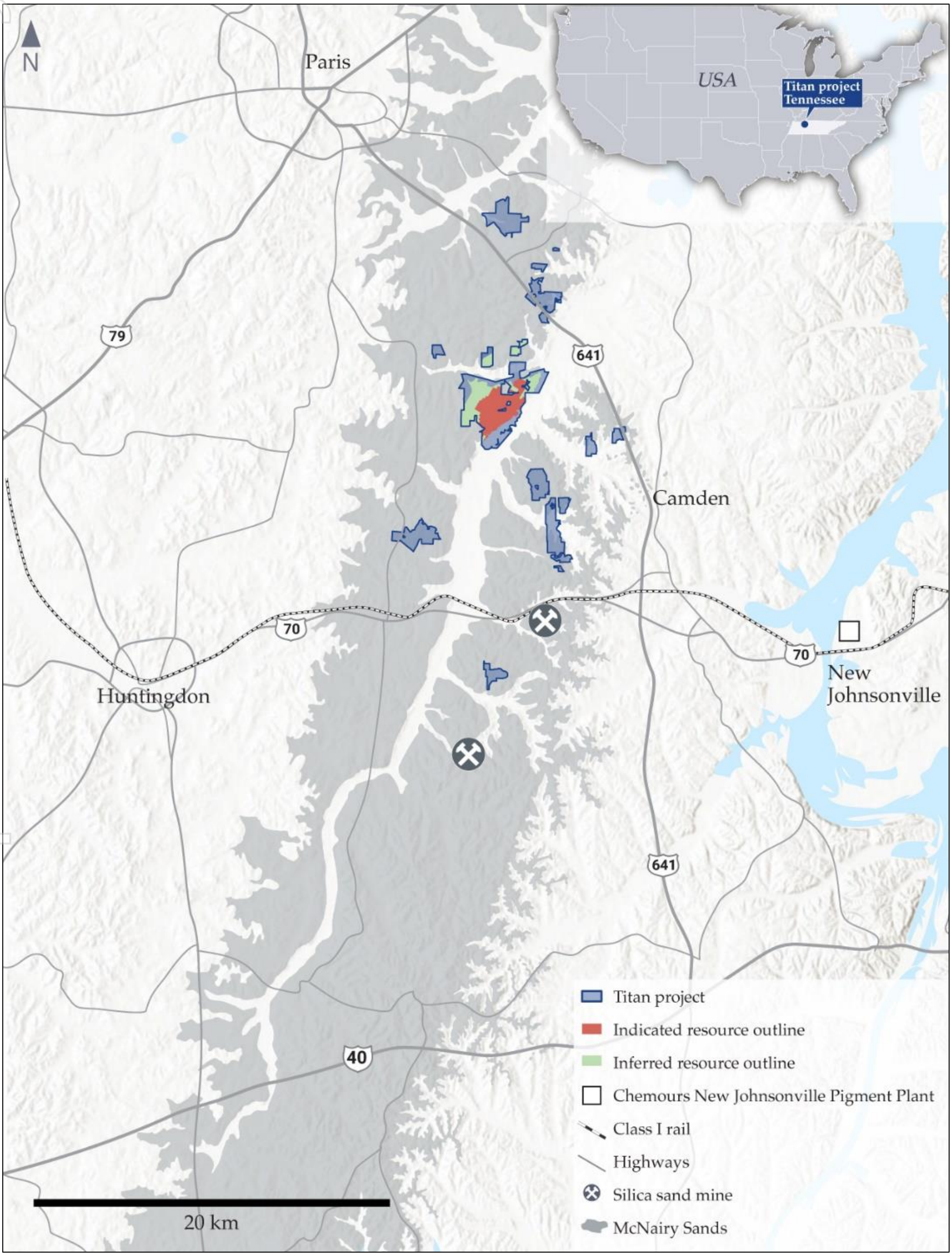

Figure 3: Hyperion's land position over the McNairy Sand formation.

Infrastructure & Location Advantage

Hyperion's Titan Project is strategically located near Camden, Tennessee, and will benefit from significant cost advantages due to the location and proximity to low cost, world-class infrastructure.

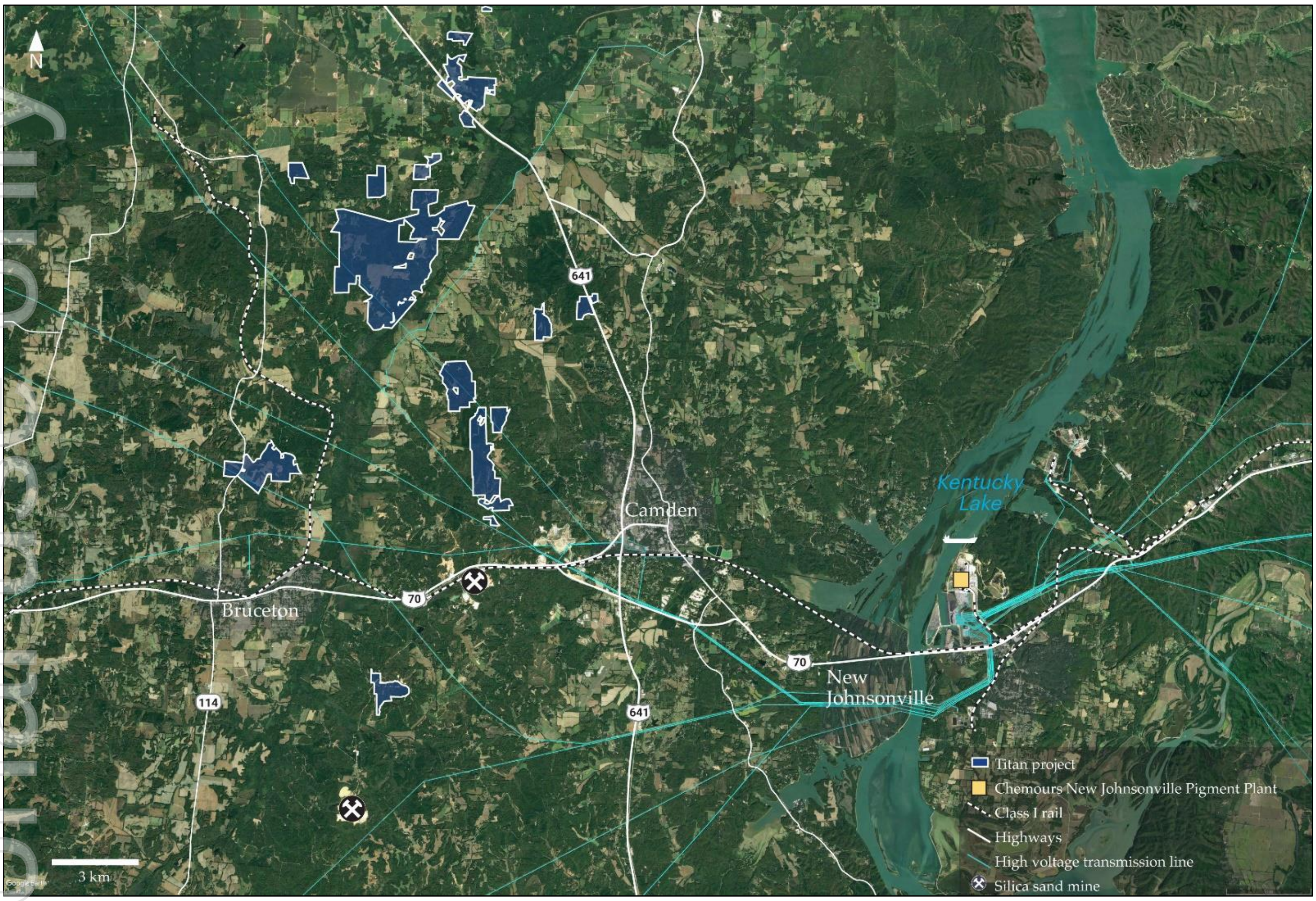

Figure 4: Project location and access to major rail, barge and port infrastructure.

95,000 miles of highway, including 8 interstate highways, put Tennessee within a day's drive of a majority of U.S. consumer markets. Tennessee is the third largest rail center in the U.S. and there are more than 1,000 miles of navigable waterways which access all other major waterways in the eastern U.S. There are over four commercial airports near Camden, including two international airports at Memphis and Nashville.

This world class infrastructure is expected to provide material cost and logistics advantages compared to projects located in more remote areas. The existing infrastructure includes low-cost power and gas, with high-capacity transmission lines near the Project, abundant transportation infrastructure including the Norfolk Southern mainline running through Camden, the major I-40 highway just 10 miles south of Camden and a major barge-loading point 15 miles from the Titan Project connecting to all major U.S. customers and export ports.

	Tennessee, USA	Western Australia
Power	US$0.06/kWh *(100% renewable)*	US$0.13/kWh
Diesel	US$0.94/l *(Biodiesel, B100)*	US$1.10/l
Operator salary	US$50,000	US$125,000
FIFO camp	×	✓
Federal corporate tax	21%	30%
Depletion allowance	14%	nil

Table 1: Comparison of major economic variables between Tennessee and Western Australia.

Further, a very cost-competitive, skilled local workforce removes any potential requirements for FIFO operations or the construction of a mining camp. The area has low-cost housing compared with the rest of the USA, with median house prices of US$113,000 compared to over US$380,000 for the USA. In addition, over 4 million people live just over 90 minutes away by car in the Nashville and Memphis metropolitan areas.

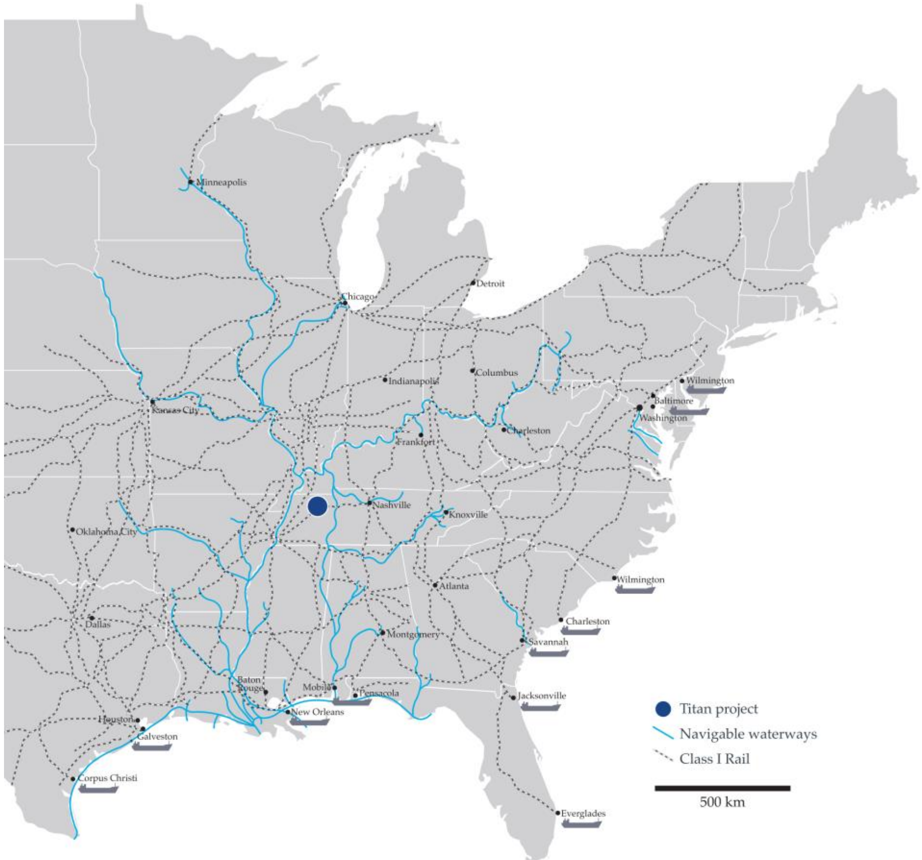

Figure 5: Titan Project location and proximity to major transportation infrastructure.

The Titan Project also benefits from a major logistical advantage over many other critical minerals that are imported into the U.S. This results in both a cost advantage (lower delivered cost for the consumer of the minerals) and a lower carbon intensity supply chain. This supply chain advantage is most prominent in the import of titanium feedstocks and is expected to result in a major cost advantage delivering into the U.S. pigment market.

Figure 6: Project location and proximity to major pigment producers compared to imported TiO_2.

Mineral Resource Estimate

The maiden MRE for the Titan Project comprises 431Mt @ 2.2% THM, containing 9.5Mt THM at a 0.4% cut-off, and includes a high-grade core of 195Mt @ 3.7% THM, containing 7.1Mt THM at a 2.0% cut-off. Slimes ("SL") and oversize material accounts for approximately 20% and 2.5% of the THM fraction respectively. There is a high level of confidence associated with the MRE classification, with 56% (241Mt) classified as being in the Indicated resource category. Mineralization occurs as a single, large, and coherent near-surface deposit.

The MRE incorporates results from 107 sonic core drill holes for a total of 4,101 meters drilled by Hyperion during 2020 and 2021. This includes 45 new holes drilled during the Phase 3 drilling campaign in 2021, which are previously unreported. A further 109 holes totaling 3,566 meters have subsequently been drilled outside of the MRE area and are in the final stages of processing. It is anticipated that these drill hole results will be incorporated into an upgraded MRE.

					THM assemblage				
	Cut off	Tons	THM %	THM	Zircon	Rutile	Ilmenite	REE	Staurolite
	(THM %)	*(Mt)*	*(%)*	*(Mt)*	*(%)*	*(%)*	*(%)*	*(%)*	*(%)*
Indicated	0.4	241	2.2	5.3	11.3	9.3	39.7	2.1	15.6
Inferred	0.4	190	2.2	4.2	11.7	9.7	41.2	2.2	13.7
Total	**0.4**	**431**	**2.2**	**9.5**	**11.5**	**9.5**	**40.3**	**2.1**	**14.8**

Table 2: Mineral Resource Estimate and THM assemblage at 0.4% cut-off grade.

					THM assemblage				
	Cut off	Tons	THM %	THM	Zircon	Rutile	Ilmenite	REE	Staurolite
	(THM %)	*(Mt)*	*(%)*	*(Mt)*	*(%)*	*(%)*	*(%)*	*(%)*	*(%)*
Indicated	2.0	105	3.8	3.9	11.7	9.8	42.0	2.3	10.7
Inferred	2.0	90	3.5	3.2	12.1	9.9	42.1	2.3	10.8
Total	**2.0**	**195**	**3.7**	**7.1**	**12.1**	**9.9**	**42.0**	**2.3**	**10.7**

Table 3: Mineral Resource Estimate and THM assemblage at 2.0% cut-off grade.

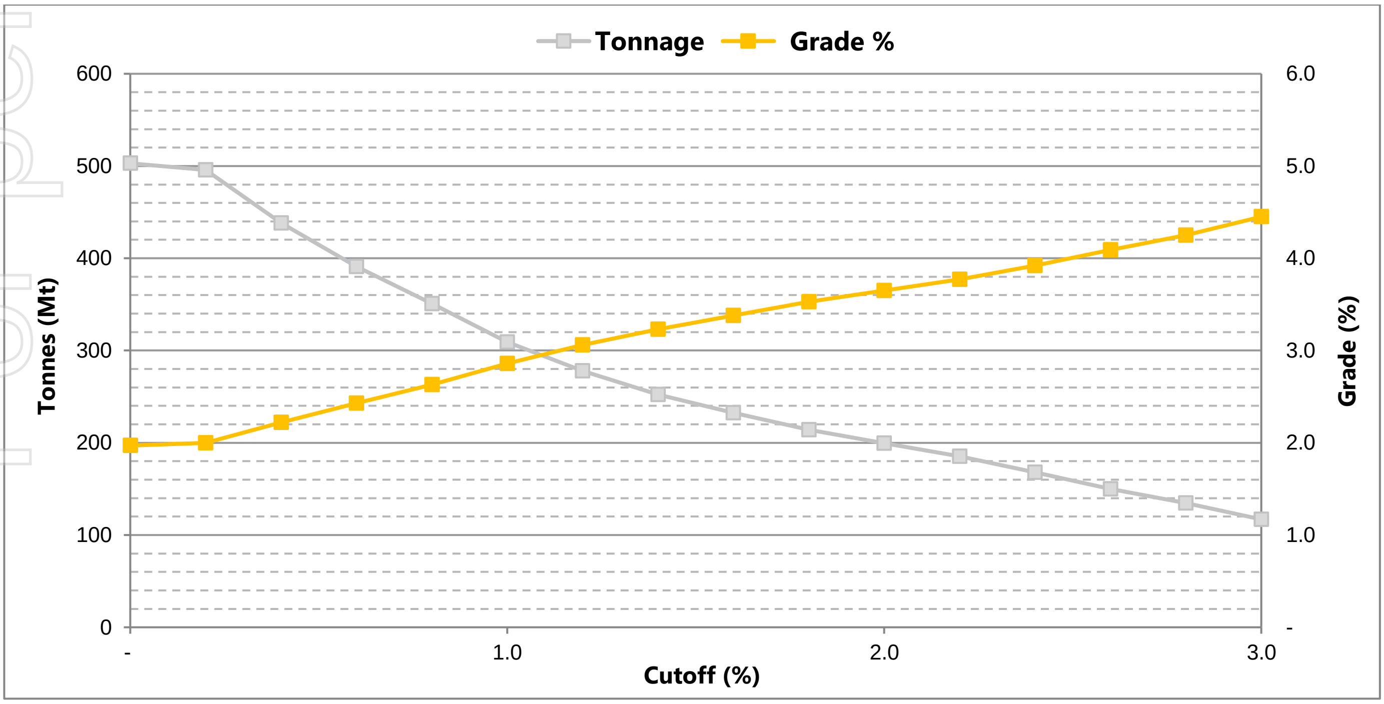

Figure 7: Grade cutoff v. tonnage curve.

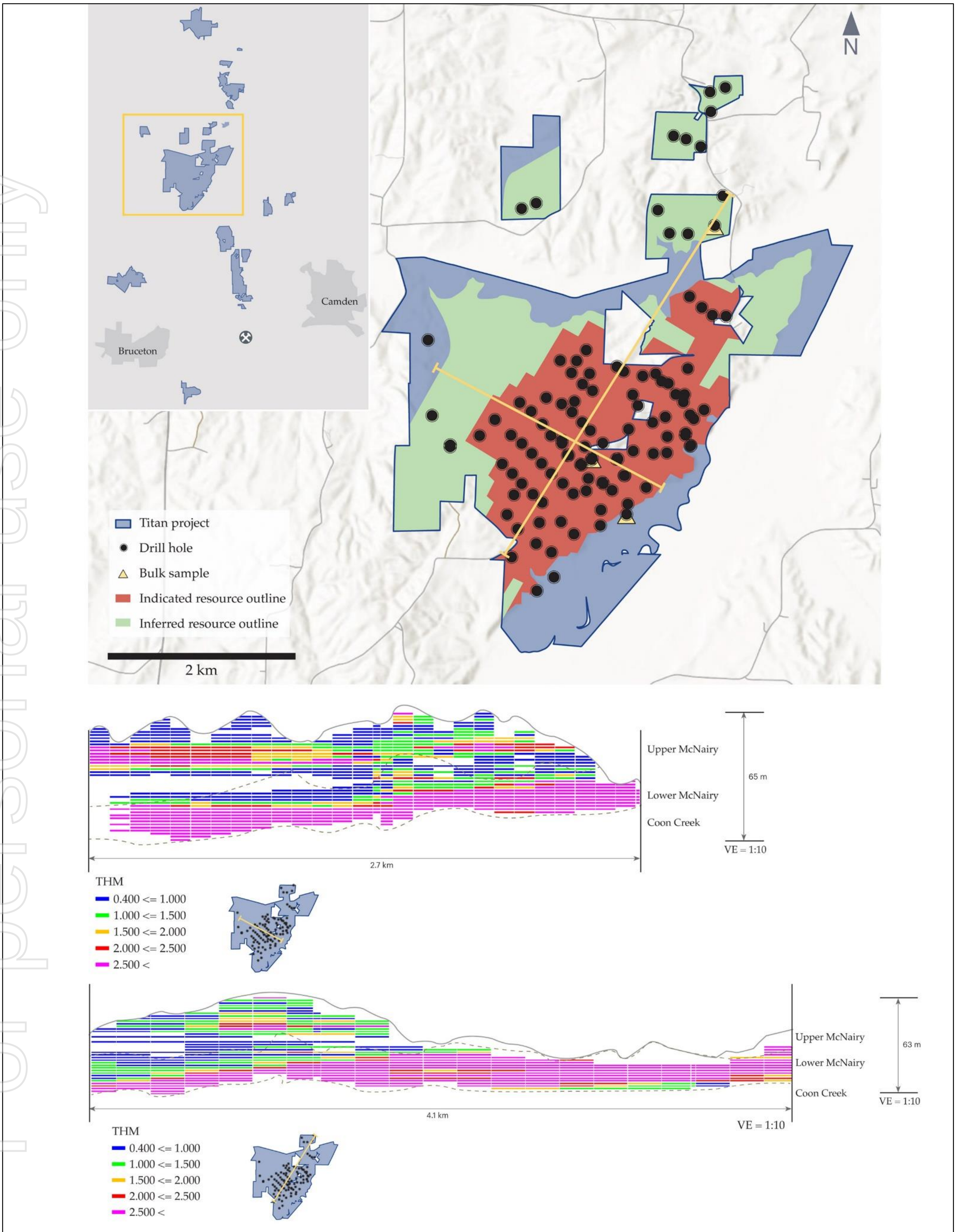

Figure 8: MRE plan view, cross section and long section.

The shallow, high grade and unconsolidated nature of mineralization enables the potential for simple mining operations supported by an industry standard mineral processing flowsheet. The Company is focusing on becoming the leading developer of zero carbon, sustainable, critical materials in the USA, and is working with Presidio Graduate School's expert consulting division, PGS Consults, to undertake Environmental, Sustainability and Corporate Governance studies to define best practice mining and processing operations in this critical mineral province.

Potential Product Suite

The Titan Project has a high proportion of titanium minerals, but also benefits from an excellent ratio of other high value minerals including zircon and the rare earth elements contained in the minerals monazite and xenotime. Preliminary chemical analysis to date has highlighted the potential for Titan Project products to be sold into premium priced markets, with further test work underway to assess potential products and specifications.

In-situ grade & tonnes									
Zircon		**Rutile**		**Ilmenite**		**REE**		**Staurolite**	
%	*(Kt)*	*%*	*(Kt)*	*%*	*(Kt)*	*%*	*(Kt)*	*%*	*(Kt)*
0.25	**1,092**	**0.21**	**900**	**0.88**	**3,826**	**0.05**	**201**	**0.28**	**1,225**

Table 4: In-situ product grade and tonnes at 0.4% cut-off grade.

Titanium minerals

Titanium minerals found at the Titan Project are dominated by rutile and highly altered ilmenite, which are feedstocks for a variety of uses including for titanium dioxide, titanium metal and other applications including welding and nanomaterials. Natural rutile is a high-grade titanium dioxide feedstock (typical TiO_2 content of 92-95%), which commands a significant price premium in the titanium dioxide market. Ilmenite is also a titanium dioxide feedstock (typical TiO_2 content of 58-62%), which can be sold directly to pigment producers or can be used as a feedstock for synthetic rutile production.

Test work to date indicates that ilmenite mineral found at the Titan Project is likely to be suitable for the chloride ilmenite market, with a TiO_2 content greater than 58%. Additionally, the rutile product has the potential to be a high-grade feedstock, with a TiO_2 content of between 93% and 97%.

Zircon

Zircon is an opaque, hard mineral widely used in the production of ceramics, where it provides whiteness, strength and corrosion resistance, including in tiles, sinks, sanitary ware and tableware. Refractory linings and foundry castings also utilize zircon in their manufacturing to provide chemical and corrosion resistance. Zircon can also be used as a feedstock for production of zirconium metal, used in many advanced industries including clean energy, health and aerospace, with two zirconium metal producers currently operating in the USA.

Test work to date indicates that zircon mineral found at the Titan Project is likely to be suitable for the premium zircon market, with a ZrO_2+HfO_2 content greater than 65%, with the potential to be sold into the domestic U.S. zircon premium market.

Rare Earth Elements

Rare earth elements are used in many applications including battery alloys, catalysts, ceramics and metal alloys. However, it is the increasing demand for rare earths used in high strength permanent magnets found in power dense electric motors used in electric vehicles and wind turbines that makes up the majority of global consumption, accounting for ~90% of the global market by value in 2019 and expected to grow rapidly along with growth in EV and wind turbine production.

In particular, the heavy rare earths dysprosium and terbium are essential for the production of DyNdFeB (dysprosium neodymium iron-boron) magnets used in clean energy, military and high technology solutions. There is only minor production of dysprosium and terbium outside of China, and no material production within the USA, and the potential production of these heavy rare earths within the USA is strategic and highly valuable to the country’s leading defense, EV and clean energy sectors.

Test work to date has highlighted that the rare earth minerals at the Titan Project contain a high percentage of rare earth oxides (58.7%), with significant proportions of the highly valuable heavy rare earths terbium and dysprosium (2.3%) as well as the valuable light rare earths neodymium and praseodymium (21.2%) identified within Hyperion’s monazite and xenotime minerals.

Staurolite

Staurolite is a naturally occurring industrial mineral frequently used in industries including abrasive blasting, steel production and cement manufacturing. The U.S. abrasives market is large, with consumption estimated at around 2Mtpa. The majority of U.S. staurolite is currently supplied by The Chemours Company into the domestic abrasive market. Staurolite is also used in the USA as an additive in cement, especially in many east coast cement plants where relatively low alumina clays are used.

Preliminary analysis of the staurolite mineral at the Titan Project has highlighted a product with a low free silica content, enabling the potential for the material to be sold into the high value domestic, and international, abrasive blasting markets.

Drill results

The MRE incorporates the second and final 45-hole batch of results of the Phase 3 drilling program. Full results can be found in Appendix 1.

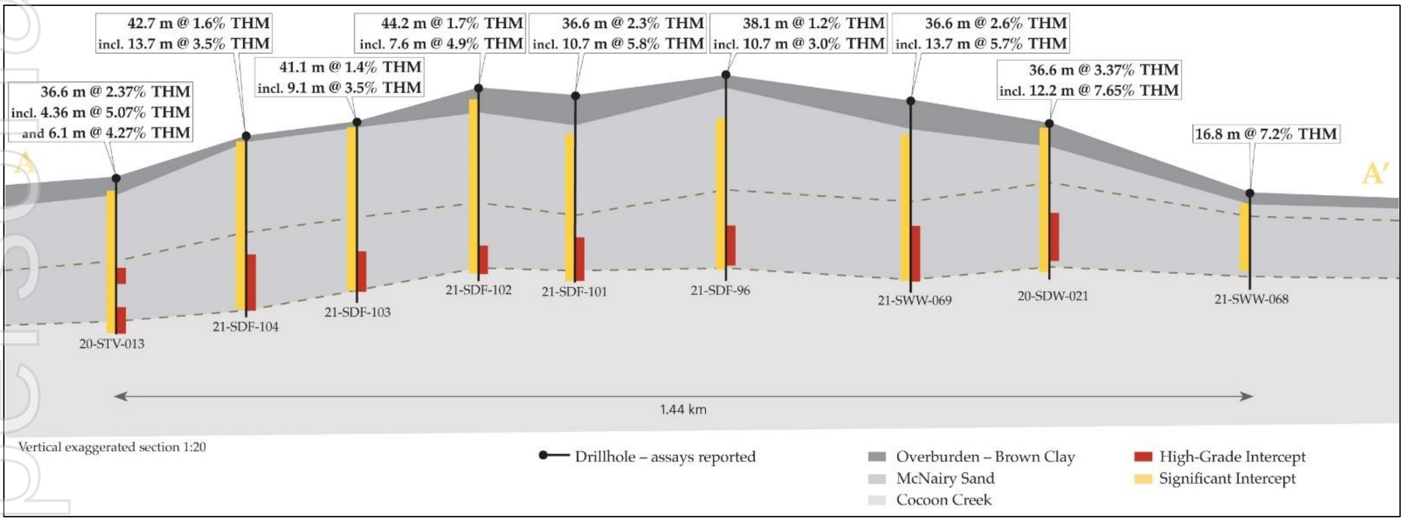

Figure 9: Phase 3 drill results cross section A – A’.

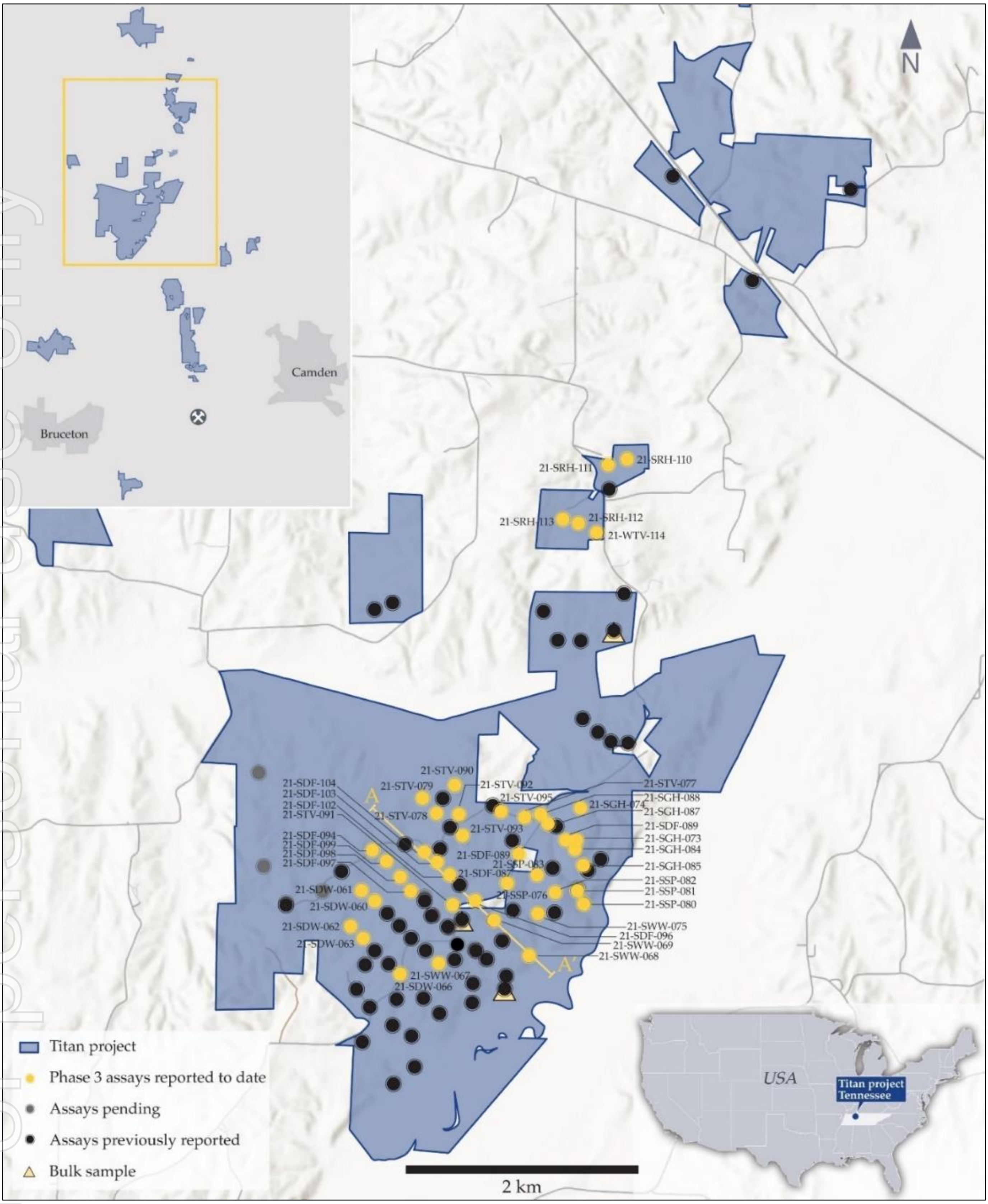

Figure 10: Phase 3 drill results plan view.

Geology and geological interpretation

The Titan Project's location in western Tennessee represents the eastern flank of the Mississippi Embayment, a large, southward plunging syncline within the Gulf Coastal Plain. This feature extends from southern Illinois to the north and to Mississippi and Alabama to the south. The embayment is filled with sediments and sedimentary rocks of Cretaceous to Quaternary age.

Figure 11: Mississippi embayment & Cretacious coastline.

The McNairy Sand Formation represents a pro-grading deltaic environment during a regressive sequence. This is evidenced by the coarsening upward sequence grading from the glauconitic clay rich Coon Creek Formation to the fine lower member of the McNairy Formation to the coarser upper member of the McNairy Formation.

The main mineralized zone at the Project is hosted stratigraphically in the lower member of the McNairy Formation. Mineralization averages 31 meters thick and has been traced, to date, for 6.2 kilometers along strike.

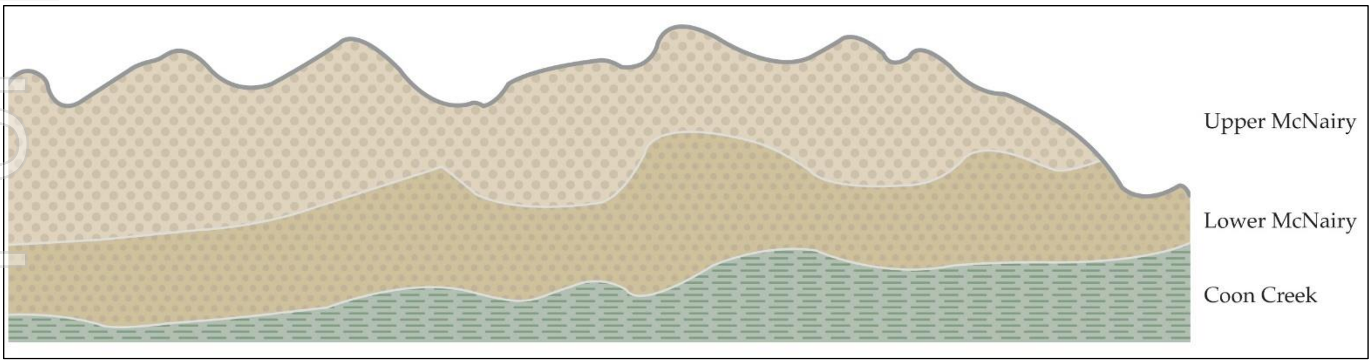

Figure 12: Idealized cross-section of McNairy Sand.

Drilling and sampling techniques

All drilling for the Project has been roto-sonic. This method alternates advancement of a core barrel and a removeable casing (casing is used when needed to maintain sample integrity). The core barrel utilized for this project is 4” in diameter with a 6” diameter outer casing. The core barrel is retrieved from the ground and the samples are recovered directly from the barrel into a plastic sleeve. All holes are drilled vertically. The sonic drilling method has been shown to provide representative unconsolidated mineral sands samples across a variety of deposits as it is a direct sampling method of the formation(s). At times water is used to create a head on the formation to help prevent run-up.

A roto-sonic drill rig, the Geoprobe 5140LS, utilized a 10 foot core barrel to obtain direct 5-foot samples of the unconsolidated geological formations hosting the mineralization in the Project area. All holes were drilled vertically which is essentially perpendicular to the mineralization. The sonic cores were used to produce approximately 2kg samples for heavy liquid separation as well as further mineralogical analysis. Each core is measured, and the recovery is calculated as length of recovered core divided by length drilled (typically 10’).

Some interpretation is involved as the material can expand or compact as it is recovered from the core barrel into the plastic sleeve. Samples are logged for lithological, geological, and mineralogical parameters in the field to help aid in determining depositional environment, major geologic units, and mineralized zones.

All samples are panned and estimates made for the %THM and %SL. Logging is both qualitative (sorting, color, lithology) and quantitative (estimation of %THM, %SL) to help support the integrity of the Exploration Results and Mineral Resource estimate. Photographs are taken of the sonic cores.

The unconsolidated sonic cores are sampled by splitting the core in half lengthwise using a machete then recovering an even fillet with a trowel along the entire length of the sample interval. Samples are collected directly to the pre-labeled/pre-tagged sample bags; the remaining sample is further split into a replicate/archival sample and what remains is used to backfill the drillhole.

Sample analysis methodology

Roto-sonic drill core samples, typically 1.5m, are sent to SGS NA facility in Lakefield, ON, Canada. Samples are subjected to standard mineral sand industry assay procedures of size fraction analysis, heavy-liquid separation, and chemical analysis. Samples are screened at 44-micron (325 mesh) for slimes and 595-micron (30 mesh) for oversize. An 85g aliquot of the -30/+325 sand is then submitted to methylene iodide diluted with acetone to target specific gravity of 2.95 g/cm^3, the greater than 2.95 g/cm^3 portion is dried and weighed to calculate the percent heavy minerals. The THM is calculated by adding the percent slimes and oversize to the total. Composites, based on geological domains, are then submitted for QEMSCAN analysis for mineralogical assemblage data.

Resource estimation methodology

The Mineral Resource occupies an area roughly 6.2km (north) by 3.6km (east); the MRE is further broken up into several areas based on land holdings (land agreements). These range from 0.5km (north) by 0.9km (east) for the smallest area to 5.1km (north) by 3.6km (east) for the largest area.

The base of mineralization ranges in RL from 90m to 110m above current sea level. Mineralization varies from 6m to 51m thick and averages 31m thick. Mineralization resides primarily in two (2) zones within the primary McNairy Sand unit. The grade interpolation was carried out using Vulcan software. Grade, slimes, and assemblage estimations were completed using inverse distance cubed (ID3) which is appropriate for this style of mineralization.

No THM top cut has been used or is deemed necessary for this deposit due to the geology, style, and consistency of the mineralization. Drill hole sample data was flagged with domain (zone) codes corresponding to the geological structure of the deposit and the domains imprinted on the model from 3-dimensional surfaces generated from geological interpretations. A primary search dimension of 212*425*3m (X*Y*Z) was used for all assay data. Successive search volume factors of 2 and 4 have been adopted to interpolate grade in areas of lower data density. A parent cell size of 100*200*1.5m was used. Parent cells are typically centered on the drill holes with a floating cell centered between drill holes along and across strike. A search orientation of 30 east of north was used to emulate the trend of the mineralization. No consistent plunge is apparent in the mineralization.

The Octant search option was used with minimum of 1 and a maximum of 5 samples per octant and a minimum of 2 octants being estimated to calculate the grade for a block. If the insufficient data was found within the first search, secondary and tertiary searches were used based on the search volume factors. In addition, a maximum of 2 samples were used from any particular drill hole.

Classification criteria

The resource classification has been predominantly determined by the drill hole density reflecting the geological confidence. Supporting data are of suitable quality for Resource Estimation. Resource material defined by sampling with an approximate density of 212mE-W by 425mN-S by 3mRL and having sufficient mineralogy data has been assigned an Indicated Resource classification, material defined by sampling with an approximate density of 305mE-W by 610mN-S by 3mRL with some mineralogy data has been assigned an Inferred Resource classification. Approximately 56% of the Mineral Resource is classified in the Indicated Mineral Resource category and approximately 44% is classified in the Inferred Mineral Resource category. Variograms are run to test spatial continuity within the selected geological domains. Down hole and directional variography are run using 'R' software and Vulcan Version 2021.3.

Cut-off grades

A nominal bottom cut of 0.4% THM is offered, based on preliminary assessment of resource value and anticipated operational cost evaluated through preliminary engineering work.

Mining and metallurgical methods and parameters

The MRE assumes that the deposit will be mined by standard mineral sands dry-mining methods that may include a combination of dozer push/dozer trap, and hydraulic excavator/shovel with a mobile mining unit. It has been assumed that ore will be transported to the wet concentrator plants after extraction via slurry pipeline(s).

Metallurgical testing has been conducted, with 3 bulk samples collected from both upper and lower mineralized horizons as well as spatially throughout the deposit footprint. Each bulk sample was processed by both wet (gravity) and dry (magnetic and electrostatic) methods to produce ilmenite, rutile, zircon, and monazite/xenotime concentrates.

Products were further analyzed by QEMSCAN, XRF and ICPMS to provide scoping-level product and quality information for use in assessing salability and markets. Product information has not been included in the block model at this stage of the Project.

About Hyperion

Hyperion's mission is to be the leading developer of zero carbon, sustainable, critical material supply chains for advanced American industries including space, aerospace, electric vehicles and 3D printing.

The Company holds a 100% interest in the Titan Project, covering over 6,000 acres of titanium, rare earth minerals, high grade silica sand and zircon rich mineral sands properties in Tennessee, USA. The Titan Project is strategically located in the southeast of the USA, with low-cost road, rail and water logistics connecting it to world class manufacturing industries.

Hyperion has secured options for the exclusive license to produce low carbon titanium metal and spherical powers using the breakthrough HAMR & GSD technologies. The HAMR & GSD technologies were invented by Dr. Z. Zak Fang and his team at the University of Utah with government funding from ARPA-E.

The HAMR technology has demonstrated the potential to produce titanium powders with low-to-zero carbon intensity, lower energy consumption, significantly lower cost and at product qualities which exceed current industry standards. The GSD technology is a thermochemical process combining low-cost feedstock material with high yield production and can produce spherical titanium and titanium alloy powders at a fraction of the cost of comparable commercial powders.

Hyperion has formed a technology partnership with EOS GmbH, the world's leading solution supplier in the field of industrial 3D printing of metals and plastics. The partnership aims to accelerate the deployment of Hyperion's HAMR and GSD technologies for the potential production of low cost, low-to-zero carbon titanium metal powders.

Hyperion also has signed an MOU to establish a partnership with Energy Fuels (NYSE: UUUU) that aims to build an integrated, all-American rare earths supply chain. The MOU will evaluate the potential supply of rare earth minerals from Hyperion's Titan Project to Energy Fuels for value added processing at Energy Fuels' White Mesa Mill. Rare earths are highly valued as critical materials for magnet production essential for wind turbines, EVs, consumer electronics and military applications.

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.

Forward looking statements are based on the Company and its management’s good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company’s business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company’s business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company’s control.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements, or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

Competent Persons Statement

The information in this announcement that relates to Exploration Results and Mineral Resources is based on, and fairly represents, information compiled and/or reviewed by Mr. Adam Karst, P.G., who is a Competent Person. Mr. Karst is an independent consultant to Hyperion Metals Limited. Mr. Karst is a Registered Member of the Society of Mining, Metallurgy and Exploration (SME) which is a Recognized Overseas Professional Organization (ROPO) as well as a Professional Geologist in the state of Tennessee. Mr. Karst has sufficient experience which is relevant to the style and type of mineralization present at the Titan Project area and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves” (the 2012 JORC Code). Mr. Karst consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

Appendix 1 – Drilling Results

Hole ID	Easting	Northing	Elev. (m)	Az. (°)	Dip (°)	Depth (m)		From (ft)	To (ft)	From (m)	To (m)	Intercept (m)	HMT (%)	Unit
21-SDW-060	390906.2	4000202.1	152.8	0	-90	61.0		60	180	18.3	54.9	15.2	**2.1**	**Upper McNairy, Lower McNairy**
21-SDW-061	390791.9	4000293.3	144.0	0	-90	51.8		20	45	6.1	13.7	7.6	**2.5**	**Upper McNairy**
21-SDW-063	390800.4	3999881.9	140.2	0	-90	48.8		130	160	39.6	48.8	15.2	**5.1**	**Upper McNairy, Lower McNairy**
21-SDW-066	391117	3999570.6	143.0	0	-90	51.8		90	160	27.4	48.8	21.3	**3.9**	**Upper McNairy, Lower McNairy**
							including	135	160	41.1	48.8	7.6	**9.8**	**Upper McNairy, Lower McNairy**
21-SWW-067	391450.9	3999659.5	152.4	0	-90	48.8		10	150	3	45.7	42.7	**1.7**	**Upper McNairy, Lower McNairy**
							including	130	150	39.6	45.7	6.1	**9.3**	**Upper McNairy, Lower McNairy**
21-SWW-068	392233.1	3999716.4	125.3	0	-90	24.4		10	65	3	19.8	16.8	**7.2**	**Upper McNairy, Lower McNairy**
21-SWW-069	391934	4000024.3	148.8	0	-90	48.8		30	150	9.1	45.7	36.6	**2.6**	**Upper McNairy, Lower McNairy**
							including	105	150	32	45.7	13.7	**5.7**	**Lower McNairy**
21-SGH-073	392656.2	4000703.9	148.1	0	-90	45.7		25	145	7.6	44.2	36.6	**1.7**	**Upper McNairy, Lower McNairy, Coon Creek**
21-SGH-074	392694.6	4000980.5	140.1	0	-90	42.7		15	55	4.6	41.1	16.8	**1.4**	**Upper McNairy, Lower McNairy**
21-SWW-075	392314.1	4000076.5	123.6	0	-90	18.3		15	55	4.6	16.8	12.2	**3.5**	**Lower McNairy**
21-SSP-076	392051.9	4000341.3	146.6	0	-90	45.7		35	135	9.1	41.1	32	**2.4**	**Upper McNairy, Lower McNairy**
							including	90	115	27.4	35.1	7.6	**6.1**	**Lower McNairy**
21-STV-077	392210.7	4000907.2	133.1	0	-90	36.6		30	100	9.1	30.5	21.3	**2.8**	**Upper McNairy, Lower McNairy**
21-STV-078	391447.8	4000949.6	132.9	0	-90	39.6		65	125	19.8	38.1	18.3	**2.9**	**Lower McNairy**
21-STV-079	391328.7	4001082.4	116.8	0	-90	33.5		40	100	12.2	30.5	18.3	**3.3**	**Lower McNairy**
21-SSP-080	392711.4	4000153	116.8	0	-90	18.3		0	20	0	6.1	6.1	**1.8**	**Upper McNairy, Lower McNairy**
21-SSP-081	392659.5	4000268.9	117.4	0	-90	15.2		0	45	0	13.7	13.7	**3.4**	**Lower McNairy**
21-SSP-082	392466.4	4000256.5	141.0	0	-90	39.6		0	120	0	36.6	36.6	**1.8**	**Upper McNairy, Lower McNairy**
							including	65	90	19.8	27.4	7.6	**3.5**	**Upper McNairy, Lower McNairy**
21-SSP-083	392310.5	4000409.5	139.8	0	-90	33.5		60	100	18.3	30.5	12.2	**3.2**	**Lower McNairy**
21-SGH-084	392642.2	4000625.1	144.5	0	-90	39.6		60	125	18.3	38.1	19.8	**2.7**	**Lower McNairy**
							including	110	125	33.5	38.1	4.6	**4.4**	**Lower McNairy**
21-SGH-085	392712.3	4000486.8	136.1	0	-90	33.5		30	95	9.1	29	19.8	**3.3**	**Upper McNairy, Lower McNairy**

Hole ID	Easting	Northing	Elev. (m)	Az. (°)	Dip (°)	Depth (m)		From (ft)	To (ft)	From (m)	To (m)	Intercept (m)	HMT (%)	Unit
21-SGH-086	392562.3	4000706.5	145.5	0	-90	42.7		25	130	7.6	39.6	32	**2.3**	Upper McNairy, Lower McNairy
							including	80	130	24.4	39.6	15.2	**3.8**	**Lower McNairy**
21-SGH-087	392411.5	4000848.6	145.1	0	-90	42.7		15	135	4.6	41.1	36.6	**1.5**	**Upper McNairy, Lower McNairy**
21-SGH-088	392350	4000929	145.4	0	-90	45.7		70	145	21.3	44.2	22.9	**1.7**	**Lower McNairy**
21-SDF-089	392155.7	4000592	146.7	0	-90	45.7		10	145	3	44.2	41.1	**2.3**	**Upper McNairy, Lower McNairy**
							including	90	145	27.4	44.2	16.8	**3.3**	**Lower McNairy**
21-STV-090	391609.2	4001190.9	141.3	0	-90	48.8		40	150	12.2	45.7	33.5	**2**	**Upper McNairy, Lower McNairy**
21-STV-091	391579.7	4000160.9	148.0	0	-90	42.7		70	130	21.3	39.6	18.3	**2**	**Lower McNairy**
21-STV-092	391641.8	4000938.5	137.5	0	-90	39.6		70	125	21.3	38.1	16.8	**2.9**	**Lower McNairy**
21-STV-093	391671.2	4000756	134.2	0	-90	39.6		45	120	13.7	36.6	22.9	**3.3**	**Lower McNairy**
21-STV-094	390890	4000639.2	146.0	0	-90	51.8		25	150	7.6	45.7	38.1	**1.6**	**Upper McNairy, Lower McNairy**
							including	120	150	36.6	45.7	9.1	**4**	**Lower McNairy**
21-STV-095	392006.9	4000957.8	125.2	0	-90	24.4		0	70	0	21.3	21.3	**3**	**Lower McNairy**
21-SDF-096	391773.9	4000195.4	154.9	0	-90	51.8		35	160	10.7	48.8	38.1	**1.2**	**Upper McNairy, Lower McNairy**
							including	125	160	38.1	48.8	10.7	**3**	**Lower McNairy**
21-SDF-097	391218.3	4000284.1	145.9	0	-90	48.8		20	145	6.1	44.2	38.1	**1.2**	**Upper McNairy, Lower McNairy**
							including	110	145	33.5	44.2	10.7	**3.6**	**Lower McNairy**
21-SDF-098	391129.3	4000406.1	147.7	0	-90	54.9		60	165	18.3	50.3	32	**2.4**	**Upper McNairy, Lower McNairy**
							including	130	165	39.6	50.3	10.7	**5.9**	**Lower McNairy**
21-SDF-099	391010.3	4000543.3	132.9	0	-90	39.6		20	125	6.1	38.1	32	**1.7**	**Upper McNairy, Lower McNairy**
							including	85	125	25.9	38.1	12.2	**3.8**	**Lower McNairy**
21-SDF-102	391555.6	4000419.9	151.8	0	-90	48.8		10	155	3	47.2	44.2	**1.7**	**Upper McNairy, Lower McNairy, Coon Creek**
							including	130	155	39.6	47.2	7.6	**4.9**	**Lower McNairy, Coon Creek**
21-SDF-103	391448.7	4000530.8	143.3	0	-90	45.7		5	140	1.5	42.7	41.1	**1.4**	**Upper McNairy, Lower McNairy**
							including	110	140	33.5	42.7	9.1	**3.5**	**Lower McNairy**
21-SDF-104	391338.9	4000619	139.6	0	-90	45.7		5	145	1.5	44.2	42.7	**1.6**	**Upper McNairy, Lower McNairy**
							including	100	145	30.5	44.2	13.7	**3.5**	**Lower McNairy**
21-SRS-105	391322.2	3985368.6	160.5	0	-90	21.3	No Significant Intercept							**NA**
21-SRS-106	391376.6	3985331.5	162.4	0	-90	21.3	No Significant Intercept							**NA**

Hole ID	Easting	Northing	Elev. (m)	Az. (°)	Dip (°)	Depth (m)		From (ft)	To (ft)	From (m)	To (m)	Intercept (m)	HMT (%)	Unit
21-SRS-107	391086.1	3985444.9	166.1	0	-90	25.9	No Significant Intercept							**NA**
21-SRH-110	393133.4	4003974.7	126.2	0	-90	27.4		5	65	1.5	19.8	18.3	**1.9**	**Lower McNairy**
							including	5	40	1.5	12.2	10.7	**2.7**	**Lower McNairy**
21-SRH-111	392969.1	4003928.9	131.2	0	-90	33.5		*30*	*60*	9.1	18.3	9.1	**3**	**Lower McNairy**
21-SRH-112	392572.2	4003465.5	141.0	0	-90	48.8		10	150	3	45.7	42.7	**1.4**	**Upper McNairy, Lower McNairy**
							including	65	110	19.8	33.5	13.7	**2.5**	**Lower McNairy**
21-SRH-113	392706.4	4003429	144.1	0	-90	45.7		5	135	1.5	41.1	39.6	**1.5**	**Upper McNairy, Lower McNairy**
								80	120	24.4	36.6	12.2	**2.9**	**Lower McNairy**
21-SRH-114	392862.1	4003347.4	137.7	0	-90	39.6		40	95	12.2	29	16.8	**2.4**	**Lower McNairy**

Table 5: Final Phase 3 drill results incorporated into the MRE.

Appendix 2 – JORC Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• A roto-sonic drill rig, the Geoprobe 5140LS, utilized a 10 foot core barrel to obtain direct 5-foot samples of the unconsolidated geological formations hosting the mineralization in the project area. All holes were drilled vertically which is essentially perpendicular to the mineralization. The sonic cores were used to produce approximately 2kg samples for heavy liquid separation as well as further mineralogical analysis.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• All drilling thus-far for the project has been roto-sonic. This method alternates advancement of a core barrel and a removeable casing (casing is used when needed to maintain sample integrity). The core barrel utilized for this project is 4" in diameter with a 6" diameter outer casing. The core barrel is retrieved from the ground and the samples are recovered directly from the barrel into a plastic sleeve. All holes are drilled vertically.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Each core is measured, and the recovery is calculated as length of recovered core divided by length drilled (typically 10'). Some interpretation is involved as the material can expand or compact as it is recovered from the core barrel into the plastic sleeve. • The driller and geologist keep a careful eye on formation run-up into the casing as the core barrel is run down the hole for sample collection. Any run-up is removed from the casing prior to sampling. • The sonic drilling method has been shown to provide representative unconsolidated mineral sands samples across a variety of deposits as it is a direct sampling method of the formation(s). At times water is used to create a head on the formation to help prevent run-up.

Criteria	JORC Code explanation	Commentary
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Samples are logged for lithological, geological, and mineralogical parameters in the field to help aid in determining depositional environment, major geologic units, and mineralized zones. All samples are panned and estimates made for the %THM and %SL. • Logging is both qualitative (sorting, color, lithology) and quantitative (estimation of %THM, %SL) to help support the integrity of the Exploration Results and Mineral Resource estimate. Photographs are taken of the sonic cores. • Total depth of the drillhole is recorded. Samples are collected at regular (5 foot) intervals unless the geology/mineralogy warrant altering this as to co-mingle samples across major geological/mineralized boundaries. The total hole is logged by the field geologist and recorded in custom logging software on a Panasonic Toughbook (or similar) laptop. The data is transferred weekly to the project's GeoSpark database.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The unconsolidated sonic cores are sampled by splitting the core in half lengthwise using a machete then recovering an even fillet with a trowel along the entire length of the sample interval. • Samples are collected directly to the pre-labeled/pre-tagged sample bags; the remaining sample is further split into a replicate/archival sample and what remains is used to backfill the drillhole. • A chip tray is maintained for each hole to keep a representative sample for each interval for later use during geological interpretation or between holes in the field. • Field duplicates are collected at a 3% rate by splitting the sample from the sonic core as described above into two samples bags. • The sample size (approx. 2kg) is appropriate for the type of material and concentration of the THM mineralization.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Standard mineral sands industry assay procedures (sizing 44-micron [325 mesh] for slimes and 595-micron [30 mesh] for oversize) heavy-liquid separation of an 85g split of the -30/+325 sand using methylene iodide. For mineralogy, QEMSCAN analysis was utilized. • Accuracy monitoring will be achieved through submission of in-house heavy mineral sand standard reference materials (SRM) developed specifically for the project. At least 5 repeat HLS of these materials were analyzed to establish an average value and standard deviation. A low-grade and a high-grade SRM were produced with materials (HMs and silica sand) from the project area. A quality control sample failure is any single sample 3 standard deviations from the true value for the comparison for each sample, or two out of three consecutive samples between 2 and 3 standard deviations, on the same side of the mean value (i.e. both above or both below the mean value). Should the errors for a particular batch exceed these limits, the section of a batch bracketed by the SRM samples (i.e. number samples on either side) should be re-analyzed. Overall, the objective of the quality assurance program for resource purposes should be a pass rate of >95%. A lower pass rate, on the order of 90% is acceptable for exploration purposes. Eleven SRMs (6 high and 5 low grade) were submitted during the

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>drilling campaign for analysis and results were all within 3 standard deviation of the mean of the SRM.
• Sampling precision will be monitored by selecting a sample interval likely to be mineralized and taking a second fillet sample over the same sample interval. These samples should be consecutively numbered after the primary sample and recorded in the sample database as “field duplicates” and the primary sample number recorded. Field duplicates should be collected at the rate of approximately 3 in 100 samples and ideally should be collected when sampling mineralized sonic core intervals containing visible THM (panning). Random sampling precision will be monitored by duplicating core samples. Analytical precision will also be monitored using HLS duplicates that will need to be requested from the laboratory at a similar rate (i.e. 3 in 100 samples), with the duplicate HLS analysis to be completed on the duplicate core sample. Data from these two types of duplicate analyses can be used to constrain sampling variance at different stages of the sampling and preparation process. It is critical to record the primary sample of the field duplicate. By convention, this should be the preceding sample. Field duplicates should have an average coefficient of variation (CoV) <10%, whereas laboratory duplicates should have an average CoV <5%. For the drilling results reported, 83 field duplicates were submitted to the laboratory with results showing a CoV of less than 10%.
• The use of an 85 g sub-sample for heavy liquid separation (HLS) results in a relative precision of 4% based on repeat analyses of standard reference materials (SRM) at SGS. This sub-sample mass is therefore appropriate for the grain size being sampled.
• Preliminary analysis of limited field duplicate splits indicates a relative precision of 31, indicating sampling of drill material presents the greatest uncertainty in the sampling procedure.
• QEMSCAN analysis of the Heavy Mineral Concentrate (HMC) averages 7.5% quartz. 15 low grade samples showed elevated quartz with values ranging from 18 to 51% of the HMC. The remaining samples produced an average of 5.27% quartz.
• QEMSCAN (Qualitative Evaluation of Minerals by Scanning Electron Microscopy) is the state of the art, top of the range automated mineral analyser. It is an analytical tool that produces efficient and accurate information on minerals. This tool has been custom developed for the mining industry.
• QEMSCAN Ti percentage classification:
<table>
<tr><th>Mineral ID</th><th>Ti%</th></tr>
<tr><td>Rutile</td><td>59.9</td></tr>
<tr><td>Leucoxene</td><td>42.0</td></tr>
<tr><td>Pseudorutile</td><td>37.7</td></tr>
<tr><td>Ilmenite</td><td>34.5</td></tr>
</table>
• The Valuable Heavy Mineral (VHM) is calculated from the QEMSCAN data using the percent of rutile+leucoxene+pseudorutile+ilmenite+zirconium+REE in the sink fraction of the sample.</td></tr>
<tr><td>Verification of sampling and assaying</td><td>• The verification of significant intersections by either independent or alternative company personnel.</td><td>• The assay data are independently visually validated and cross-checked against the geology. This is done as the results are received and prior to geological modeling and resource estimation.
• Twinned holes have not been used. Analysis of twin data for other similar deposits indicate that they</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	• *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	are of limited value due to the inherent variably over small distances for this style of mineralization and it is the assessment of the Competent Person that the absence of twin data is not material to the accuracy of the Exploration Results and Resource Estimate. Twinned holes will be used if there is a change in drilling methods during the project to assess whether any bias exists with the different methods and how this bias may impact the integrity of the Exploration Results or Mineral Resource Estimate. • Data is collected in the field using both a field computer and a field notebook. Data is transferred weekly to the company network and verified against the field log book if questions arise. The data are checked and verified by the geologist completing the resource estimation to ensure there are no errors. Lab data are added as they become available and verified against the field geologist's visual THM grade and SL estimates. Any data in question that is not able to be rectified are removed from the database and not used in the reporting of Exploration Results or the estimation of the Mineral Resource. • The data appear to be in good order with no significant quality issues identified that will be material to the Exploration Results and Mineral Resource Estimate.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All drillholes are surveyed after drilling with a hand-held GPS unit and the X and Y coordinates recorded in the project's database by the field geologist. Elevation data for each collar has been determined using publicly available topographic data. • The coordinate system used for the project is UTM (Zone16N).
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drillhole spacing varies at this early point in the project. Drill samples are collected at regular intervals (5 foot). • Compositing of samples downhole and across/along strike based on geological/mineralized units may be utilized for assemblage and quality parameters.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The drilling and sampling have been orientated such to test the thickness and grade of the deposit(s). Holes are drilled vertically to give true thickness of the gently dipping mineralized units.
Sample security	• *The measures taken to ensure sample security.*	• Samples remain in the custody of the field geologist from time of collection until time of delivery to the project's temporary storage location which is a secure third-party storage unit. • Samples are placed in rice bags and a red security tag secure the top. These tags are verified by the

Criteria	JORC Code explanation	Commentary
		lab to guarantee all sample bags are intact.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No third-party review of the sampling techniques employed have been conducted. Only internal reviews by the Competent Person who is considered to have expertise in the drilling/sampling methods has been utilized.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• All areas reported are either owned or controlled under exclusive option agreements with the owners of the mineral rights. • The Project currently comprises approximately 6,111 acres of surface and associated mineral rights in Tennessee, of which approximately 137 acres are owned and approximately 5,974 acres are subject to exclusive option agreements. These exclusive option agreements, upon exercise, allow the Group to purchase or, in some cases lease, the surface property and associated mineral rights. Negotiations are ongoing to secure additional parcels within the deposits. • No known impediments to obtaining a license to operate. License to operate is based on obtaining land access through mining leases with individual landowners as well acquiring local, state, and federal permits.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Several Heavy Mineral Sand (HMS) exploration campaigns have focused on this region over the past 60 years, with DuPont reportedly being the first company to investigate this region, followed by Kerr-McGee Chemical Corporation that had exploration success but never commenced mining. BHP Titanium Minerals had an interest in the region in the 1990's and Mineral Recovery Systems, a company associated with Altair International Inc., had significant activities in the region in the late 1990's, including land acquisition, drilling and metallurgical studies.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The deposits are Cretaceous mineral sands deposits located in the Mississippi Embayment region of the U.S. These deposits consist of reworked deltaic sediments hosting THM mineralization. The deposits overlay other clay rich marsh and lagoonal sediments and are overlain by more recent fluvial sediments.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified*	• A total of 107 drill holes for 2,626 THM assay samples (heavy liquid) and 181 THM and composite mineralogy (QEMSCAN) have been completed to-date. A summary of representative THM intersections from the drilling is presented in tables in the main text and on the accompanying cross section(s).

Criteria	JORC Code explanation	Commentary
	on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No lower cut-offs have been applied. • Sample interval lengths are typically 5 feet. • No metal equivalent values are used in this report.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Drillholes are vertical and drilled from ground surface through the entire mineralized thickness typically terminating in the Coon Creek Formation. The geological units in this area are near flat lying (slight westward dip) so mineralized thicknesses are close to true.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Figures in text.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Representative reporting of low and high grades has been employed within this report.
Other substantive	• *Other exploration data, if meaningful and material, should be reported including (but not*	• None at this time material to the reporting of exploration results.

Criteria	JORC Code explanation	Commentary
exploration data	*limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Additional drilling within the deposits as agreements are negotiated on new properties is required to better define lateral extents of mineralization and to increase the geological confidence.

Section 3 Estimation and Reporting of Mineral Resources
(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• The geologic and sample field data collected for this project have been collected in the field on sequentially numbered field logging tickets that have removeable sample ID tags that are placed in each sample bag. The data from the tickets are then entered into the project's GeoSpark database daily. Laboratory data is received in spreadsheets from the contract laboratory and are then uploaded and correlated to collar and geologic data by sample ID. • All data is visually inspected in cross-section as a verification.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person has visited the site multiple times during drilling operations and sample collection (including bulks) and is intricately familiar with the deposit's geology and site conditions from both current and past experience in this area.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The confidence in the geological interpretation is moderate at this stage of the project based on the available data density. The geological style of mineralization (flood-tidal/deltaic) is generally regarded as consistent based on observations in this area by the CP as well as the available literature. The Titan Project deposit comprises several stacked zones of heavy mineral mineralization separated by zones barren of significant mineralization including an "upper" (fore shore zone) and "lower" (lower shore zone) sedimentary package sitting on top of the Coon Creek

Criteria	JORC Code explanation	Commentary
		formation which represents a deeper marine unit in the regressive sequence. • The geological interpretations for this deposit have been developed based on a review of the available literature on the McNairy sand and associated sedimentary units in the area as well direct drilling and sampling including logging sonic cores which provide the highest level of visual geologic interpretation. • No other interpretations have been considered as the geology and style of mineralization are well understood. • Appropriate search ellipse size has been used to control both horizontal and vertical mineralization during Resource Estimation with verification against geologic horizons. • Grade continuity within the mineralized zones appears to be mainly affected by depositional environment rather than basement features, structural changes, etc. As the project moves to the Feasibility study and finally Execute phases, additional in-fill drilling will mitigate this risk.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The Titan Project deposit and Mineral Resource occupies an area roughly 6.2km (north) by 3.6km (east); the resource is further broken up into several areas based on landholdings (land agreements). These range from 0.5km (north) by 0.9km (east) for the smallest area to 5.1km (north) by 3.6km (east) for the largest area. The base of mineralization ranges in RL from 90m to 110m above current sea level. Mineralization varies from 6m to 51m thick and averages 31m thick. Mineralization resides primarily in two (2) zones within the primary McNairy Sand unit.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of*	• The grade interpolation was carried out using Vulcan software. Grade, slimes, and assemblage estimations were completed using inverse distance cubed (ID3) which is appropriate for this style of mineralization. • No THM top cut has been used or is deemed necessary for this deposit due to the geology, style, and consistency of the mineralization. • Drill hole sample data was flagged with domain (zone) codes corresponding to the geological structure of the deposit and the domains imprinted on the model from 3-dimensional surfaces generated from geological interpretations. • A primary search dimension of 212*425*3m (X*Y*Z) was used for all assay data. Successive search volume factors of 2 and 4 have been adopted to interpolate grade in areas of lower data density. • A parent cell size of 100*200*1.5m was used. Parent cells are typically centered on the drill holes with a floating cell centered between drill holes along and across strike.

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	model data to drill hole data, and use of reconciliation data if available.	• A search orientation of 30 east of north was used to emulate the trend of the mineralization. No consistent plunge is apparent in the mineralization. • The Octant search option was used with minimum of 1 and a maximum of 5 samples per octant and a minimum of 2 octants being estimated to calculate the grade for a block. If insufficient data was found within the first search, secondary and tertiary searches were used based on the search volume factors. In addition a maximum of 2 samples were used from any particular drill hole. • No mining for THM has taken place in this area therefore no production data was available for development of the Mineral Resource. • Staurolite, which is a typical mineral sands by-product, is being considered for this project. • No deleterious elements have been included in the resource estimation. No analysis for deleterious elements has been done at this time. • No consideration of mining units has been incorporated into the resource estimation. The deposit is large, with zones of potential over- and inter-burden and is amenable for open cut mining using standard dry mining methods. However, in some areas “top to bottom” mining is being considered and as such, some lower grade material is being considered in the Mineral Resource as it would likely be mined and does contain recoverable THMs. • No correlation between variables has been considered. Heavy mineral is variant. • Due to flat-lying nature of the geology and subsequent mineralization as well as the fact that mineralized zones/horizon typically do not have sharp boundaries, wireframe constraints on interpolation were not used in the development of the Mineral Resource. • Grade cutting or capping was not required for this deposit. • Validation of the model was done by comparing model statistics to drill data statistics and visual comparison of drill and model grades in section.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• The tonnages in the Mineral Resource are estimated on a dry basis. Moisture content was determined during the bulk density testing.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Nominal grade cut-offs of 1.0 per cent THM have been chosen at this early scoping study stage of the project. These grades were chosen based on initial scoping level study engineering work suggesting these grades could allow economic extraction and are driven by grade, slimes, and assemblage.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects*	• The scoping study assumes that this deposit will be mined by standard mineral sands dry-mining methods that may include a combination of dozer push/dozer trap, truck and shovel, and hydraulic excavator/shovel/dragline.

Criteria	JORC Code explanation	Commentary
	for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	Ore will be transported to the wet concentrator plants(s) after extraction via truck or slurry pipeline(s).
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Metallurgical testing has been conducted as part of the scoping study from 3 bulk samples collected from both upper and lower mineralized horizons as well as spatially throughout the deposit footprint. Each bulk sample was processed by both wet (gravity) and dry (magnetic and electrostatic) to produce ilmenite, rutile, zircon, and monazite/xenotime concentrates. Both wet and dry processing recoveries were calculated. Products were further analyzed by QEMSCAN, XRF and ICPMS to provide scoping-level product and quality information for use in assessing salability and markets. Product information has not been included in the block model at this stage of the project.
Environmen-tal factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Regulated wetlands are present within the deposit areas. These areas will be professionally delineated during the feasibility study stages. Only publicly available significant wetlands/water bodies have been considered in the Mineral Resource estimate (not included). No other environmental factors or assumptions have been made. It is assumed that minor wetlands included in the Mineral Resource estimate can be permitted and mined with the associated offset credits commonly available/used at other similar mineral sands operations in the U.S.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• The bulk density chosen (1.65 t/m^3) was developed by collecting 200 samples from the various geologic zones (upper/lower mineralized and upper/lower non-mineralized) and conducting bench-scale BD testing. This testing was performed by taking 2" sections of the 4" sonic core, drying them to calculate the percent moisture, and then weighing them. The range of values derived (1.38 t/m^3 to 1.82 t/m^3) are considered appropriate and similar to those at other similar mineral sands deposits being mined for THMs. As this project is in the scoping study stage, a more detailed application of zone-specific BD is not used.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The resource classification has been predominantly determined by the drill hole density reflecting the geological confidence. Supporting data is of suitable quality for Resource Estimation. Resource material defined by sampling with an approximate density of 212mE-W by 425mN-S by 3mRL and having sufficient mineralogy data has been assigned an Indicated Resource classification, material defined by sampling with an approximate density of 305mE-W by 610mN-S by 3mRL with some mineralogy data has been assigned an Inferred Resource classification. Approximately 56% of the Mineral Resource is classified in the Indicated Mineral Resource category and approximately 44% is classified in the Inferred Mineral Resource category.

Criteria	JORC Code explanation	Commentary
		• Down hole and directional variography are run using 'R' software and Vulcan Version 2021.3. Variograms are run to test spatial continuity within the selected geological domains. • It is the view of the Competent Person that the frequency and integrity of data, and the Resource Estimation methodology are appropriate for this style of mineralization and support the Resource Classifications applied.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• A review of the current Resource Estimation has been completed by the Competent Person as well as peer-reviewed internally. No issues with the current Titan Project Resource Estimate have been noted. No external review of the current Resource Estimation has been done at this time but will likely be conducted if this project moves forward to the feasibility study stage(s).
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• Indicated and Inferred Mineral Resource classifications have been assigned to the deposit as per the guidelines set out in the 2012 JORC code. It is the view of the Competent Person that the frequency and integrity of data, and the Resource Estimation methodology are appropriate for this style of mineralization and support the Resource Classifications applied. • The statement relates to the global estimate of tonnes and grade. • No production data is available - not in production.