IPERIONX TITAN DFS CONFIRMS HIGH-RETURN U.S. RARE EARTHS AND CRITICAL MINERALS PROJECT

U.S. Government supported Definitive Feasibility Study delivers US$813 million after-tax NPV$_8$, 39% IRR and US$1.9 billion after-tax free cash flow from an initial 14-year mine plan producing heavy rare earth concentrate, titanium minerals and zircon in Tennessee, U.S.A.

IperionX Limited (NASDAQ: IPX, ASX: IPX) (IperionX or Company) is pleased to announce the results of the Definitive Feasibility Study (DFS or Study) for the Company's 100%-owned Titan Critical Minerals Project (Titan or Project), located near Camden, Tennessee, United States.

The DFS confirms Titan as a large-scale, technically robust and high-return critical minerals project designed to produce titanium, zircon and a heavy rare earth concentrate from a single domestic resource in the United States. The Study underpins an initial 14-year mine plan based entirely on Proved and Probable Ore Reserves, with no Inferred Mineral Resources included in the Production Target.

- **Compelling after-tax returns:** DFS delivers after-tax NPV$_8$ of US$813 million, after-tax IRR of 39% and an after-tax payback period of 3.6 years
- **Significant cash generation:** Forecast life-of-mine EBITDA of US$2.8 billion and after-tax free cash flow of US$1.9 billion over an initial 14-year mine plan
- **Capital-efficient staged development:** Phase 1 development capital of US$228.1 million and Phase 2 incremental capital of US$153.2 million, for total development capital of US$381.3 million
- **Strong scale-up to Phase 2 cash flow:** Phase 2 forecast average annual EBITDA of US$226 million and average annual after-tax free cash flow of US$172 million.
- **Maiden Ore Reserve:** Reserves of 117 million tons at 3.2% THM, containing 3.7 million tons THM, with approximately 80% of Ore Reserves classified as Proved
- **High-value critical mineral products:** Multi-critical mineral platform for American supply-chains from a single domestic resource base, including rare earths, titanium minerals and zircon. Phase 2 annual production forecast of approximately 5,287 tpa HREC (Heavy Rare Earth Concentrate), 118,658 tpa ilmenite, 24,656 tpa rutile and 65,668 tpa zircon concentrate
- **Heavy rare earth leverage:** Titan HREC contains strategically important heavy rare earths dysprosium, terbium and yttrium (Dy, Tb, Y) and other heavy rare earth elements representing a large share of HREC basket value. The heavy rare earths are vital for U.S. supply chains for high-performance magnets, defense, advanced ceramics, aerospace, and semiconductor applications
- **Titanium and zircon critical minerals:** Titan is positioned as a near-term, U.S.-based critical minerals platform for titanium and zircon critical minerals for downstream domestic metal production
- **Simple, modular execution pathway:** Titan is a near-surface, free-dig mineral sands development with no blasting or hard-rock crushing, using industry standard wet concentration, flotation and dry mineral separation
- **U.S. infrastructure advantage:** Titan Project is located in west Tennessee near road, rail, barge, power, water and gas infrastructure, with access to an established regional industrial workforce
- **U.S. Government-supported DFS pathway:** The DFS was supported under U.S. Government IBAS-related funding, reinforcing Titan's strategic relevance to resilient domestic critical minerals and titanium supply chains for defense, aerospace, advanced manufacturing, energy and robotics
- **Strategic U.S. minerals-to-metals platform:** Titan is positioned to underpin domestic critical mineral feedstock for U.S. heavy rare earth, titanium, zirconium and advanced materials supply chains, while complementing IperionX's downstream titanium metal technologies and Virginia manufacturing platform

IperionX CEO Taso Arima said:

"The Titan DFS confirms Titan as one of the most compelling, shovel-ready rare earth and critical minerals development opportunities in the United States.

The investment case is powerful: an after-tax NPV_8 of US$813 million, after-tax IRR of 39.4%, US$1.9 billion of after-tax free cash flow and a 3.6-year payback. These outcomes are underpinned by key mine-area permits already in place, a Proved and Probable Ore Reserve base, a modular staged development pathway, conventional mineral sands processing, established infrastructure and a premier U.S. critical minerals jurisdiction.

What makes Titan exceptional is the combination of strong economics, multi-critical-mineral diversity and direct relevance to U.S. supply-chain security. Titan is designed to produce a heavy rare earth concentrate enriched in dysprosium, terbium and yttrium, together with titanium minerals and zircon concentrate. These are critical feedstocks for high-performance permanent magnets, aerospace and defense systems, semiconductors, thermal barrier coatings, nuclear materials, zirconium and hafnium pathways, advanced ceramics and next-generation manufacturing.

Titan is the leading asset of Tennessee's Big Sandy Critical Minerals Province — a large-scale, high-grade U.S. critical minerals system with the potential to become the largest domestic source of heavy rare earths, titanium and zircon minerals

For IperionX, Titan is the cornerstone asset for an integrated U.S. critical minerals-to-metals strategy, connecting Tennessee rare earth and critical mineral feedstocks with downstream rare earth processing, permanent magnets, titanium metal production and American advanced manufacturing.

Our objective is clear: to build a resilient, scalable and domestic critical minerals-to-metals platform that strengthens America's defense industrial base, reduces reliance on foreign-controlled supply chains and creates long-term value for IperionX shareholders."

This announcement has been authorized for release by the CEO and Managing Director.

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DFS METRICS

A NEAR TERM U.S. CRITICAL MINERALS PLATFORM WITH ROBUST ECONOMICS

AFTER-TAX NPV

US$813M

39.4% IRR

DEVELOPMENT CAPEX

US$381M

Phase 1: US$228M
Phase 2: US$153M

LIFE OF MINE EBITDA AND FCF

US$2.8B

US$1.9B FCF

HEAVY RARE EARTH CONCENTRATE[1]

~5,300 tpa

Heavy rare earth concentrate

TITANIUM MINERALS[1]

~143,300 tpa

Rutile: ~24,700 tpa
Ilmenite: ~118,700 tpa

ZIRCON CONCENTRATE[1]

~65,700 tpa

Zircon concentrate

Figure 1: Key metrics from Titan DFS.

TITAN MINERAL PRODUCTS CONTAIN THE METAL REQUIRED FOR AN ELECTRIFIED FUTURE

37,000
BOEING 787s

13,000,000
Electric Vehicles

5,700,000
Humanoid Robots

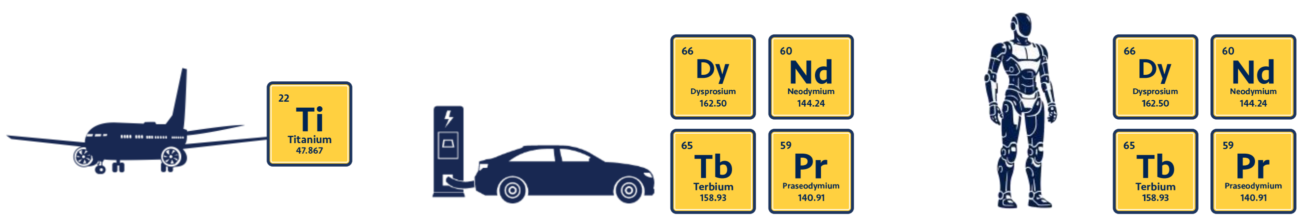

Figure 2: Titan's projected LOM production of ilmenite and rutile and HREC are estimated to contain sufficient titanium and NdPr-material to support the production of ~37,000 Boeing 787s, ~13 million electric vehicles, and ~5.7 million humanoid robots[1].

[1] Figures shown are rounded. Based on Titan's annual Phase 2 projected and LOM projected production of titanium in ilmenite and rutile, and NdPr in HREC oxides. IPX estimates for material intensities for various end-use applications. Sources: Adamas Intelligence; Benchmark Minerals; ORNL; DoE; MDPI Minerals 2023, 13, 1274; Resources, Conservation & Recycling (2025) 107966

METRIC	UNIT	PHASE 1	PHASE 2
Mine life	*Years*	1-4	5-14
Annual ore feed	*Mt pa*	3.5	10
Ore and waste	*Mt*	117.0 Mt ore; 95.6 Mt waste (strip ratio: 0.82)	
Total development capital	*US$*	$228.1M	$153.2M
Operating costs	*US$/t ore*	$13.31	$10.57
Total LOM EBITDA	*US$*	$2.8B	
Total after-tax free cash flow	*US$*	$1.9B	
Phase 2 avg. annual EBITDA	*US$ pa*	$226M	
Phase 2 avg. annual after-tax FCF	*US$ pa*	$172M	
After-tax NPV_8	*US$*	$813M	
After-tax IRR	*%*	39.4%	
After-tax payback period	*Years*	3.6	
Phase 2 annual production	*tpa*	HREC: 5,287	
		Ilmenite: 118,658	
		Rutile: 24,656	
		Zircon concentrate.: 65,668	

Table 1: Summary DFS metrics[1].

[1] Units throughout the DFS are stated in metric tons

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DFS STRATEGIC CONTEXT

Titan Project Overview

The Titan Critical Minerals Project is IperionX's flagship U.S. critical minerals development, located in west Tennessee approximately 80 miles west of Nashville, near the town of Camden. Titan benefits from an established industrial setting with access to road, rail and barge logistics, power, water, gas infrastructure and a skilled regional workforce.

The Definitive Feasibility Study (DFS) confirms Titan as a large-scale, shovel-ready U.S. critical minerals asset with compelling project economics, a diversified multi-product revenue base and a conventional execution pathway. The project is designed to produce heavy rare earth concentrate, titanium minerals and zircon concentrate from the McNairy Formation within the Big Sandy Critical Minerals Province.

IperionX commenced exploration at Titan in 2020 and has advanced the project through resource definition, technical studies, permitting and now completion of the DFS. The DFS was supported by U.S. Government Industrial Base Analysis and Sustainment-related funding, with approximately US$5 million allocated to accelerate Titan to feasibility-study status within IperionX's broader U.S. minerals-to-metals critical supply chain development program.

The DFS evaluates an initial 14-year mine plan and staged processing strategy. At Phase 2 run-rate, Titan is forecast to produce approximately **5,287 tpa of heavy rare earth concentrate (HREC)**, **118,658 tpa of ilmenite**, **24,656 tpa of rutile** and **65,668 tpa of zircon concentrate**.

Titan's development plan is modular and staged. Phase 1 is designed for the initial four years of operations, followed by a scale-up to Phase 2 for the remaining ten years. The process route is conventional and scalable, using contractor excavator-and-truck mining, ROM ore conveying, wet concentration, rare earth mineral flotation, dry mineral separation and progressive backfill.

The DFS demonstrates strong financial outcomes, with an after-tax NPV8 of **US$813 million**, an after-tax IRR of **39.4%**, total life-of-mine EBITDA of **US$2.8 billion** and total after-tax free cash flow of approximately **US$1.93 billion**. Phase 1 development capital is estimated at **US$228.1 million**, with Phase 2 incremental capital of **US$153.2 million**, for total development capital of **US$381.3 million**.

Titan is more than a mineral sands project. It is a differentiated U.S. critical minerals platform with exposure to three strategic product streams from a single domestic resource base. **Titan's heavy rare earth concentrate is enriched in yttrium, dysprosium and terbium — materials required for high-temperature magnets, advanced ceramics, radar, semiconductor equipment, aerospace and defense systems.** Its titanium and zircon product streams extend Titan's relevance into U.S. defense, energy, aerospace, nuclear, robotics and advanced manufacturing supply chains.

This combination of scale, permitting, infrastructure, conventional processing and strategic product exposure positions Titan as one of the most actionable near-term U.S. critical minerals projects capable of addressing multiple supply chain gaps from a single domestic source.

Strategic Importance to the U.S.

Titan is positioned as a cornerstone U.S. critical minerals project because it combines four attributes rarely found in one domestic mineral resource base.

First, Titan has a near-term development pathway in the United States, with key permits already in place. Second, it is designed to produce a heavy rare earth concentrate containing strategically scarce yttrium, dysprosium and terbium. Third, it provides meaningful titanium and zircon mineral streams that are relevant to defense, aerospace, nuclear and advanced manufacturing supply chains. Fourth, it is based on a staged, lower-risk development plan using conventional mineral sands processing methods.

The United States is actively rebuilding rare earth separation, metal, alloy and magnet manufacturing capacity. However, those midstream and downstream investments require secure upstream feedstock. Titan directly targets this missing domestic feedstock node by providing a U.S.-based source of heavy rare earth concentrate while also supplying titanium minerals and zircon concentrate into markets that are exposed to foreign concentration and supply chain disruption.

Titan is not a single-product project. It is a multi-critical-mineral industrial platform.

Titan's permitting and execution position is a major competitive advantage. The project is located in an established industrial corridor, with key mine area permits already in place and access to road, rail, barge, power, water and gas infrastructure. This execution setting differentiates Titan from many remote or earlier-stage critical mineral developments that require substantial greenfield infrastructure, long permitting pathways and higher logistics complexity.

Titan's product suite is also directly aligned with some of the most important material requirements of the U.S. defense industrial base. Through one domestic mineral platform, Titan has the potential to support American supply chains for rare earth magnets, advanced ceramics, propulsion materials, refractory inputs and lightweight structural alloys.

TITAN'S PRODUCTS MATTER TO U.S. DEFENSE

A single mineral platform can help secure magnets, advanced ceramics, propulsion materials, and lightweight alloys essential to U.S. defense

PRODUCT FAMILY	REPRESENTATIVE MATERIALS / PRODUCTS	DEFENSE APPLICATIONS	STRATEGIC BENEFIT
Dy Tb Nd Pr **DyTb + NdPr rare earths**	Separated oxides; NdFeB magnet materials	Missiles, precision munitions, drones, radar gimbals, electric actuators, guidance and control systems	DyTb enables high-temperature magnet performance; NdPr is the foundation of high-power magnets
Y **Yttrium**	Y oxide; YSZ; YAG and specialty ceramics	Thermal barrier coatings for turbine engines, armor ceramics, sensors, laser systems, electronics	Y is essential for high-temperature coatings, advanced ceramics, and defense electronics
Gd **Gadolinium**	Gd oxide; specialty magnetic and ceramic inputs	Electronic warfare materials, specialty ceramics, sensing, shielding and high-performance components	Supports niche but strategic defense materials where substitution is limited
Zr Hf **Zirconium + hafnium**	Zircon; zirconia; hafnium-bearing products; YSZ	Hypersonics, turbine coatings, refractory ceramics, nuclear/naval, high-temperature components	Zirconium and hafnium sit at the center of high-temperature, corrosion-resistant, and advanced ceramic systems
Ti **Titanium**	Titanium mineral feedstocks; titanium metal; Ti alloys including Ti-6Al-4V	Airframes, armor, naval components, missile structures, engine parts, soldier systems	Titanium delivers superior strength-to-weight, corrosion resistance, and survivability

Figure 3: Titan's products map to defense magnets, advanced ceramics, propulsion materials, and lightweight alloys.

Dysprosium, terbium and neodymium-praseodymium rare earths are essential to high-performance permanent magnets used in missiles, precision munitions, unmanned systems, radar platforms, electric actuators, guidance systems and other mission-critical defense technologies. Yttrium, gadolinium, zirconium, hafnium and titanium materials support applications ranging from turbine thermal barrier coatings, armor ceramics and electronic warfare systems to hypersonics, naval components, airframes, missile structures, engine parts and soldier systems.

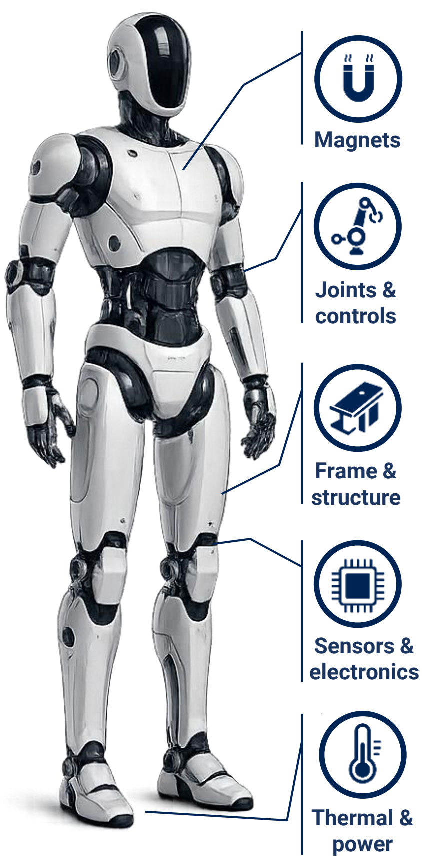
Collectively, these materials occupy high-value positions in platforms where performance requirements are demanding, substitution is limited and secure domestic supply is increasingly strategic.

Titan therefore represents a rare combination: a near-term U.S. development project with strong financial returns and key permits already in place, conventional execution, and direct relevance to multiple strategic supply chains. Titan offers leverage to a diversified critical minerals platform with compelling economics, staged capital intensity and strong alignment with U.S. industrial policy, defense resilience and the reshoring of advanced manufacturing.

Titan's relevance extends beyond defense into the next generation of physical AI, including humanoid robotics, factory automation and advanced manufacturing. Humanoid robots will require high-torque, high-efficiency magnets for actuators, motors, hands and joints; titanium-based materials for lightweight frames, limbs and structural components; specialty rare earths and ceramics for sensors, optics, chips and electronics. As robotics demand scales, Titan's broader suite of magnets, metals and ceramic feedstocks positions the company at the intersection of national security, industrial automation and American supply-chain resilience.

TITAN ENABLES THE MATERIALS STACK FOR HUMANOID ROBOTICS

Humanoid robots require high-performance magnets, lightweight structures, advanced sensors, thermal materials, and reliable power electronics.



ROBOT SUBSYSTEM	TITAN-LINKED MATERIAL INPUT	RELEVANCE
Actuators & motors	Dy Tb, Nd Pr — NdPr magnets with DyTb for high-temperature performance	High torque density, efficiency, and precision motion
Frame, limbs & structural components	Ti — Titanium alloys and titanium metal pathway	Lighter weight, stronger structures, improved battery efficiency and durability
Sensors, optics & chip systems	Y, Gd — Y, Gd and selected specialty rare earths; zirconia ceramics	Supports sensing, photonics, advanced electronics, and specialty ceramics
Thermal management & harsh environments	YSZ, Zr Hf — YSZ and zirconium-hafnium ceramic pathway	Heat resistance, wear resistance, and insulation for demanding duty cycles
Powertrain, automation & robot manufacturing	Dy Tb, Nd Pr, Ti, REE — Titanium, NdPr, DyTb, and broader REE suite	Humanoid robotics growth also drives upstream demand in automated equipment

Figure 4: Titan enables the materials stack for humanoid robotics and physical AI.

Rare Earths Overview

Rare earths are a group of 17 elements comprising the 15 lanthanides, plus scandium and yttrium. Although rare earths are not necessarily scarce in the earth's crust, the economically recoverable heavy rare earth elements — particularly dysprosium, terbium and yttrium — are geologically scarce and strategically valuable.

Their importance is driven by properties that are difficult to substitute: exceptional magnetic strength, high-temperature stability, optical performance, catalytic activity, plasma resistance and durability in harsh operating environments. For U.S. defense and advanced industry, the most strategically important rare earths are concentrated in a small subset:

- **Neodymium and praseodymium** are the foundation of high-power NdFeB permanent magnets.
- **Dysprosium and terbium** enable those magnets to maintain coercivity and performance at elevated temperatures, which is essential for missiles, aircraft, electric drives, drones, robotics, naval systems, actuators and harsh-environment industrial equipment.
- **Yttrium** is a high-impact heavy rare earth used in yttria-stabilized zirconia thermal barrier coatings, YAG lasers, YIG microwave components, plasma etch chamber coatings, advanced ceramics, specialty electronics and semiconductor manufacturing equipment.

The supply-chain risk is structural. China dominates major stages of the rare earth system, including mining, cracking, separation, metallization and sintered magnet manufacturing. Heavy rare earth exposure is even more acute because global dysprosium and terbium supply has relied heavily on Myanmar-origin feedstock processed through China, while U.S. heavy rare earth and yttrium supply remains highly import-dependent.

The result is a direct vulnerability for U.S. defense, aerospace, automotive, semiconductor, energy and robotics supply chains.

This is what makes Titan strategically differentiated. Titan is not simply another light rare earth project. It is designed to produce a U.S.-sourced heavy rare earth concentrate enriched in dysprosium, terbium and yttrium from monazite- and xenotime-bearing mineral sands. That positions Titan as a potential upstream feedstock node for the U.S. mine-to-magnet, semiconductor and advanced materials supply chains now being rebuilt with U.S. Government support.

U.S. Rare Earth Supply Chain

The United States is actively reshoring rare earth separation, metal, alloy and permanent magnet manufacturing capacity. Federal support has been directed across multiple downstream and midstream projects, including MP Materials, Lynas USA, E-VAC, Noveon Magnetics, TDA Magnetics, Vulcan Elements and ReElement Technologies.

This downstream investment is strategically important, but it does not solve the entire supply-chain problem. Separation plants, metal makers, alloy producers and magnet manufacturers require secure, qualified and scalable upstream feedstock. Without a U.S.-based, heavy-rare-earth-rich resource, domestic magnet and semiconductor supply chains remain exposed to imported dysprosium, terbium and yttrium.

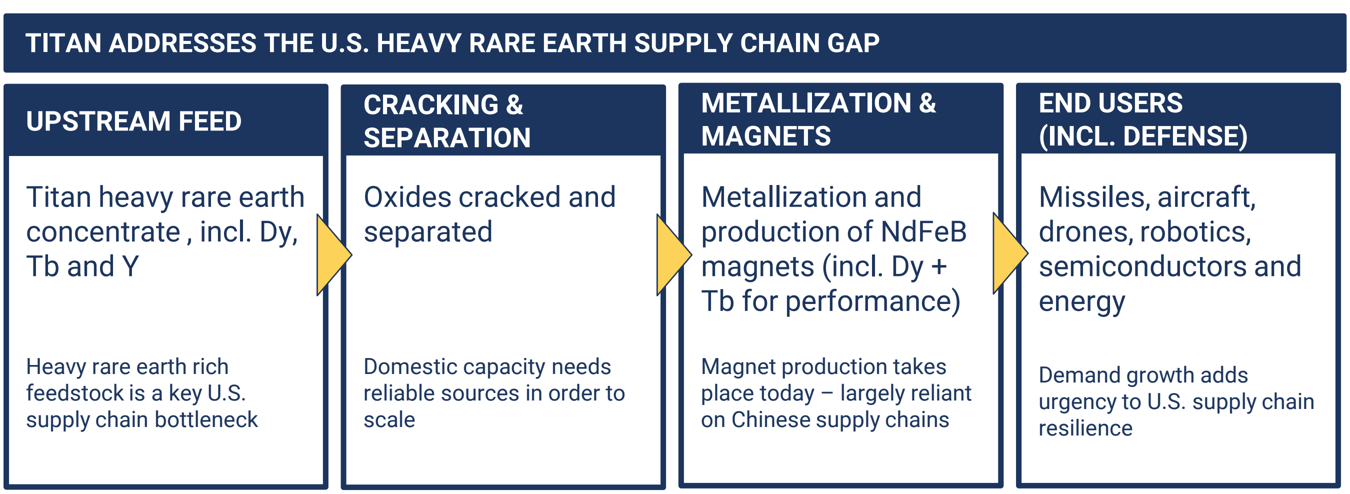


Figure 5: Titan addresses the upstream feedstock bottleneck in the U.S. rare earth supply chain by providing a potential domestic source of monazite- and xenotime-bearing heavy rare earth concentrate.

The largest current U.S. rare earth mine, MP Materials' Mountain Pass operation, is a globally important light rare earth bastnaesite deposit. However, Mountain Pass is not a material domestic source of the heavy rare earths most constrained in U.S. supply chains. Its ores contain only trace amounts of dysprosium, terbium and yttrium.

Titan is differentiated by mineralogy. **Titan's monazite- and xenotime-bearing mineral sands are designed to produce a heavy rare earth concentrate enriched in yttrium, dysprosium and terbium, while also containing neodymium and praseodymium for permanent magnet supply chains.**

Titan fills a different role: a U.S. mineral resource capable of feeding the separation, metal, alloy and magnet investments the United States is already building.

The U.S. requirement for rare earths now extends well beyond electric vehicles and wind turbines. High-performance magnets are embedded in precision actuators, drones, satellites, missile systems, radar platforms, shipboard systems, EV drivetrains, industrial automation and humanoid robots. Yttrium and other specialty rare earths extend Titan's relevance into semiconductors, lasers, photonics, microwave components, advanced ceramics and thermal barrier coatings.

In practical terms, modern defense systems and physical AI platforms will need minerals, magnets and metals — not just software.

China's use of rare earths as a strategic lever is no longer hypothetical. The 2010 China-Japan dispute demonstrated rare earth leverage, and China's 2025 export controls on medium and heavy rare earths and related magnet materials showed how quickly non-China manufacturers can face licensing risk, shortages and price dislocation. The U.S. response cannot be limited to downstream subsidies. It must also secure the upstream heavy rare earth feedstock that makes downstream capacity viable.

POTENTIAL TO CLOSE THE U.S. DY+TB SUPPLY GAP FOR PERMANENT MAGNET MANUFACTURING

Titan has the potential to become one of the most important prospective heavy rare earth supply sources for U.S. magnet manufacturing

SELECT POTENTIAL U.S. MAGNET PRODUCERS[1]		
PRODUCER	CAPACITY (TPA)	INDICATIVE DY+TB DEMAND (TPA)[2]
MP Materials	10,000	200
USA Rare Earth	10,000	200
Vulcan + ReElement	10,000	200
eVAC Magnetics	12,000	240
Noveon Magnetics	10,000	200
Total	**52,000**	**1,040**

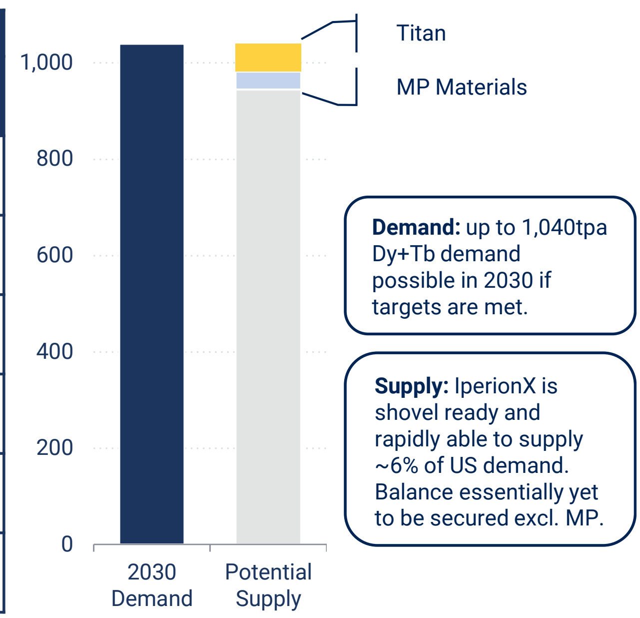


Figure 6: Illustrative Dy/Tb supply versus selected U.S. NdFeB magnet manufacturing demand[1,2,3].

[1] Source: Public press releases. Capacity represents targeted nameplate run-rates with commissioning/completion targets beginning in 2027/2028/2029.
[2] Illustrative Dy+Tb demand potential based on an assumed 2% Dy+Tb material intensity for magnet making. Actual material intensity in magnet-making varies depending on product.
3 See 'Endnote 1' - peer comparison material assumptions, page 22.

Titan is one of the most actionable near-term U.S. development options to address that gap. **Titan combines a domestic resource base, existing permits, established logistics, conventional mineral sands processing and a heavy rare earth concentrate product designed around the materials most constrained in the U.S. supply chain.**

SUPPLY-CHAIN NODE	U.S. ACTIVITY	STRATEGIC GAP	TITAN RELEVANCE
Primary mining / concentrate	MP Materials Mountain Pass; IperionX Titan HREC	Mountain Pass is light rare earth dominant; U.S. lacks domestic heavy rare earth feedstock	Titan is positioned as a U.S. source of HREC enriched in Dy, Tb and Y
Rare earth separation	MP Materials; Lynas USA; Energy Fuels White Mesa pathway	Separation capacity requires qualified, scalable feedstock	Titan may provide domestic monazite / xenotime-bearing feedstock
Metallization / alloys	Vulcan Elements; E-VAC; MP Materials	Metal and alloy capacity needs separated oxides, including Dy/Tb for defense-grade magnets	Titan can support upstream feedstock security for downstream metals and alloy production
Magnet manufacturing	E-VAC, Noveon, TDA, MP Materials 10X, Vulcan	High-temperature NdFeB magnets require reliable Dy/Tb supply	Titan targets the heavy rare earth bottleneck required for high-performance magnets
Recycling and secondary recovery	ReElement, other recyclers	Valuable but not a substitute for mine-scale primary supply	Titan has the potential to provide primary supply that can complement recycling and circular supply chains

Table 2: Titan's role across the U.S. rare earth supply chain.

REPRESENTATIVE U.S. COMPANY	RELEVANT PLATFORMS	WHY RARE EARTH MAGNETS OR HREE MATTER
Lockheed Martin	F-35, missiles, space systems	Permanent magnets support motors, actuators, sensors and other compact high-power-density systems; Dy/Tb support high-temperature magnet performance.
RTX / Raytheon	Missiles, radar, air-defense systems	Rare earth magnets and yttrium-bearing microwave materials support guidance, actuation, radar and electronic systems.
Northrop Grumman	Autonomous aircraft, defense electronics, space systems	Motors, actuators, sensors and payload systems rely on high-performance magnetic materials.
General Dynamics	Nuclear submarines, land systems, defense platforms	Permanent magnets are relevant to compact motors, generators, actuators and submarine systems.
Boeing	Aircraft, defense and space platforms	Aerospace systems use high-reliability motors, actuators, generators and sensor systems where rare earth magnets can reduce weight and size.
GE Aerospace	Jet engines and aerospace power systems	Rare earth magnets support high-density electrical systems; yttrium is critical to thermal barrier coatings.
GM / Ford	EVs and advanced vehicle platforms	NdFeB magnets are used in high-efficiency traction motors and automotive actuators; Dy/Tb improve high-temperature performance.
Tesla	EVs, robotics and energy products	Permanent magnet motors and robotics systems demand nodes for NdPr and potentially Dy/Tb depending on design.
Lam Research / Applied Materials	Semiconductor manufacturing equipment	Yttria coatings are used in plasma etch environments; rare earth magnets are used in equipment subsystems

Table 3: Representative U.S. demand for rare earth magnets and HREE/Y materials.

Humanoid robots, semiconductor fabs, data centers and automated factories are emerging as new critical-mineral demand centers. They require high-performance magnets for actuators and motors, titanium and zirconium-bearing materials for lightweight structures and harsh-environment components, yttrium and gadolinium for sensors, optics and specialty ceramics, and thermally robust materials for power electronics and energy infrastructure.

Titan Project's Role in the U.S. Rare Earth Supply Chain

Titan is designed to address the missing upstream resource gap in the U.S. heavy rare earth supply chain.

The DFS forecasts total life-of-mine production of approximately 60,790 tons of HREC, including approximately 5,287 tpa at full Phase 2 run-rate. The DFS design-basis HREC is approximately 61.4% TREO and contains important dysprosium, terbium and yttrium exposure, derived from monazite and xenotime mineralization contained within Titan's mineral sands.

This mineralogy is fundamentally different from bastnaesite deposits such as Mountain Pass, which is a globally important light rare earth operation, but does not by itself address the heavy rare earth supply gap. **Titan's heavy rare earth concentrate has leverage to the vital elements that remain most constrained: dysprosium, terbium and yttrium.**

At the Phase 2 annual HREC production rate, Titan's HREC product is forecast to contain approximately:

- 48 tpa dysprosium oxide (Dy_2O_3)
- 11 tpa terbium oxide (Tb_4O_7)
- 232 tpa yttrium oxide (Y_2O_3)

Based on Argus 2026 forecast prices, heavy rare earth elements represent approximately 13% of TREO content by mass, but more than 70% of forecast HREC basket value. This means Titan's HREC is not just heavy-rare-earth-bearing; it is heavy-rare-earth-dominant by value. That is a critical distinction for investors and policymakers. Titan's strategic value is not driven solely by total rare earth tonnage. It is driven by the value, scarcity and strategic importance of the contained heavy rare earths and yttrium.

Titan is positioned to address one of the most important gaps in the U.S. critical minerals strategy: secure domestic feedstock for heavy rare earth separation, metals, alloys and magnets.

The project combines a U.S. resource base, existing permits, conventional mineral sands processing, established infrastructure and a differentiated HREC product enriched in dysprosium, terbium and yttrium. This positions Titan as a potential cornerstone upstream feedstock source for U.S. defense, aerospace, semiconductor, robotics and advanced manufacturing supply chains.

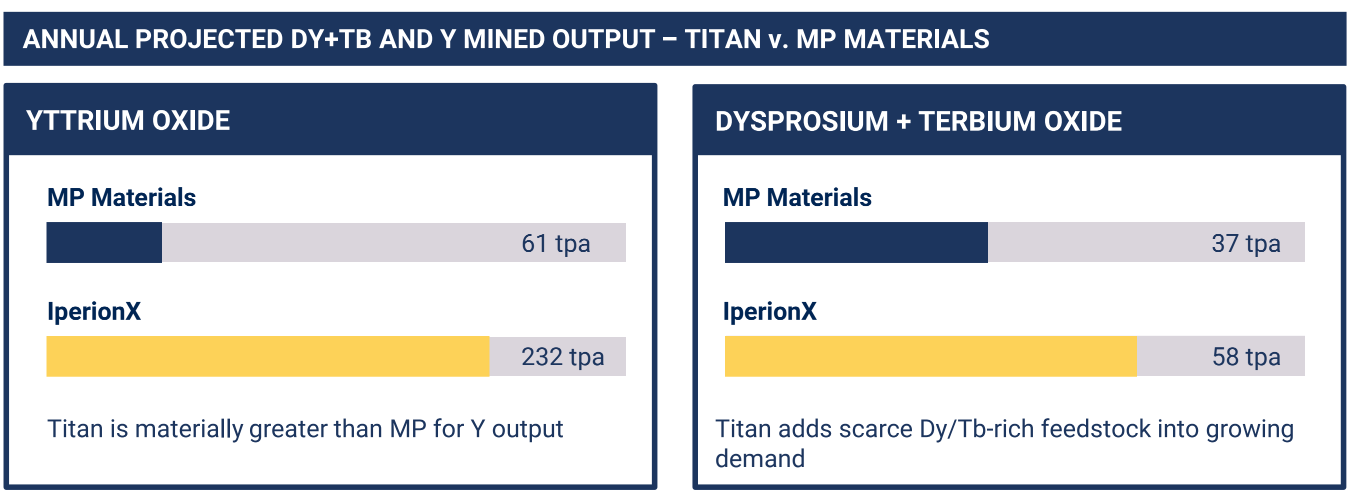


Figure 7: Annual projected Dy+Tb and Y output compared to MP Materials' Mountain Pass operation[1].

1 See *Endnote 1 - peer comparison material assumptions*, page 22.

TITAN HREC ATTRIBUTE	DFS-BASED VALUE
HREC production	5,287 tpa in Phase 2
TREO grade	61.4% TREO
Contained Dy_2O_3	~48 tpa at Phase 2
Contained Tb_4O_7	~11 tpa at Phase 2
Contained Y_2O_3	~232 tpa at Phase 2

Table 4: Titan Project heavy rare earth concentrate.

Titanium Overview

Titanium is a strategic metal with a rare combination of high strength-to-weight ratio, corrosion resistance, fatigue performance, heat tolerance and compatibility with demanding aerospace and defense environments. These properties make titanium essential across airframes, engine-adjacent structures, landing gear, fasteners, armor, naval systems, missiles, satellites, drones, medical devices, energy infrastructure and advanced manufacturing.

For U.S. defense and industrial policy, titanium is not simply another metal. It is a qualification-heavy material embedded in mission-critical platforms where shortages, long lead times or uncertain provenance can affect readiness, production schedules, platform cost and supply-chain resilience.

The legacy titanium metal supply chain is capital-intensive, energy-intensive and structurally inefficient. Titanium minerals are typically upgraded and chlorinated into titanium tetrachloride, reduced by magnesium through the Kroll process to produce titanium sponge, melted and re-melted into ingot, converted through forging or rolling into mill products, and then machined into finished components. Each step adds cost, time, yield loss and qualification complexity. One ton of titanium sponge typically yields only approximately 0.6–0.8 tons of titanium mill product, and after downstream buy-to-fly losses, can result in as little as approximately 0.2 tons of finished titanium parts.

This inefficiency is a major reason titanium remains expensive and strategically sensitive. It is also why supply-chain control matters. The U.S. no longer produces commercial titanium sponge, leaving domestic ingot, mill-product, forging and component suppliers reliant on imported sponge, imported scrap and domestic recycled scrap. USGS estimates indicate that the U.S. imported approximately 44,000 tons of titanium sponge and approximately 32,000 tons of titanium scrap in 2025.

The strategic risk is compounded by foreign concentration. Japan, Kazakhstan and Saudi Arabia were leading U.S. titanium sponge import sources through July 2025, while China has become the world's dominant producer and consumer of titanium mineral concentrates and has materially expanded across the titanium value chain. Russia and China also remain strategically important global sponge and titanium metal supply-chain actors, creating a resilience challenge for U.S. defense, aerospace and advanced manufacturing customers.

The U.S. Department of Commerce's Section 232 titanium sponge investigation found that titanium sponge imports threatened to impair U.S. national security, highlighting that the absence of domestic sponge production capacity could limit U.S. surge capacity for defense and critical infrastructure needs during a national emergency. That finding remains highly relevant: domestic melting and downstream fabrication capacity do not fully resolve the vulnerability if the upstream sponge and mineral feedstock inputs remain foreign-dependent.

PRIMARY TITANIUM PRODUCTION CAPACITY (METRIC TONS PER YEAR)[1,2]

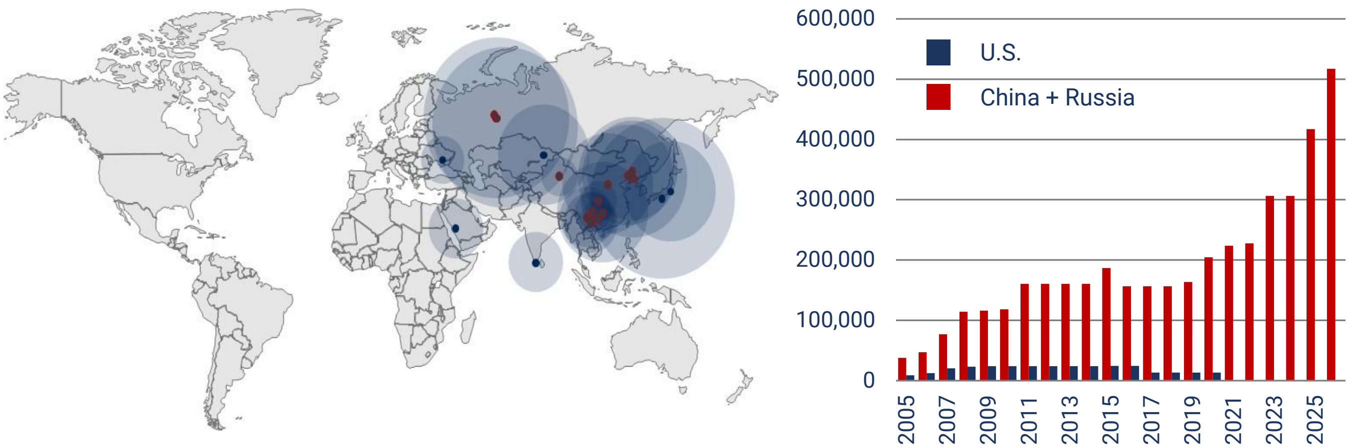


Figure 8: Global primary titanium (sponge) production locations and U.S. capacity vs. China and Russia capacity over time[1].

U.S. Titanium Supply Chain

The current U.S. titanium supply chain is fragmented. The United States has world-class aerospace, defense, specialty metals, forging, casting and precision component manufacturing capability. Domestic companies can convert sponge and scrap into qualified titanium products for aerospace and defense platforms. However, those operations remain structurally dependent on imported sponge and variable scrap availability.

This creates a strategic mismatch. The U.S. has advanced titanium-consuming industries, but lacks secure domestic primary titanium input capacity at commercial scale.

For defense procurement, this matters because titanium alloys are specialty metals embedded across aircraft, missile and space systems, ships, submarines, tanks, weapon systems and ammunition. U.S. law and DFARS provisions focus on specialty metals melted or produced in the United States or qualifying countries. However, a domestic melt step does not by itself solve the upstream vulnerability. A supply chain that begins with imported sponge remains exposed to foreign capacity constraints, logistics disruption, price spikes, geopolitical risk and qualification bottlenecks.

The defense exposure is visible in the F-35 supply chain. Public Howmet / Alcoa materials state that titanium bulkheads and titanium material are used to manufacture airframe structures for all three F-35 variants, including the largest titanium bulkheads for the CTOL variant. This illustrates why titanium supply security is not theoretical: titanium availability, cost and qualification directly affect high-priority aerospace and defense programs.

REPRESENTATIVE U.S. COMPANY	RELEVANT PRODUCTS / PLATFORMS	WHY TITANIUM MATTERS
Lockheed Martin	F-35, missiles, hypersonics, space and rotorcraft systems	Titanium supports airframe structures, bulkheads, fasteners and high-strength lightweight components where weight, fatigue life and heat performance matter.
RTX / Pratt & Whitney / Raytheon	Military and commercial engines, missiles, radar and precision systems	Titanium is used in engine structures, rotating and static components, housings and missile / aerospace hardware that require strength-to-weight and durability.
Boeing	Military aircraft, commercial aircraft, space systems and rotorcraft	Titanium supports airframes, landing gear, pylons, fasteners and composite-compatible structures while reducing weight and improving corrosion resistance.

[1] U.S. Geological Survey. Locations shown represent titanium sponge production facilities, and are approximate. List is not exhaustive, but is representative of American vs. RoW capacity. 2026 figures shown are estimates and projections, and Chinese data includes projections for incremental 2026 capacity from Argus Metals.

REPRESENTATIVE U.S. COMPANY	RELEVANT PRODUCTS / PLATFORMS	WHY TITANIUM MATTERS
Northrop Grumman	B-21, uncrewed aircraft, space and missile systems	Titanium enables lightweight, qualified structures and mission-critical components for long-life defense and space platforms.
General Dynamics	Submarines, combat vehicles, munitions and mission systems	Titanium provides corrosion resistance, weight reduction and survivability in marine, armor and high-reliability defense applications.
Huntington Ingalls Industries	U.S. Navy ships, submarines and shipyard sustainment	Titanium is relevant to seawater-resistant piping, heat exchangers, specialty marine systems and high-integrity naval components.
GE Aerospace	Jet engines and advanced propulsion systems	Titanium alloys support compressor and engine-adjacent structures where low weight and high fatigue performance are required.
Honeywell Aerospace	Engines, APUs, avionics-adjacent and thermal systems	Titanium supports lightweight engine hardware, thermal management and corrosion-resistant aerospace components.
Howmet Aerospace	F-35 bulkheads, forgings, fasteners, castings and aerospace materials	Howmet is a critical titanium supplier into F-35 and aerospace structures, making qualified titanium input security directly relevant.
ATI / Precision Castparts / Carpenter Technology	Titanium mill products, forgings, specialty alloys and engineered components	These suppliers convert titanium input streams into qualified products that downstream defense and aerospace primes require.

Table 5: Representative U.S. demand for titanium.

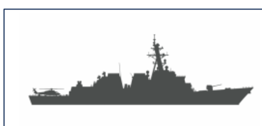
Strategic Importance to Defense and Advanced Manufacturing

Titanium is embedded across major U.S. weapons platforms and advanced industrial systems. It supports lightweighting, survivability, fatigue resistance, corrosion resistance and high-temperature performance.

TITANIUM USE IN MAJOR U.S. WEAPONS PLATFORMS

Army

- **M777 Howitzer** – Core structure made of titanium
- **M1 Abrams** – Titanium lightweighting and ballistic performance



Navy

- **Submarines** – Large scale titanium fasteners and valves
- **Surface ships** – Titanium piping and pumps

Air Force

- **F-22 Raptor** – 39% titanium content
- **F-35 Lightning II** – 20% titanium content

Figure 9: Select major U.S. defense platforms that require titanium components.

Key defense applications include:

- Army: M777 Howitzer structures, lightweight armored systems and vehicle components.
- Navy: submarine components, seawater-resistant piping, valves, fasteners, pumps and heat exchangers.
- Air Force: F-22 and F-35 airframes, bulkheads, structural components, fasteners and engine-adjacent systems.

- Missiles and hypersonics: high-strength lightweight structures, thermal-resistant components, propulsion-adjacent hardware and complex precision parts.
- Space systems: qualified structural components, fasteners, thermal hardware and high-reliability mission components.

Titanium demand is also expanding beyond traditional aerospace and defense. Humanoid robotics, automated factories, advanced energy systems and physical AI platforms are likely to increase demand for lightweight, high-strength, fatigue-resistant and corrosion-resistant materials. Robotics require low-mass structural components, precision actuators, fasteners, gears, bearings, thermal management systems and durable mechanical assemblies. Titanium is well suited to these applications where performance, weight reduction and reliability matter.

ADVANCED INDUSTRIES ARE GENERATING CONDITIONS FOR MASS TITANIUM DEMAND GROWTH

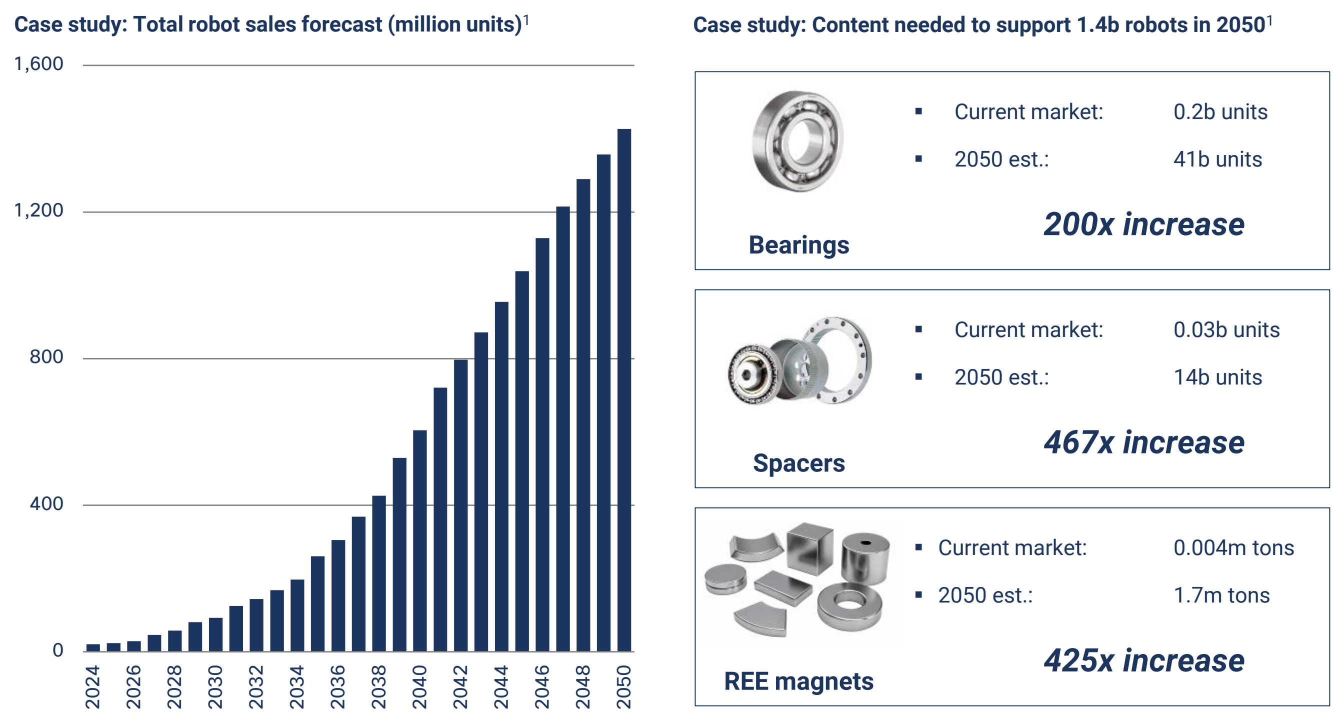


Figure 10: Projected growth in humanoid robot sales, and demand implications for critical mechanical components that would benefit from titanium material usage[1].

Titan's Vital Role in the U.S. Titanium Supply Chain

Titan gives IperionX a differentiated pathway to address the U.S. titanium supply-chain challenge from upstream mineral resource through to finished titanium products.

The Titan DFS is designed to produce two titanium mineral products: ilmenite and rutile. At full Phase 2 run-rate, Titan is forecast to produce approximately 118,658 tpa of ilmenite and 24,656 tpa of rutile. Using the DFS product specifications of 62.5% TiO_2 for ilmenite and 91.1% TiO_2 for rutile, this equates to approximately 58,000 tpa of titanium metal contained in Phase 2 product streams before downstream upgrading, recovery, commercial and processing assumptions.

Over the 14-year DFS mine plan, Titan is forecast to produce approximately 1.37 million tons of ilmenite and 286,000 tons of rutile. On the same TiO_2-to-titanium metal basis, those saleable product streams contain approximately 670,000 tons of titanium metal across the life of mine.

On an in-situ resource basis, using the DFS grand total THM of 9.163 million tons and THM assemblage of 40.8% ilmenite and 9.6% rutile, Titan contains an indicative approximately 1.71 million tons of titanium metal in ilmenite

[1] Morgan Stanley research – December 2025

and rutile minerals. Importantly, the Big Sandy critical minerals province is estimated to contain significantly more titanium minerals that could underpin higher production over decades.

This scale is important, but the strategic significance is greater than mineral feedstock alone. IperionX is not only a mineral-feedstock developer. Titan can feed a broader integrated technology pathway that includes:

- Green Rutile™ and ARH™ enrichment / upgrading technologies to improve titanium feedstock quality.
- HAMR™ to reduce titanium feedstock or scrap into titanium powder.
- HSPT™ / powder metallurgy to manufacture high-performance titanium components and potential mill-product pathways.

This creates the strategic bridge from Tennessee titanium minerals to U.S. titanium metal production and finished titanium components.

IperionX's Mineral-to-Metal Advantage

HAMR™ and HSPT™ are designed to address two of the largest structural inefficiencies in the incumbent titanium system.

HAMR™ is designed to bypass the Kroll process's chlorination, sponge, melt and re-melt complexity by using hydrogen-assisted metallothermic reduction to produce titanium powder from recycled titanium or mineral feedstocks, providing the potential to reduce titanium metal powder production costs by 40–70% relative to incumbent processes.

HSPT™ then enables near-net-shape titanium parts with wrought-quality mechanical properties, improving manufacturing yield and reducing buy-to-fly losses for defense, aerospace and advanced industrial parts.

This matters because the legacy titanium supply chain loses value at every stage: mineral upgrading, sponge production, melting, mill-product conversion and final machining. IperionX's pathway is designed to compress that chain, reduce waste, lower production cost and increase U.S. supply-chain control.

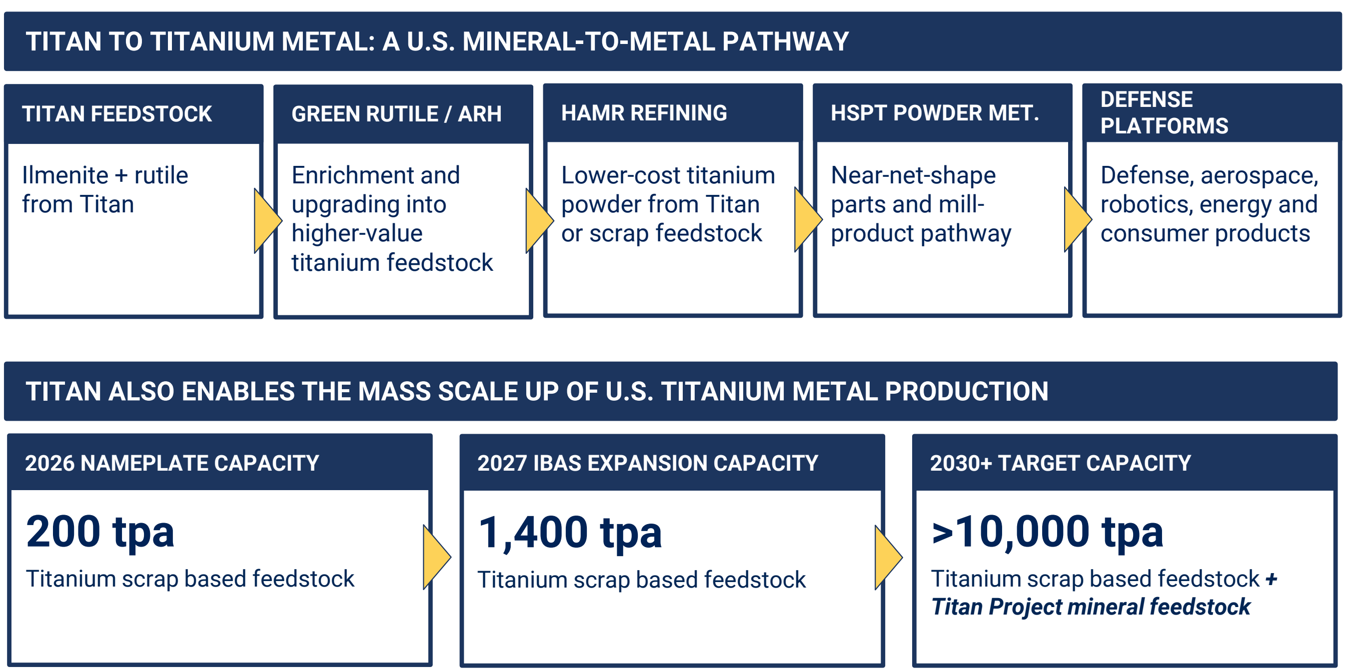


Figure 11: Titan-to-titanium metal pathway from Tennessee minerals to U.S. titanium components.

IperionX is already scaling its downstream platform through development of titanium powder capacity of approximately 200 tpa, a U.S. Government-backed expansion to approximately 1,400 tpa by 2027, and a target of more than 10,000 tpa by 2030[1]. Titan provides the backward-integration option that can move this platform from recycled scrap dependence toward a fully U.S. mineral-to-metal titanium supply chain.

The strategic value is clear: Titan provides domestic titanium mineral feedstock; Green Rutile™ and ARH™ provide a potential upgrading pathway; HAMR™ provides a lower-cost titanium powder production route; and HSPT™ provides a pathway to high-performance titanium components with reduced buy-to-fly losses.

Zirconium and Hafnium Overview

Zircon's commercial importance is broad. It is used in ceramics, refractories, investment casting, zirconia chemicals, high-temperature materials, thermal barrier coatings and chemical processing equipment. However, its strategic importance is much greater than traditional industrial markets suggest.

Zirconium metal and zirconium alloys are vital to the nuclear industry because zirconium has low neutron absorption and excellent corrosion resistance, making zirconium alloys the dominant material for nuclear fuel cladding. Secure zirconium supply is therefore directly relevant to civil nuclear power, naval nuclear propulsion and long-duration energy security.

Hafnium has a smaller-volume but high-strategic-value demand profile. It is used in nuclear control rods, nickel-based superalloys, plasma arc nozzles, high-temperature ceramics and semiconductor high-k dielectric materials, including hafnium oxide. Hafnium is also relevant to refractory alloy pathways, including niobium-hafnium-titanium systems such as C-103, which are used in rocket nozzles, space propulsion, re-entry systems and hypersonic structures.

This combination makes zircon more than a ceramic mineral. It is an upstream feedstock into some of the most demanding materials systems in nuclear energy, aerospace propulsion, hypersonics, semiconductors, advanced ceramics and high-temperature industrial applications.

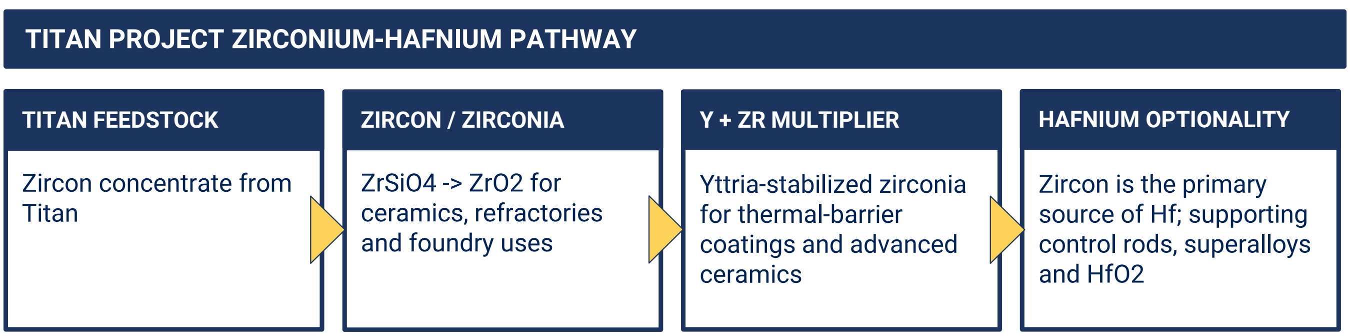


Figure 12: Titan zircon-hafnium pathway and the Y + Zr advanced-ceramics multiplier.

U.S. Zirconium + Hafnium Supply Chain

The U.S. zirconium and hafnium supply chain is specialized, qualification-heavy and strategically important. It spans upstream zircon mineral feedstock, zircon and zirconia chemicals, zirconium metal, hafnium separation, nuclear-grade alloys, semiconductor materials and advanced ceramic systems.

The United States has downstream zirconium metal capability and significant nuclear-related expertise. However, the upstream supply chain remains exposed to global heavy mineral sands supply and specialized processing pathways.

Despite having significant domestic resources of zircon, such as Titan and those within the Big Sandy Critical Minerals province, the U.S. import sources for zirconium ores and concentrates have historically included South Africa, Australia and Senegal, highlighting the lack of a large domestic mineral production base. China lacks significant domestic resources of economic extractable zircon and is highly reliant on the same countries as the U.S.

[1] Refer to ASX announcement dated September 2, 2025, titled "IperionX Commences U.S. DoD backed Titanium Expansion"

This creates a strategic vulnerability. The U.S. has high-value downstream demand in nuclear, aerospace, defense, semiconductor and advanced ceramics applications, but the upstream zircon and hafnium-bearing mineral supply chain remains dependent on foreign sources. **Titan and the Big Sandy Critical Minerals province can underpin long term domestic supply security of zircon and hafnium for the United States.**

Zirconium and hafnium matter at the intersection of several strategic markets:

- **Nuclear energy and naval propulsion**: zirconium alloys for nuclear fuel cladding; hafnium for control rods.
- **Hypersonics and space:** hafnium-bearing superalloys, refractory alloys, high-temperature ceramics and thermal protection systems.
- **Jet engines and propulsion:** zirconia and yttria-stabilized zirconia thermal barrier coatings; hafnium-bearing alloy systems.
- **Semiconductors:** hafnium oxide high-k dielectrics; zirconia / yttria ceramics for plasma-facing components.
- **Advanced ceramics:** zirconia and YSZ for wear resistance, heat resistance, insulation and harsh-environment reliability.

For U.S. policymakers and defense customers, the issue is not simply zircon pricing. It is whether the United States has secure access to upstream feedstocks required for nuclear systems, propulsion materials, high-temperature ceramics and semiconductor manufacturing.

As such, Titan's zircon concentrate is a strategically important critical mineral feedstock into a domestic material pathway that extends well beyond traditional mineral sands markets.

REPRESENTATIVE U.S. COMPANY	RELEVANT PRODUCTS / PLATFORMS	WHY ZIRCONIUM / HAFNIUM MATTER
Westinghouse	Nuclear fuel, fuel assemblies and reactor services	Zirconium alloys are core fuel-cladding materials; hafnium can be used in control rods because of neutron absorption.
BWX Technologies	Naval nuclear components, nuclear fuel and government services	Zr/Hf materials are relevant to nuclear materials, reactor systems and high-specification defense supply chains.
GE Vernova / GE Hitachi	Nuclear reactors, energy systems and industrial equipment	Zirconium alloys and zirconia ceramics support nuclear, turbine and high-temperature energy applications.
Framatome Inc.	Nuclear fuel assemblies and reactor components	Zirconium alloy cladding and related nuclear materials require qualified supply chains.
Lockheed Martin	Space, missile defense, hypersonics and propulsion-adjacent systems	Zr/Hf ceramics and refractory alloys are relevant to high-temperature structures, thermal protection and propulsion components.
RTX / Pratt & Whitney / Raytheon	Jet engines, missiles, sensors and defense electronics	YSZ coatings, hafnium-bearing superalloys and advanced ceramics support high-temperature propulsion and electronics reliability.
Northrop Grumman	Space systems, missiles, propulsion and autonomous platforms	Zr/Hf pathways support thermal protection, propulsion hardware and mission-critical high-temperature materials.
Applied Materials / Lam Research	Semiconductor fabrication equipment and process systems	Zirconia/yttria ceramics and hafnium oxide are relevant to plasma-facing components and high-k dielectric materials.
CoorsTek / Saint-Gobain Ceramics	Advanced technical ceramics and industrial components	Zirconia and YSZ ceramics provide wear resistance, heat resistance and electrical / thermal performance.
Corning / specialty glass and ceramics suppliers	Specialty glass, ceramics, optics and industrial products	Zircon and zirconia improve heat, chemical and mechanical performance in specialty glass and ceramic systems.

Table 6: Representative U.S. demand for zirconium and hafnium.

Titan's Role in the Zirconium Supply Chain

Titan is designed to produce zircon concentrate as a saleable product alongside heavy rare earth concentrate, ilmenite and rutile. This gives Titan a multi-product revenue base and positions the project as a potential domestic source of rare earth, titanium and zircon-bearing mineral feedstocks from a single U.S. resource base.

The DFS projects production of approximately 767,168 tons of zircon concentrate over the life of mine and approximately 65,668 tpa of zircon concentrate at Phase 2 run-rate. The DFS product specification of 34.4% ZrO_2 for zircon concentrate equates to approximately 34,000 tpa on a premium zircon basis.

That scale is important. It is not so large that it would overwhelm global zircon markets, but it is meaningful as a domestic U.S. feedstock source for strategic zirconium-related supply chains. Titan's zircon concentrate product contains approximately 195,000 tons of zirconium metal over the life of mine and approximately 16,700 tpa at Phase 2 run-rate, before downstream processing and recovery assumptions.

A key advantage is the Yttrium + Zircon multiplier: Titan's Heavy Rare Earth Concentrate is enriched in yttrium while its zircon concentrate provides a zirconium feedstock. Together, these streams are relevant to yttria-stabilized zirconia and advanced ceramic systems used in thermal barrier coatings, turbine engines, high-temperature electronics, armor ceramics, semiconductor equipment and harsh-environment sensors. **This makes Titan more than a standalone zircon project: it is a potential domestic platform for zirconium, hafnium and yttrium-linked materials systems.**

Endnote 1 – peer comparison material assumptions

Company / project	Status	Proved reserves	Probable reserves	Total reserves	Grade
IperionX / Titan	DFS	93.3 Mt	23.7 Mt	117.0	3.2% THM
MP Materials / Mountain Pass	Producer	1.0 Mt	27.9 Mt	29.0	5.9% TREO

Source: IperionX – Titan Project Definitive Feasibility Study, June 4, 2026 (this report), MP Materials – Form 10K Annual Report, February 26, 2026 (link)

Notes: Values subject to rounding. Titan reserve grade presented in Total Heavy Mineral (THM). Mountain Pass reserve grade presented in Total Rare Earth Oxide (TREO). The Mountain Pass reserve is reported pursuant to the requirements of Regulation S-K Subpart 1300 ("S-K 1300"), and the Titan reserve is reported under the JORC Code (2012). The Competent Person has not undertaken sufficient work to classify the S-K 1300 estimates as JORC Compliant Mineral Resources or Ore Reserves, meaning that following further evaluation the estimate may change or not achieve JORC status. Nonetheless, the comparison is reasonable because:
- The comparator projects are disclosed under alternative recognised reporting standards (i.e. S-K 1300), with broadly equivalent scale, grade ranges and development status.
- All data inputs are sourced from public filings (e.g. public reports and investor presentations) and referenced to the original source and date.
- The comparative metrics are clearly contextual – intended as industry benchmarks for scale and stage, rather than definitive reserve/resource values.

IPERIONX

DFS SUMMARY

DFS Summary

Introduction and Background

IperionX is pleased to announce the completion of the DFS for the commercial-scale development of the Titan Project, located near Camden, Tennessee ("Titan", the "Titan Project", or the "Project"). The DFS design considers the mining and processing of heavy mineral sands from the McNairy Formation to produce saleable ilmenite, rutile, zircon concentrate and heavy rare earth concentrate ("HREC") over a 14-year mine life based on proved and probable reserves.

The Titan Project is strategically significant because it combines a large, domestic mineral resource, a conventional and simple mineral sands processing route, a multi-product revenue base and a location within an established U.S. industrial jurisdiction. These characteristics distinguish Titan from many remote mineral sands and rare earth projects and support its potential role as a domestic upstream source of critical minerals. The DFS confirms the Titan Project as a technically and economically robust development, supported by a maiden Ore Reserve and a multi-product revenue base including critical mineral product lines, as defined by the U.S. federal government.

The DFS was prepared by Marshall Miller & Associates, Inc. (MM&A). While MM&A fulfilled the responsibility as the integrator of the DFS, other consulting firms also completed vital aspects of the Study. Karst Geo Solutions, LLC (KGS) was responsible for exploration results for the Project. Mineral Technologies Pty Ltd (MT) completed the process plant design and related modular plant cost estimation. Primero Group Americas Inc. (Primero) completed the non-process infrastructure (NPI) design and related cost estimates and was responsible for integrating the mining, process and NPI costs into a discounted cash flow financial model for the DFS.

The Company has included supporting technical information in Appendix 1 and JORC Table 1 disclosure in Appendix 2. Appendix 1 summarizes the technical workstreams and assumptions supporting the DFS outcomes. Information relating to Exploration Results, Mineral Resources and Ore Reserves has been prepared and reported in accordance with the JORC Code 2012 and is supported by the Competent Persons Statements included in this announcement.

Key DFS Work Programs and Assumptions

The DFS builds upon prior exploration, mineral resource estimation, metallurgical test work, process design, infrastructure design, environmental baseline work, permitting analysis, mine planning and financial modeling. The DFS has been prepared to support estimation of Ore Reserves and provide a detailed basis for decision-making on project development, financing and implementation planning.

Work completed for the DFS included updated geologic modeling and resource estimation, pit optimization, mine scheduling, process flowsheet development, engineering design, infrastructure design, capital and operating cost estimation, financial modeling, environmental and permitting analysis and market studies.

Capital and operating cost estimates are prepared to a ±15% level of accuracy. All costs are expressed in real 2026 United States dollars.

Project Overview

The Titan Project is a proposed critical minerals mining and mineral processing operation near Camden, Tennessee. The Project is designed to recover mineral sands from the McNairy Formation and process those minerals into saleable ilmenite, rutile, zircon concentrate and HREC. The mine and Wet Concentrator Plant ("WCP") are located near the mineral deposit, while the Rare Earth Plant ("REP") and Mineral Separation Plant ("MSP") are planned to be located at a separate industrial site in the Camden area.

The Project benefits from its location in the United States, including access to road and rail infrastructure, skilled labor, industrial services, utilities and customers in critical mineral sectors. The project location is a core strategic differentiator when compared with remote projects that require long-distance logistics, greenfield camp infrastructure, airstrips and isolated power solutions.

Ownership and Tenure

IperionX has a large regional ground holding prospective for valuable mineral sands, of which a small subset of the mineral tenure hosts the current Mineral Resource and Ore Reserve estimates. For the purposes of this Report, the term “Property” is used for the larger ground holding, and the term “Study Area” is used for the area that hosts the Mineral Resource and Ore Reserve estimates.

The Titan Project is located near Camden, Tennessee, U.S., approximately 128 kilometers (km) (80 miles) west of Nashville, Tennessee and approximately 11 km (7 miles) northwest of Camden, Tennessee. The Study Area is centered at approximately 36.147349°N, -88.20974°W.

As at June 4, 2026, the Property consists of approximately 40.8 square kilometers (km^2) (10,091 acres) of surface and associated mineral rights in Tennessee, of which approximately 6.0 km^2 (1,490 acres) are owned by IperionX, approximately 5.9 km^2 (1,457 acres) are subject to long-term lease by IperionX, and approximately 28.9 km^2 (7,144 acres) are subject to exclusive option agreements with IperionX. These exclusive option agreements, upon exercise, allow IperionX access to the surface property and associated mineral rights.

As at June 4, 2026, the Study Area is comprised of approximately 13.4 km^2 (3,317 acres) of surface and associated mineral rights, of which approximately 4.9 km^2 (1,212 acres) are owned by IperionX, approximately 4.6 km^2 (1,147 acres) are subject to long-term lease by IperionX, and approximately 3.9 km^2 (958 acres) are subject to exclusive option agreements with IperionX.

For the optioned and leased land, IperionX will pay the landowner the greater of 1) US$75 per acre of the property per year, or 2) the production royalty, generally 5% of net revenues from products mined and removed from the property. All properties owned by IperionX or its subsidiary will not incur a royalty.

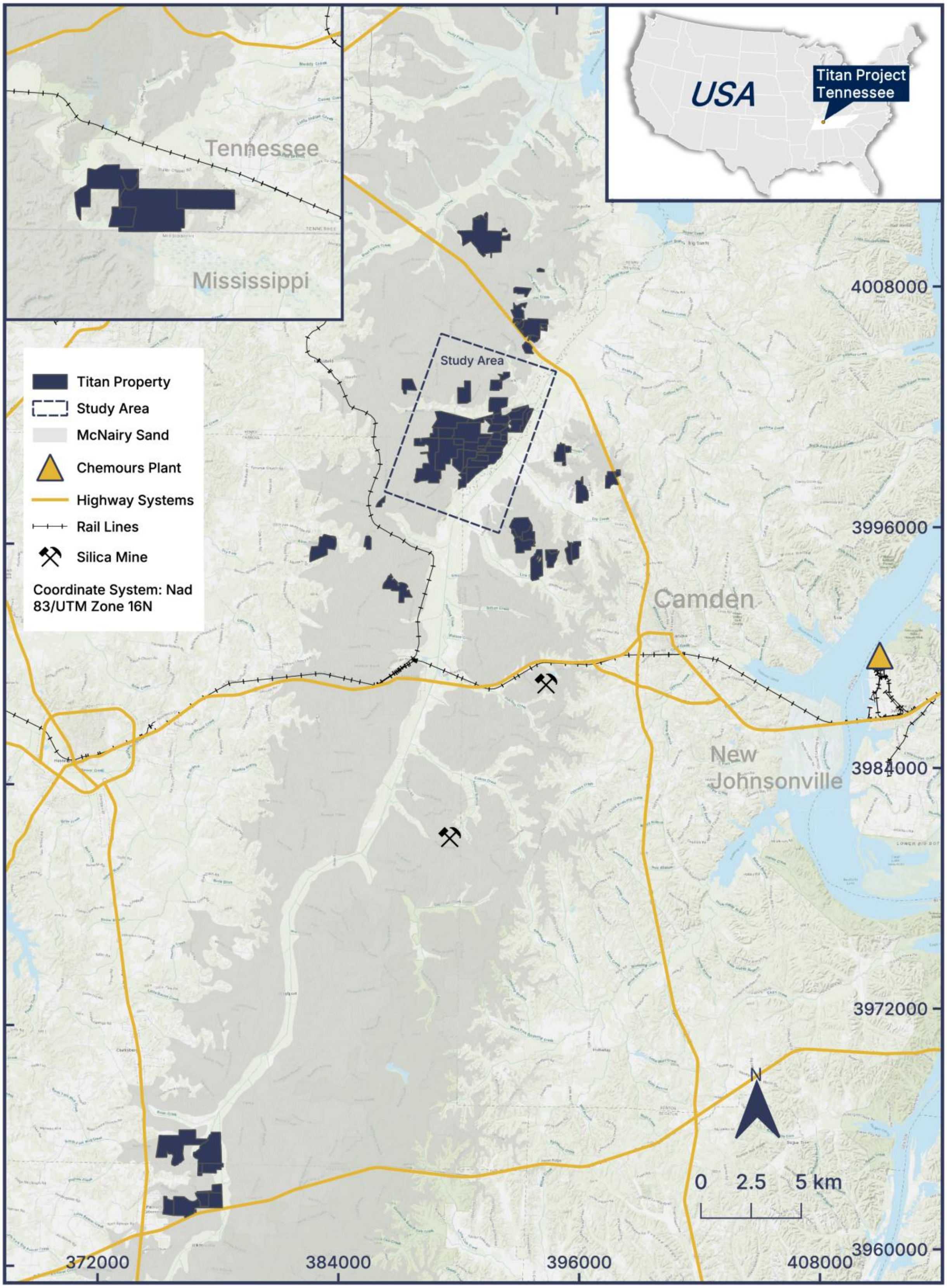


Figure 13: Titan property and study area.

Infrastructure and Logistics

The Titan Project benefits from an established U.S. industrial location with access to road and rail infrastructure, along with proximity to potential domestic customers. General access to the Study Area is via a well-developed network of primary and secondary roads, including mine and WCP access via paved and maintained state and county roads. The MSP and REP sites will be accessed primarily via U.S. Highway 70, and an operating railyard exists approximately 7 miles from the MSP and REP site.

The Study site can be accessed via Highway 641 north 41.0 km (25.5 miles) from Interstate 40 near the town of Camden, Tennessee, Reynoldsburg Road for 1.6 km (1.0 miles), Pleasant Hill Road for 1.6 km (1.0 miles) and the Little Benton Road, a gravel road, for 4.8 km (3.0 miles). Little Benton Road goes through the Study Area.

The existing infrastructure includes power and gas, with 161-kV transmission lines near the Project area. IperionX intends to implement 100% renewable power sourcing options for the Titan Project. Water supply can either be sourced from nearby surface water bodies or from shallow groundwater sources.

West Tennessee is home to a large and diversified workforce, with personnel assumed to live in surrounding communities, and no accommodation camp is expected to be required. There are a number of local active sand mining, gravel mining and timber operations in the area, which are expected to be sources of experienced labor for IperionX's operations.

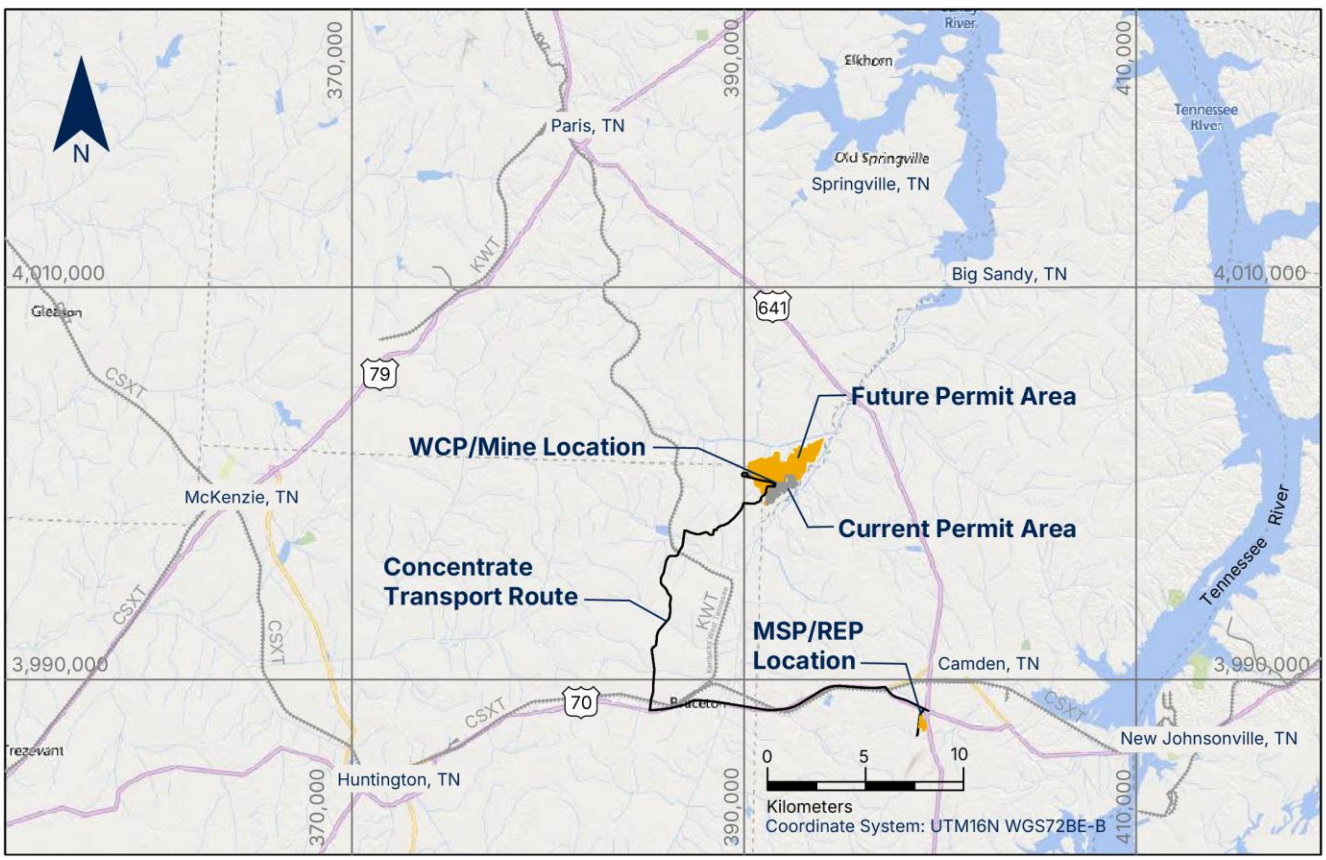


Figure 14: Titan Project mine and process plant locations.

The property location for the wet concentrator plant and mining area associated with the Titan Project is split between Benton and Carroll Counties in Tennessee, with the proposed wet concentrator plant to reside in Carroll County. The proposed rare earth plant and mineral separation plant will reside in Benton County outside the municipal limits of Camden, Tennessee. Distance between the wet concentrator plant and mineral separation plant is approximately 29 km (18 miles) using county, state, and U.S. routes. CSX Transportation operates a rail yard approximately 11 km (7 miles) from the mineral separation plant site. The movement of heavy mineral concentrate from the wet concentrator plant to the mineral separation plant/rare earth plant will be conducted by road trucking.

Transportation of ROM and tailings materials between the mine pits and the wet concentrator plant will be conducted by conveyor belts.

The Titan Project infrastructure concept reflects a staged, modular development approach designed to reduce execution risk, with development of the wet concentrator plant and the mineral separation plant occurring in Phase 1 and expanded in Phase 2. Development of the rare earth plant will be carried out in Phase 1.

Government Support and Strategic Importance

Titan is strategically positioned at the intersection of U.S. critical minerals policy, defense industrial base resilience, advanced manufacturing and domestic titanium supply chain development. The Project has the potential to provide a domestic source of critical minerals (as defined by the U.S. government) including titanium feedstocks, zircon and HREC, into supply chains that are currently exposed to high levels of foreign concentration and geopolitical risk.

The Titan Project DFS was funded by the U.S. Department of War (“DoW”), via the Industrial Base Analysis and Sustainment program (“IBAS”), as part of a broader $47.1 million funding contract to accelerate the development of a mineral to metal supply chain in the U.S., leveraging both IperionX’s Titan Project as well as its titanium technology portfolio. DFS funding of approximately $5.0 million was awarded and obligated under the IBAS program in February 2025.

The Titan Project’s strategic value is underpinned by the following themes:

- **Critical minerals supply security:** Titan would produce minerals used in titanium dioxide, titanium metal, ceramics, foundry, advanced manufacturing, permanent magnets, defense systems and energy-transition technologies.
- **Domestic production:** The Project is located in Tennessee, enabling domestic production of critical mineral concentrates and reducing exposure to long global supply chains.
- **Titanium supply chain integration:** IperionX’s broader titanium strategy provides a potential downstream pathway for titanium feedstocks, supporting a more integrated U.S. titanium ecosystem.
- **Rare earth resilience:** HREC production provides exposure to rare earth elements, including heavy rare earths, that are important to magnet, defense and high-performance technology supply chains.
- **Heavy rare earth enriched product:** Titan’s HREC product lines are enriched in heavy rare earth oxides, most notably Dy, Tb, and Y, which are especially at risk for foreign import reliance in the U.S.
- **Industrial policy alignment:** The Project is aligned with U.S. policy themes focused on critical minerals, defense production, re-shoring, domestic manufacturing and supply chain resilience.

Mineral Resource Estimates

The Study Area location in western Tennessee represents the eastern flank of the Mississippi Embayment, a large, southward-plunging syncline within the Gulf Coastal Plain. The McNairy Formation represents a pro-grading deltaic environment during a regressive marine sequence. This deposition model is supported by the coarsening upward sequence grading from the glauconitic clay-rich Coon Creek Formation to the finer grained lower member of the McNairy Formation to the coarser grained upper member of the McNairy Formation.

The main mineralized zone at the Study Area is hosted stratigraphically in the lower member of the McNairy Formation, which dips gently to the west in the Study Area. The upper zone is also mineralized in some areas. Mineralization in the lower member had been traced for over 6.0 km along strike.

The base of mineralization range is relatively level from 81 meters (m) to 112 m (266 feet (ft) to 367 ft) above current sea level. Mineralization varies from 5 m to 67 m (16 ft to 220 ft) thick and averages 28 m (92 ft) in thickness. Mineralization primarily occurs in two zones within the McNairy Formation. The main mineralized zones are interrupted by low-grade sand. The primary minerals associated with the mineralized horizons are altered ilmenite, zircon, rutile, staurolite, kyanite, monazite and xenotime. The Gangue minerals are predominantly quartz and clays. Though extensive basement faulting is present in the region, it does not appear to impact the stratigraphy at the scale of this Project.

Drilling on the Study Area comprises 156 drill holes. This includes 16 reverse circulation holes (total drilled length of 837 m or 2,746 ft) and 140 roto-sonic drill holes (total drilled length of 5,644 m or 18,517 ft). Across all Titan properties, including those outside of the Study, IperionX has drilled 313 holes (total drilled length of 11,382 m or 37,343 feet). All exploration drilling was completed by IperionX.

The area covered by the drilling is roughly 6.6 km (4.1 miles) (north-south) by 3.7 km (2.3 miles) (east-west); the area that hosts the Mineral Resource estimate is further broken up into several areas based on land holdings (land agreements). These range from 1.58 hectare (ha) (3.9 acres) for the smallest area to 161 Ha (397 acres) for the largest area. Drill hole spacing is generally 150 x 300 m (492 x 984 ft). Some areas have difficult access and drill spacing in those areas is wider spaced, approximately up to 300 x 600 m (984 x 1,969 ft).

There are an additional 11 roto-sonic drill holes completed as part of a hydrogeological study by HDR Engineering, Inc. These holes were drilled on IperionX's behalf. In 2025, an additional 62 holes were drilled by S&ME, Inc. for geotechnical evaluations.

Geoprobe drill core samples, typically 3 m (9.8 ft) in length, were collected directly from the plastic sample sleeves at the drill site. Some interpretation was involved as the material could expand or compact as it was recovered from the core barrel into the plastic sleeve. Samples were collected at regular 1.5-m (4.9 ft) intervals unless geological contacts were encountered. Sample length ranged from 0.3 m (1.0 ft) to 4.5 m (14.8 ft).

The unconsolidated sonic cores were sampled by splitting the core in half lengthwise using a machete, then recovering an even split with a trowel along the entire length of the sample interval. The sample volume weights were about 2 kilograms (kg) (4.4 pounds (lbs)) and were appropriate for the analytical method(s) being used. Samples were collected directly to pre-labeled/pre-tagged sample bags; the remaining sample was further split into a replicate/archival sample. What sample remained after these steps was used to backfill the drill hole.

Drill samples were sent to the SGS facility in Lakefield, ON, Canada and Bureau Veritas in Perth, Australia. SGS is a qualified third-party laboratory that is independent of IperionX. SGS Lakefield is accredited as an ISO 17025 facility for selected analytical techniques. Samples were subjected to standard mineral sand industry assay procedures of size fraction analysis, heavy-liquid separation, and chemical analysis.

Accuracy monitoring was addressed by submission of in-house heavy mineral sands standards developed specifically for the Project. There is no commercially available standard reference material for heavy mineral sands. It is a common practice within heavy mineral sands exploration and operations to generate standards that represent a matrix match to the target material being analyzed.

Assayed samples of THM% in the Lower McNairy Formation were used to derive variograms. Variogram features exhibit the spatial continuity of the sample spacing. The variogram sill factor along with the known drill hole spacing were used to support the Mineral Resource confidence classification ranges of the deposit.

A block model was created to encompass the Study Area extent and estimate the mineral sands deposit resources. The model was oriented with a bearing of 30 degrees east of north, an orientation near the apparent depositional trend of the mineral sands. Block cell dimensions of the model are 25 m*25 m*1.524 m (X*Y*Z). For block model development, the digital topographic surface established the overlying bounding surface. Blocks above the topography were coded as air and excluded from any resource or volume estimates. Gap spaces that exist between the base of the overburden and the top of the Upper McNairy Formation were assigned to waste material (and were therefore handled with the overburden).

Two testwork programs were conducted for the mineral resource area, one in 2021 and the second in 2023. All testwork was completed on behalf of IperionX.

Assays were conducted by SGS Lakefield, and Bureau Veritas in Perth, Australia, using X-ray fluorescence (XRF), laser ablation/inductively-coupled plasma mass spectrometry (ICP–MS) and quantitative evaluation of materials by scanning electron microscopy (QEMSCAN) analytical methods. The final products, ilmenite, rutile, zircon, rare earth mineral concentrate, were produced from the 2023 testwork. Ilmenite graded 64.9% TiO_2, and the rutile graded 91.2% TiO_2. The zircon graded 66.8% ZrO_2. The rare earth mineral concentrate had a total rare earth oxide grade of 59.1%. The product grades generally align with 2021 scoping testwork results and were considered to be saleable products.

The testwork showed that high-quality ilmenite, rutile, zircon products could be achieved using conventional separation equipment through a typical wet concentrator plant, and fine and coarse mineral separation plant flowsheet. A rare earth mineral concentrate product was created at a high monazite recovery using a wet rare earth mineral concentrate circuit.

Circuit simulation models were generated for the wet concentration plant, rare earth mineral plant and mineral separation plant flowsheets to evaluate recycle streams and resultant mass flows. The expected future performance of the processing plant was based on metallurgical testwork results and benchmarked against other deposits that have similar characteristics to the Titan deposit. The simulated recoveries for in-size samples (+45-micron material) from ROM to products are: rare earth mineral recovery of 82.6%; ilmenite recovery of 79.7%; rutile recovery of 66.9%; zircon recovery of 77.6%.

The resource classification was determined based on drill hole density reflecting the geological confidence; firstly, from hole locations with QEMSCAN analysis and secondly from all drill holes with total heavy minerals and the geostatistical variogram model. To prevent stand-alone classification pods, radial arcs from points of measurement were required to intersect with an adjacent arc of the same classification. Therefore, isolated, stand-alone drill holes with QEMSCAN samples were not assigned Measured classification and similarly, stand-alone drill holes with total heavy minerals were not assigned an Indicated classification.

A bottom cut-off grade of 0.4% THM was used in the constraining pit shell, on the basis that the incremental cost of selectively extracting this material, hauling it to a long-term stockpile, and subsequently reclaiming and re-placing the material into a mine void for progressive rehabilitation would be higher than the net cost (operating cost less revenue) of the central case method. The central case method is the processing of this material, extracting the contained valuable critical minerals for sale and immediately returning the remaining material, mostly silica sand, back to the deposit void. An additional pit optimization was completed to generate the finalized mine plan pit shell used in the conversion of Mineral Resources to Ore Reserves.

The Titan Project hosts a Mineral Resource of approximately 445.7 million tons at 2.1% total heavy mineral ("THM"), containing approximately 9.16 million tons of THM with an assemblage of zircon, rutile, ilmenite and rare earth elements. Mineral Resources are reported using the Mineral Resource definitions set out in the 2012 JORC Code on a 100% basis. The reference point for the estimate is in situ, and the Mineral Resource is inclusive of Ore Reserves.

Mineral Resource Estimate	In situ tons	THM	THM	THM Assemblage			
				Zircon	Rutile	Ilmenite	REE
		(%)	(t)	(%)	(%)	(%)	(%)
Inclusive of Reserve							
Measured (M)	120,434,000	2.5	3,060,000	11.1	9.5	40.9	1.5
Indicated (I)	28,388,000	2.9	828,000	11.8	9.2	52.0	1.5
Total M+I	**148,823,000**	**2.6**	**3,887,000**	**11.2**	**9.4**	**43.2**	**1.5**
Inferred (Inf)	-	-	-	-	-	-	-
Total M+I+Inf	**148,823,000**	**2.6**	**3,887,000**	**11.2**	**9.4**	**43.2**	**1.5**
Exclusive of Reserve							
Measured (M)	96,851,000	1.5	1,489,000	10.4	9.2	40.1	1.2
Indicated (I)	102,190,000	2.0	2,013,000	9.8	10.2	38.9	1.5
Total M+I	**199,041,000**	**1.8**	**3,502,000**	**10.0**	**9.8**	**39.4**	**1.4**
Inferred (Inf)	97,832,000	1.8	1,774,000	9.3	9.6	38.0	1.2
Total M+I+Inf	**296,872,000**	**1.8**	**5,276,000**	**9.8**	**9.7**	**39.0**	**1.3**
Grand Total							
Measured (M)	217,285,000	2.1	4,548,000	10.8	9.4	40.6	1.4
Indicated (I)	130,578,000	2.2	2,841,000	10.4	9.9	42.7	1.5
Total M+I	**347,863,000**	**2.1**	**7,389,000**	**10.6**	**9.6**	**41.4**	**1.4**
Inferred (Inf)	97,832,000	1.8	1,774,000	9.3	9.6	38.0	1.2
Total M+I+Inf	**445,695,000**	**2.1**	**9,163,000**	**10.4**	**9.6**	**40.8**	**1.4**

Notes to accompany mineral resource table:

1. *Mineral Resources are reported using the definitions set out in the 2012 JORC Code and are current as at June 4, 2026. Mineral Resources are reported on an in-situ basis, inclusive of Ore Reserves.*
2. *The Competent Person responsible for the estimate is John Eckman.*
3. *Mineral Resources are reported within a conceptual pit shell that uses the key assumptions summarized in the Report in the Appendix.*
4. *Mineral Resources are reported above a cut-off grade of 0.4% THM.*
5. *Estimates have been rounded.*

Table 7: Titan Project Mineral Resource Estimate.

Ore Reserve Estimates

Ore Reserves were converted from Measured and Indicated Mineral Resources. Inferred Mineral Resources were treated as waste.

MM&A developed a mine plan and reserve estimate using K-MINE Group's (K-MINE) Planning and Optimal Pit Boundaries modules. The initial cutoff grade for Ore Reserve estimation was set at 0.4% THM based on previous work. Upon coordination with process engineers designing the wet concentrator plant, it was determined that a cutoff grade yielding a rougher feed grade of 3.2% THM would yield better recoveries through the process plant. A detailed cutoff grade analysis was completed whereby additional optimizations were run at cutoff grades of 0.6% THM, 0.7% THM, 0.8% THM, and 0.85% THM to arrive at 3.2% THM grade feed to the wet concentrator plant. The final cutoff grade used for optimization, scheduling, and mine planning was set at 0.85% THM. This selection was supported by a sensitivity analysis. Price coefficients (or revenue factors) were set up as part of the optimization process with a range of 20% to 110% with a 10% price correlation step for the final products. It was decided to proceed using a 90% price coefficient, which provides the best correlation between maximizing profit and maximizing the Ore Reserves mined. Floodplain restrictions were observed for the optimization process. Production requirements were based on the target production of 3.5 Mt per year for Phase 1 (Years 1-4) and 10.0 Mt per year for Phase 2 (Years 5-14).

Geotechnical assessment resulted in a final wall berm (batter) height of 10 m with a batter angle 35 degrees and 5-m benches, resulting in an overall 27.4-degree slope wall. Due to the geometry of the mining pits, small amounts of economic material may have been excluded from the mine plan tonnages, while small amounts of sub-economic/low-grade material may have been included and account for the dilution included as part of the Ore Reserve estimate.

Production data outputs from LOM plan sequencing were processed into Microsoft® Excel spreadsheets and summarized on an annual basis for incorporation into the economic model.

Revenue streams as projected in the economic portions of the report assume a sales realization (FOB-mine) of US$1,425 per ton for rutile final product, US$340 per ton for ilmenite final product, US$912 per ton for zircon concentrate, and US$10,678 for rare earth elements concentrate. Product prices were provided by IperionX based on "TZMI Titanium Feedstock Price Forecast to 2029, Issue 2, 2025" and Adamas Intelligence "Value of IperionX Monazite Concentrate, Q3, 2025" Market Reports. The DFS economic analysis uses higher overall commodity prices in aggregate than Ore Reserve price assumption. This difference reflects updated market information available at the time of completion of the DFS economic model. A separate pit optimization economic review and sensitivity analysis demonstrates that the project remains economically viable at the Ore Reserve commodity price assumption. The conversion of Ore Reserves (ROM-basis) via concentration and chemical processing to final products or concentrates are included in IperionX's business plan, and as such, the costs of such processes and appropriate revenue streams are included in financial modeling.

Resource modeling and mine optimization as described above were used as a basis for the Ore Reserve estimate using the geologic model described as the basis of the conversion from Mineral Resources to Ore Reserves. Proved and Probable Ore Reserves were derived from the defined resource considering relevant processing, economic (including technical estimates of capital, revenue, and cost), marketing, legal, environmental, socio-economic, and regulatory factors. The mining optimization parameters used in the conversion from Mineral Resources to Ore Reserves are provided in Table 8.

Parameters	Unit	Value
Production rate	ton/year	3,529,000 to 10,588,000
Production schedule	Hours/Year	8760
Production schedule efficiency	%	85
Ramp grade	%	10
Mining recovery factors:		
Rutile	%	70.6 (81.2% mineral in product)
Ilmenite	%	85.0 (95.8% mineral in product)
Heavy rare earth concentrate	%	89.5 (87.8% mineral in product)
Zircon	%	91.2 (46.9% mineral in product)
Pit Loss/Dilution	%	10 (in addition to low-grade interburden)

Table 8: Titan Project mining optimization parameters.

The DFS delivers an Ore Reserve for the Titan Project of approximately 117.0 million tons at 3.17% THM, comprising approximately 93.3 million tons of Proved and 23.7 million tons of Probable Ore Reserves, which underpins the 14-year mine plan and the DFS economic analysis. Ore Reserves were converted from Measured and Indicated Mineral Resources. Inferred Mineral Resources were set to waste. Ore Reserves were confined within a pit shell that used the optimization parameters in the Report in the Appendix. Ore Reserves are reported using the Ore Reserve definitions set out in the 2012 JORC Code on a 100% basis. The reference point for the Ore Reserve estimate is as delivered to the process facilities.

Ore Reserve Estimate	ROM tons			THM	THM	THM Assemblage			
						Zircon	Rutile	Ilmenite	REE
Unit	**Proved**	**Probable**	**Total**	**(%)**	**(t)**	**(%)**	**(%)**	**(%)**	**(%)**
Upper McNairy	24,565,000	2,415,000	26,980,000	2.30	620,000	6.2	6.2	23.6	0.2
Lower McNairy	68,740,000	21,307,000	90,047,000	3.43	3,086,000	12.7	10.5	48.3	1.9
Total	**93,306,000**	**23,722,000**	**117,027,000**	**3.17**	**3,706,000**	**11.6**	**9.8**	**44.2**	**1.6**

Notes to accompany ore reserve table:

1. *Ore Reserves are reported using the definitions set out in the 2012 JORC Code and are current as at June 4, 2026. Ore Reserves are reported at the point of delivery to the process plant.*
2. *The Competent Person responsible for the estimate is Justin Douthat.*
3. *Ore Reserves are reported within a finalized mine design pit shell that uses the key assumptions summarized in the Report in the Appendix above.*
4. *Ore Reserves are reported above a cut-off grade of 0.85% THM.*
5. *Ilmenite includes leucoxene, pseudorutile, and ilmenite and REE includes monazite, xenotime, and unclassified REE.*
6. *Estimates have been rounded.*

Table 9: Titan Project Ore Reserves Estimate.

Mine Plan and Production Target

Mining at Titan Project is planned as an open-pit operation, using excavator and articulated truck mining methods – a conventional mineral sand mining method, requiring no drilling and blasting typically associated with traditional hard-rock open-pit mining.

The mining method selection considered orebody geometry, geotechnical conditions, hydrogeology, material handling, environmental constraints, capital costs and operating costs. The DFS mine plan incorporates floodplain restrictions and is designed to support total ~117Mt of ore over 14 years of life of mine.

Material will be mined, conveyed to the processing plant, processed, and the process tailings will be dewatered and returned to the mined area as backfill, supporting progressive rehabilitation and minimizing long-term tailings storage footprint.

Mining contractors will provide all labor and material for support equipment including all mobile mining equipment, water truck, dozer capable of maintaining the waste disposal volumes, motor grader, utility loader backhoe, fixed or portable lights, pumps, and a utility articulated haul truck. A combination of excavators and articulated trucks will be used to mine the ROM ore as well as all topsoil, overburden and interburden material. Conveyors will be used to transport ROM ore from the mine area to the wet concentrator plant, and dewatered tailings from the wet concentrator plant back to the pits for disposal in the final backfill.

The mine plan uses temporary out-of-pit waste storage areas early in the mine life, with all tailings and waste material expected to be backfilled into the pit as mining progresses after approximately Year 5. This integrated mine and tailings strategy is an important differentiator of the Project because it seeks to reduce the long-term tailings storage footprint while aligning with progressive closure and reclamation objectives.

Production scheduling is based on providing 400 tph rougher feed, roughly 3.5 Mtpa of ROM ore to the WCP during Phase 1 (Years 1-4) and 1,200 tph rougher feed, roughly 10.0 Mtpa of ROM ore during Phase 2 (Years 5-14) and includes Proved and Probable Ore Reserves only for all years of operations. The Ore Reserve estimate and production target is approximately 117 million ROM tons over the 14-year mine period at a THM of 3.17%. Approximately 93.3 million tons or 80% of the Ore Reserves and production target estimates are Proved, while 23.7 million tons or 20% of the Ore Reserves and production target estimates are Probable. All Ore Reserves were converted from Measured and Indicated Mineral Resources. Inferred Mineral Resources were treated as waste.

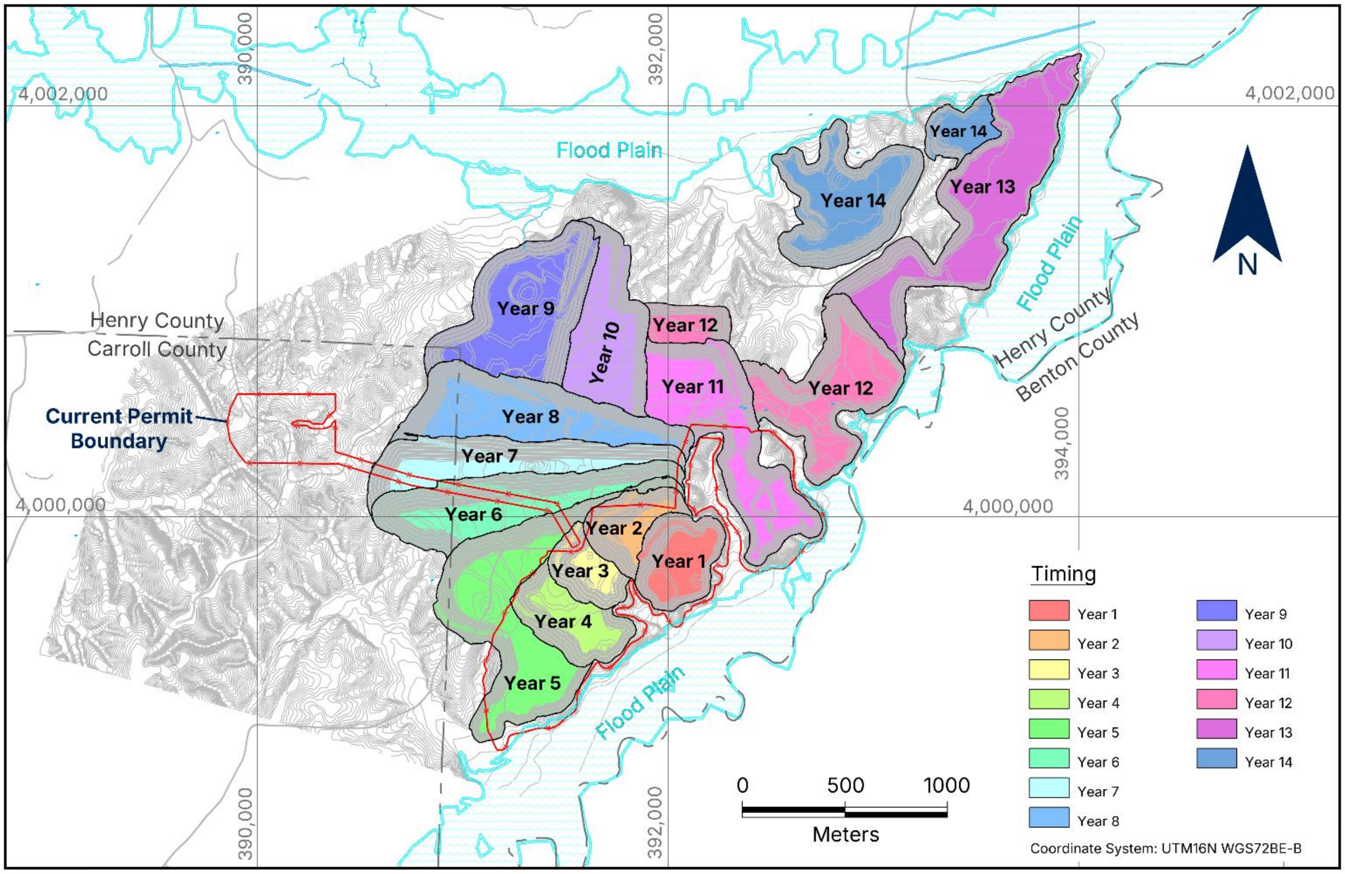


Figure 15: Titan Project mine production timing map.

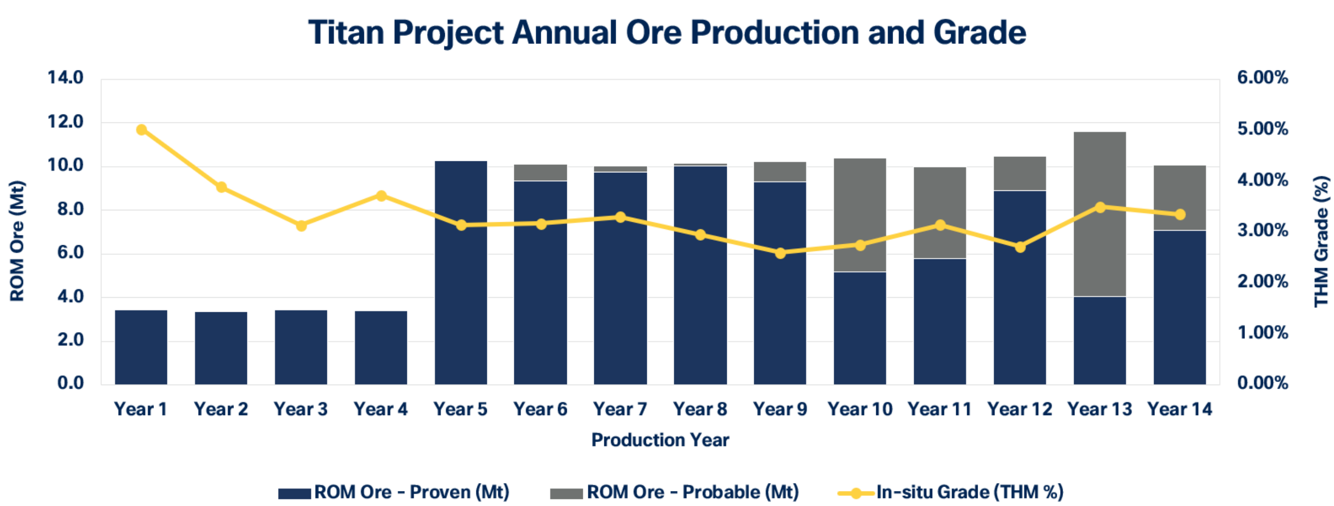


Figure 16: Titan Project annual ore production and grade profile.

Metallurgical Testing

Two metallurgical test work programs, completed in 2021 and 2023, evaluated sample preparation, desliming, wet gravity separation, rare earth flotation and dry mineral separation. These test work programs established the basis for the proposed flowsheet and informed recovery assumptions, product specifications and process design criteria.

Assays were conducted by SGS Lakefield in Canada and Bureau Veritas in Perth, Australia, using X-ray fluorescence, laser ablation/inductively coupled plasma mass spectrometry and quantitative evaluation of materials by scanning electron microscopy analytical methods.

The test work confirmed that high-quality ilmenite, rutile, zircon products could be achieved using conventional separation equipment through a typical wet concentrator plant, and fine and coarse mineral separation plant flowsheet. A rare earth mineral concentrate product was created at a high monazite recovery using a wet rare earth mineral concentrate circuit.

Processing and Recovery Methods

The Titan processing flowsheet is based on conventional mineral sands processing technology and a series of test work programs completed between 2021 and 2023. The proposed process and recovery methods were selected based on well-established and conventional approaches to processing mineral sands, including recovery of heavy mineral content using wet gravity separation equipment (such as spiral separators and up-current classifiers) followed by dry separation of titanium (ilmenite and rutile) and zircon minerals using electrostatic and magnetic separation equipment.

With the increased focus on recovery of rare earth mineral content from mineral sand deposits, the use of flotation to extract these minerals prior to dry mineral separation, and wet shaking tables to upgrade them, has become a more conventional approach and was selected for this flowsheet. The flowsheet is designed to produce ilmenite, rutile, zircon concentrate and HREC.

The process plant performance estimates assume it is fed with run-of-mine (ROM) material containing 3.2% in-size heavy minerals, made up of 11.7% zircon, 9.8% rutile, 44.1% ilmenite, and 1.6% rare earth elements. The ROM feed also includes 1.3% oversize material (>600 µm) and 14.8% slimes (<44 µm).

These estimates are based on modelled grades and recoveries, supported by metallurgical test work. The final products are estimated as follows: HREC at 61.4% TREO with 91.4% recovery; rutile at 91.1% TiO_2 with 64.3% recovery; ilmenite/leucoxene at 62.5% TiO_2 with 80.7% recovery; and zircon concentrate at 34.4% ZrO_2 with 91.8% zircon recovery.

The process plant layout is broken down further within each site into specific areas as follows:

Wet Concentrator Plant Site:

- Mining Unit Plant (MUP)
- Feed Preparation Plant (FPP)
- Wet Concentrator Plant (WCP)
- Concentrate Upgrade Plant (CUP)
- Tailing Dewatering Circuit (TDC)

Mineral Separation Plant Site:

- Rare Earth Plant (REP)
- Mineral Separation Plant (MSP)

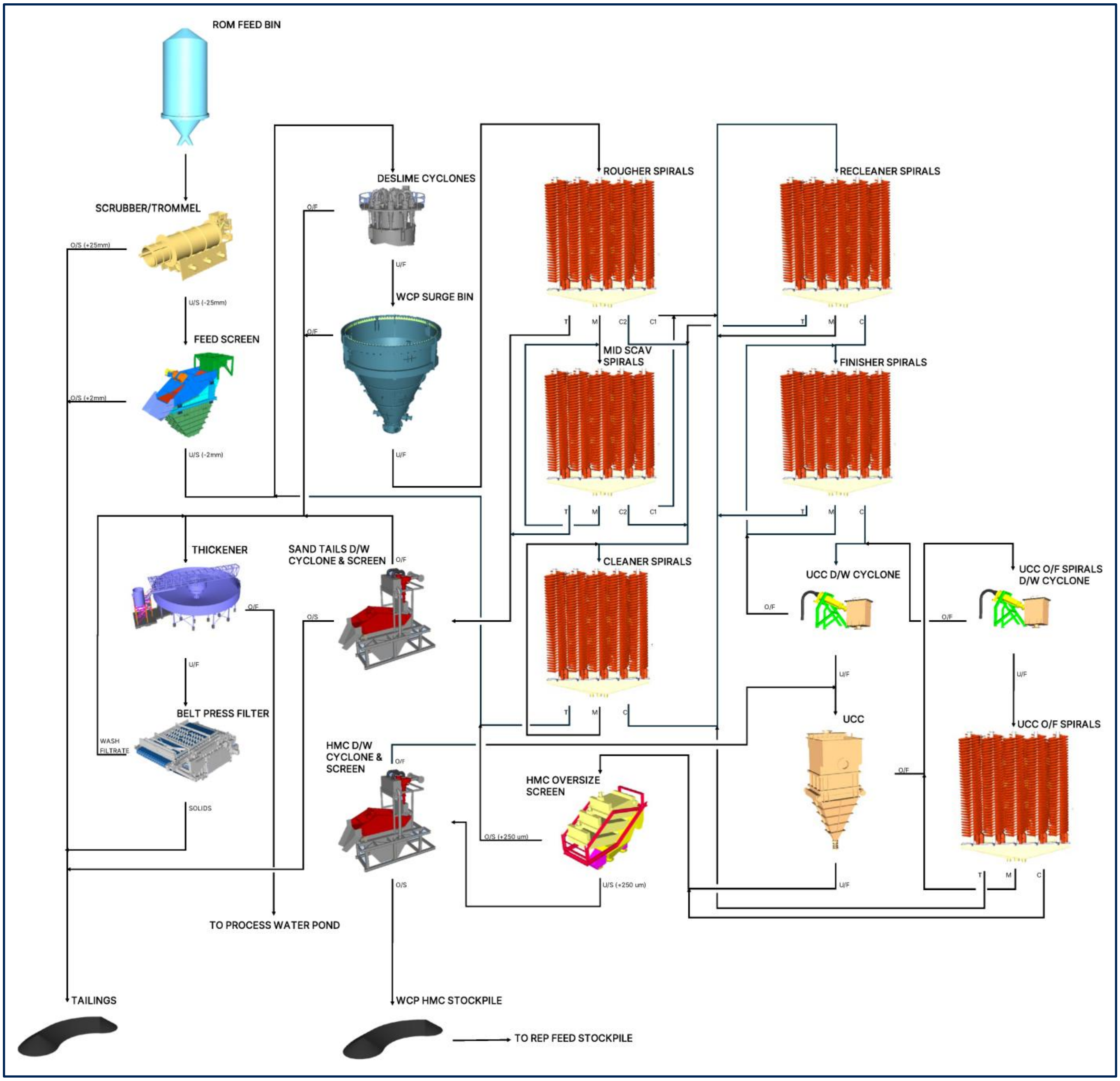


Figure 17: Titan Project process flowsheet for wet concentrator plant site.

Each site has been designed to first accommodate the 400 tph plant and then cater for the future expansion to 1,200 tph of rougher spiral head feed by adding a parallel 800 tph plant. The method for expansion for each area was considered individually to provide the most flexibility during operations, whilst also considering economies of scale in construction, and minimizing the variation of required spare parts for each plant area.

Equipment selection across all process areas is based on proven mineral sands technologies, with capacities, duty points, and configurations aligned to the design throughput and supported by metallurgical test work, process modeling, and industry operating experience. The use of modular equipment configurations enables staged expansion, reduces construction risk, and maintains consistency in equipment types across development phases.

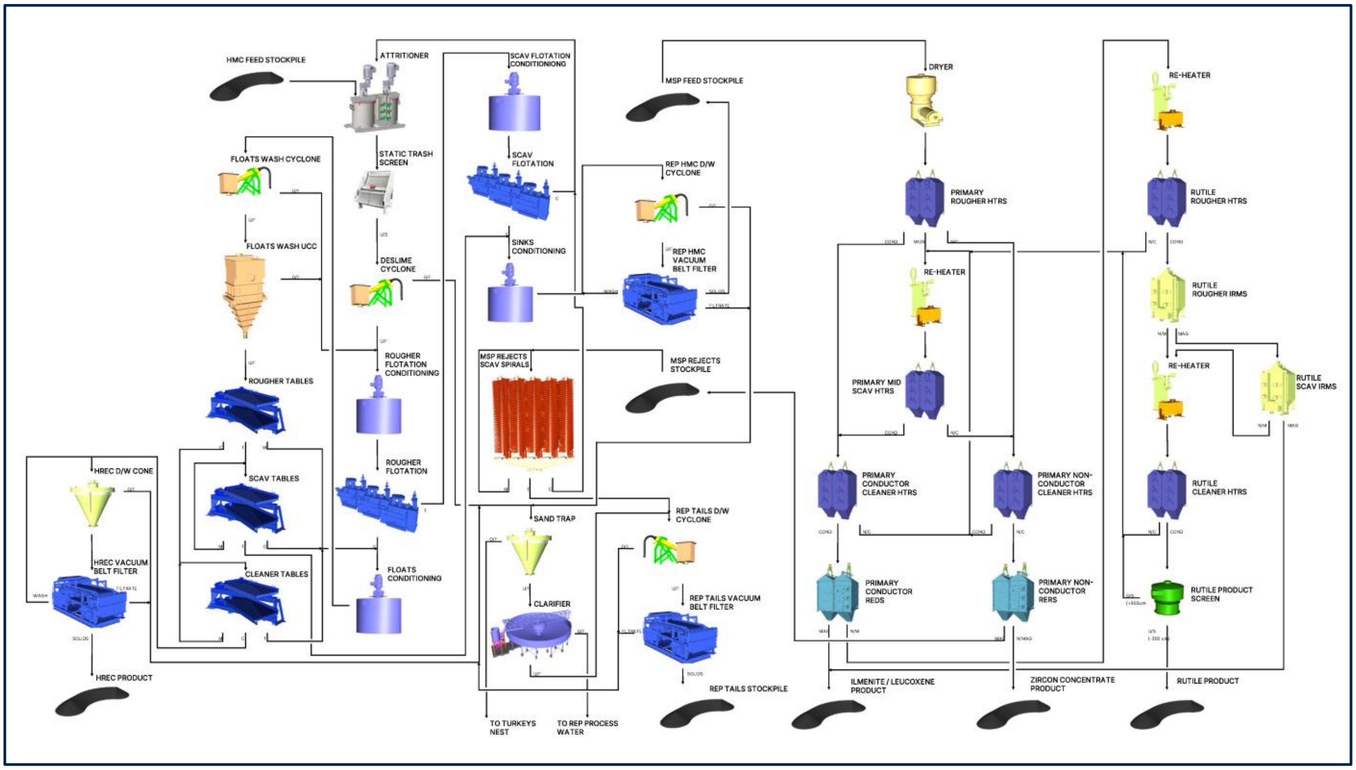


Figure 18: Titan Project process flowsheet for mineral separation plant site.

The layout of the proposed wet concentrator plant site is within the permit boundary, with the general access road entering the site from the southeast, the process water storage facility to the northeast, and the power supply connection on the south side of the site. The 400-tph plant and warehouse are positioned on the southeast of the site to minimize the earthworks required in the initial phase of plant construction. The future expansion to a 1,200-tph plant will then include construction of the 800-tph plant separated to the 400-tph plant on the west side of the site.

The MSP Site will be in the Benton County Industrial Park at 650 Divider and Natchez Trace Road. The layout of the MSP site is with the brown background showing part of the overall site boundary, including Divider and Natchez Trace Road on the western side. The warehouse, admin building, lab and sample preparation building are shown near the western side entrance off Divider and Natchez Trace Road. The Heavy Mineral Concentrate (HMC) as REP feed stockpile will be located to allow trucks delivering the HMC and backloading REP tailings to enter and leave the site without moving through the main process plant area.

The REP and MSP plants will be located along the northern side of the MSP site, with the second phase MSP plant in the northeastern corner of the site. REP HMC as MSP feed, MSP rejects and REP tailings stockpiles, as well as associated reclaim systems, will be located to the south of the REP and MSP buildings, such that loader movements will all be in a similar location. All final REP and MSP products will be stored on the northern side of the REP and MSP buildings for loading out to trucks on a ring road around the plant. The reagents area will be located on the western side of the REP plant and serviced from the same product collection ring road.

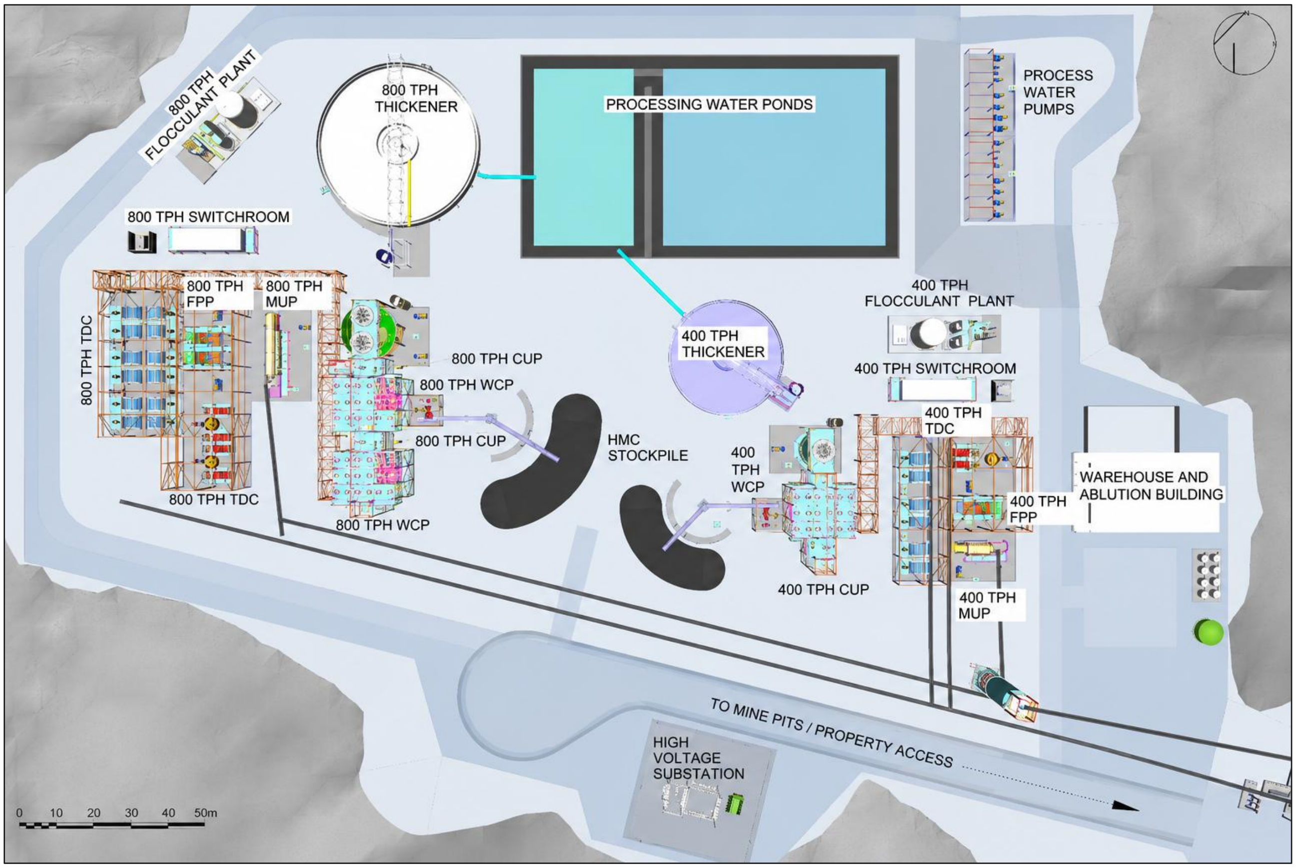


Figure 19: Titan Project wet Concentrator plant site layout / 3D model.

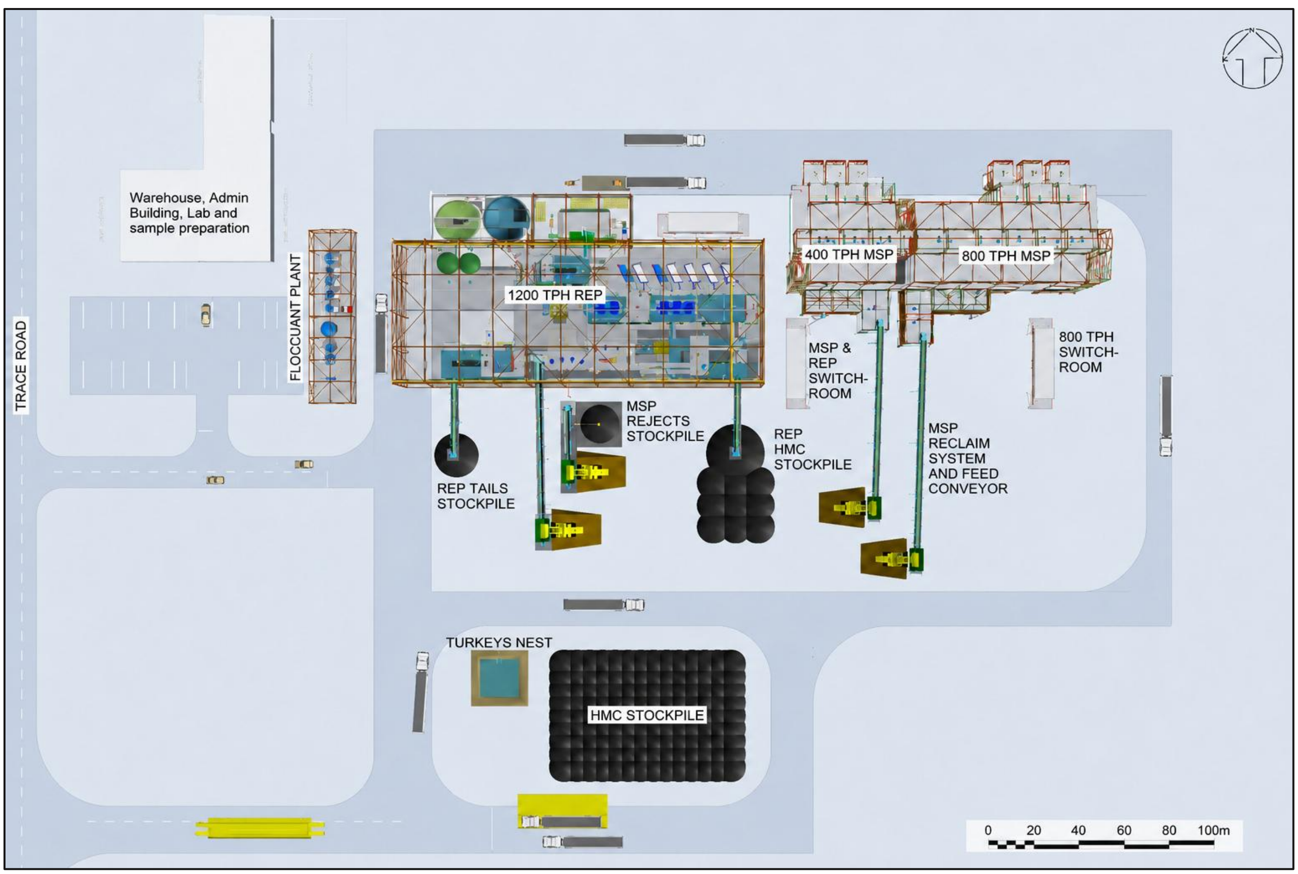


Figure 20: Titan Project mineral separation plant site layout / 3D model.

Product Specifications

The Titan Project is designed to produce four saleable mineral concentrate products: ilmenite, rutile, zircon concentrate and HREC. This product mix provides diversified exposure to titanium feedstocks, zircon and rare earth markets.

Titan DFS Product Suite	Key Specification	DFS Design Value
Ilmenite	TiO_2 content	62.5%
Rutile	TiO_2 content	91.1%
Zircon concentrate	ZrO_2 content	34.4%
Heavy Rare Earth Concentrate	Total Rare Earth Oxide (TREO)	61.4%

Table 10: Titan Project product specifications.

The HREC specification of 61.4% TREO is based on assay data incorporated into the DFS design basis. The estimated distribution of individual rare earth oxides within the TREO used for valuation purposes is summarized below.

CeO_2	Dy_2O_3	Er_2O_3	Eu_2O_3	Gd_2O_3	Ho_2O_3	La_2O_3	Lu_2O_3	Nd_2O_3
25.15	0.9	0.39	0.16	1.49	0.16	11.72	0.04	11.3
Pr_6O_{11}	**Sc_2O_3**	**Sm_2O_3**	**Tb_4O_7**	**Tm_2O_3**	**Y_2O_3**	**Yb_2O_3**	**TREO**	
3.08	0.004	2.05	0.2	0.05	4.39	0.32	**61.4**	

Note: Totals may not sum due to rounding.

Table 11: Titan Project HREC estimated TREO (%).

The specifications presented above represent the DFS design grades used in the production schedule and revenue modeling. Product grades may vary during operations and will be subject to offtake and sales agreement specifications.

Market Overview

Titanium feedstock markets are driven by demand for titanium dioxide pigment, welding products and titanium metal. Demand for titanium metal is closely linked to aerospace, defense, industrial, medical and advanced manufacturing applications. Titan's ilmenite and rutile production could provide an important U.S.-based feedstock source in a market currently exposed to high levels of foreign supply concentration. Titan's combined Phase 2 titanium feedstock production of approximately 143,000 tpa represents approximately 1% of forecast global titanium feedstock demand, positioning the Project as a readily absorbable new source of supply into a market forecast to move from surplus toward deficit later this decade.

Zircon demand is linked to ceramics, sanitaryware, tiles, refractories, foundry sand and specialty zirconium chemicals. Titan's zircon concentrate production provides a separate revenue stream and improves the Project's multi-product diversification. Global zircon supply is constrained by limited new project development, supporting the potential for Titan's zircon to serve domestic U.S. demand. Titan's forecast Phase 2 zircon concentrate production of approximately 65,700 tpa represents approximately 2% of global zircon demand, which has remained broadly stable since 2020 and is forecast to move into a slight deficit beyond 2030 as mine depletions reduce supply.

The Project's HREC provides exposure to rare earth elements, including the heavy rare earths, dysprosium, terbium and yttrium, which are essential to high-performance permanent magnets and defense applications. On the DFS design basis, Phase 2 HREC production of approximately 5,300 tpa contains approximately 58 tons per annum of combined dysprosium and terbium oxide, a meaningful domestic contribution given the U.S. currently supplies less than 2% of global dysprosium and terbium. Although the heavy rare earth elements represent approximately 13% of TREO content by mass, they contribute over 70% of the concentrate's basket value. Rare earth supply chains remain strategically sensitive due to high concentration of mining, separation, refining and magnet manufacturing capacity in China. Titan's HREC production could therefore have strategic importance as a U.S.-based upstream rare earth-bearing product, subject to downstream processing and sales arrangements.

No binding offtake agreements for Titan products have been executed as at the date of this announcement. Product pricing assumptions are based on independent market studies and are not forecasts of contracted sales prices.

Product Pricing

Market analysis and commodity price projections used in DFS economic analysis are derived from data provided by independent third-party market studies sourced from TZMI, Argus, and Mine Value Partners.

Titanium and zircon mineral sands market conditions and price forecasts are based on the base case scenario from Titanium Feedstock Price Forecast (Issue 3, 2025) prepared by TZ Minerals International Pty Ltd (TZMI). From 2026 to 2029, annual base case forecast prices were applied, after adjusting for inflation in IperionX's analysis. From 2030 onward, TZMI long-term inducement prices, converted to real 2026 U.S. dollars, were held flat through the remainder of the mine life.

HREC pricing is based on the IperionX Rare Earth Concentrate Calculations (April 2026) prepared by Argus Media and Expected Payability for Rare Earth Concentrates from IperionX's Titan Project (April 2026) prepared by Mine Value Partners (MVP). The Argus Report provides forecast for 15 individual rare earth oxide prices and the resulting TREO basket value for the Project HREC, expressed in real 2026 U.S. dollars over the 2020-2040 horizon.

Titan DFS Products LOM Average Price	Unit	Value
Ilmenite price	US$/t	353
Rutile price	US$/t	1,471
Zircon concentrate price	US$/t	829
HREC price	US$/t	41,759

Table 12: LOM average price forecasts for Titan products.

Capital Cost Estimate

Capital costs were developed in accordance with the requirements of a Class 3 estimate, consistent with the Association for the Advancement of Cost Engineering (AACE) Cost Estimating Classification System, as defined in AACE International Recommended Practice No. 17R-97. In keeping with the intended Class 3 estimate maturity, the estimate has been prepared to reach a target accuracy range of ±15%. The estimate is based on an estimate base date of Q2 2026 and is expressed in United States dollars (US$). No allowance was made for escalation.

Item	Phase 1 400tph (US$)	Phase 2 – Incremental 800tph (US$)	Total Phase 1+ Phase 2 (US$)
Direct Costs			
1000 - Site Wide - Mining	$23,237,857	$347,042	$23,584,929
1000 - Site Wide - non-process infrastructure	$18,316,630	$0	$18,316,630
1000 - Site Wide - Balance of Scope	$18,499,189	$3,191,001	$21,690,190
2000 - Feed Preparation Plant	$10,086,726	$15,587,107	$25,673,833
3000 - Wet Concentrator Plant	$44,143,921	$62,212,480	$106,356,401
4000 - Mineral Separation Plant	$25,058,422	$33,435,617	$58,494,039
5000 - Rare Earth Plant	$33,181,069	$1,240,555	$34,421,625
8000 - Mining Unit Plant	$1,304,793	$2,133,248	$3,438,041
Direct Costs Sub-total	**$173,828,608**	**$118,147,079**	**$291,975,688**
Indirect Costs			
EPCM	$22,414,018	$14,663,588	$37,077,606
Temporary Facilities and Services	$2,240,370	$1,247,800	$3,488,170
Vendor's ME Installation Assistance	$250,000	$190,000	$440,000
Contractor's Pre-Commissioning Assistance	$186,342	$244,769	$431,111
Commissioning & Testing	$1,898,000	$1,620,320	$3,518,320
Spare Parts	$928,893	$1,196,017	$2,124,910
First Fills	$143,330	$223,407	$366,737
Indirect Costs Sub-total	**$28,060,953**	**$19,385,901**	**$47,446,854**
Total, excl. Contingency and Owner's Costs	$201,889,562	$137,532,980	$339,422,542
Owner's Costs	$5,598,338	$1,637,627	$7,235,964
Contingency	$20,638,419	$14,027,432	$34,665,851
Total CAPEX, 400tph and 800tph	**$228,126,319**	**$153,198,038**	**$381,324,357**

Note: Totals may not sum due to rounding.

Table 13: Capital cost estimate summary.

Operating Cost Estimate

The operating cost estimate has been performed for mining, processing, product transport and other costs including royalties. The estimates have an accuracy of ±15%. The estimate base date is Q2, 2026, and the estimate was prepared using US$. Mine operating costs were based on prices from mine contractor services for moving ROM ore material from the pits to the wet concentrator plant and dewatered tailings and waste material back to the pits to the disposal areas and all associated work. Equipment consumables, repairs, maintenance, and labor costs were included in the contractor pricing to supply mine services including waste mobile conveyors, loaders for ore, loaders for waste, dozers for ore and interburden material, dozers for waste spreading and compaction, dozers for reclamation, and support equipment. Process plant operating costs included labor, power, consumables, reagents and utilities, maintenance, mobile equipment, laboratory, general and administration.

Operating Costs	US$/year		US$/t ore	
	Phase 1 Average	Phase 2 Average	Phase 1 Average	Phase 2 Average
Mining	21,505,614	64,334,874	6.32	6.22
Process Plant	15,520,852	27,967,350	4.56	2.70
Product Transport	3,558,600	8,900,738	1.05	0.86
Royalties	4,747,628	8,052,134	1.39	0.78
Total Operating Costs	**45,332,694**	**109,255,096**	**13.31**	**10.57**

Note: Totals may not sum due to rounding.

Table 14: Operating cost estimate summary.

The reduction in operating cost per ton from Phase 1 to Phase 2 reflects the scale benefits of the expanded operating configuration. Mining remains the largest operating cost component, with process plant costs benefiting from economies of scale in Phase 2.

Economic Analysis

The DFS financial model evaluates the economic viability of the Titan Project using an unlevered discounted cash flow model. The model assumes a 14-year mine life, phased construction and production, real 2026 U.S. dollars, no inflation escalation, a real 8% discount rate and 100% equity financing for modeling purposes. The model incorporates production schedules, product pricing, recoveries, capital costs, operating costs, taxes, royalties, working capital and sensitivities.

The Project generates US$1.93 billion of free cash flow and after-tax NPV8 of US$813 million. The after-tax IRR is 39.4% and the after-tax payback period is 3.63 years. These outcomes demonstrate the financial significance of Titan and the strength of the Project's staged capital strategy and multi-product revenue model.

Financial Forecast	Units	Value
Total EBITDA	US$ million	2,804
Pre-Tax NPV8	US$ million	1,016
Pre-Tax IRR	%	42.6
Pre-Tax Payback Period	Year	3.49
After-Tax NPV8	US$ million	813
After-Tax IRR	%	39.4
After-Tax Payback Period	Year	3.63
NPV/Initial Capital		3.56
NPV/Total Capital		2.13

Table 15: Titan Project DFS financial forecast.

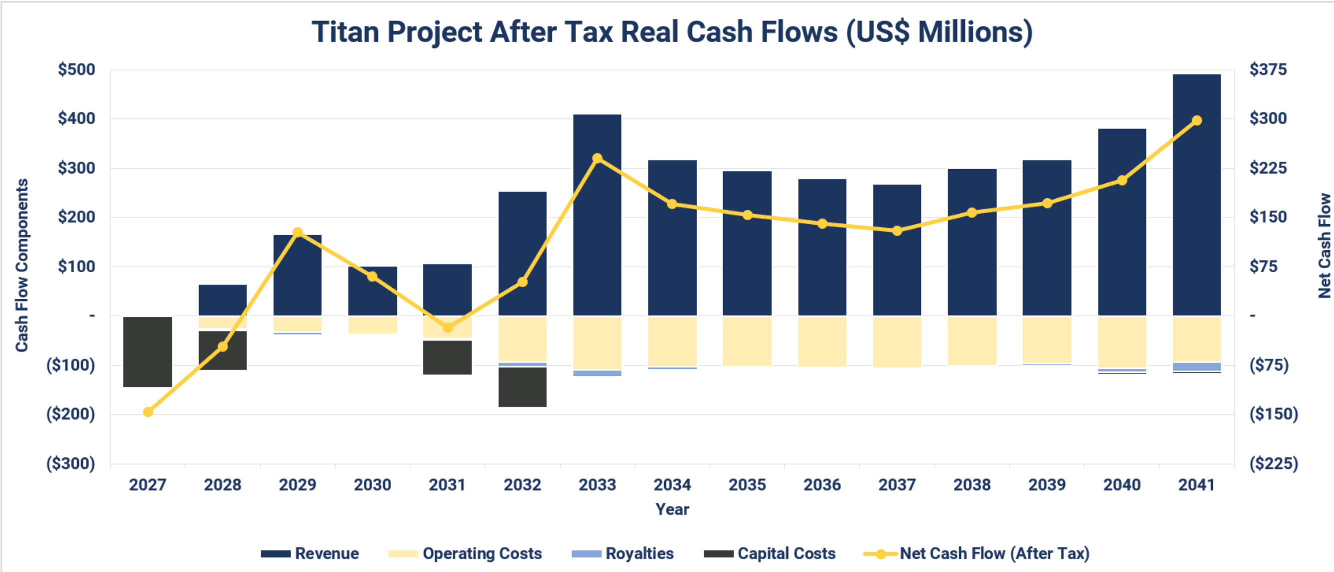


Figure 21: Titan Project after tax real cash flows.

Sensitivity analysis

The DFS includes sensitivity analysis for key value drivers, including capital cost estimates, operating cost estimates, grade and product pricing. The Project is most sensitive to product pricing assumptions, reflecting the multi-product revenue base and the importance of market pricing for ilmenite, rutile, zircon concentrate and HREC. The Project remains leveraged to upside in titanium feedstock, zircon and rare earth pricing environments.

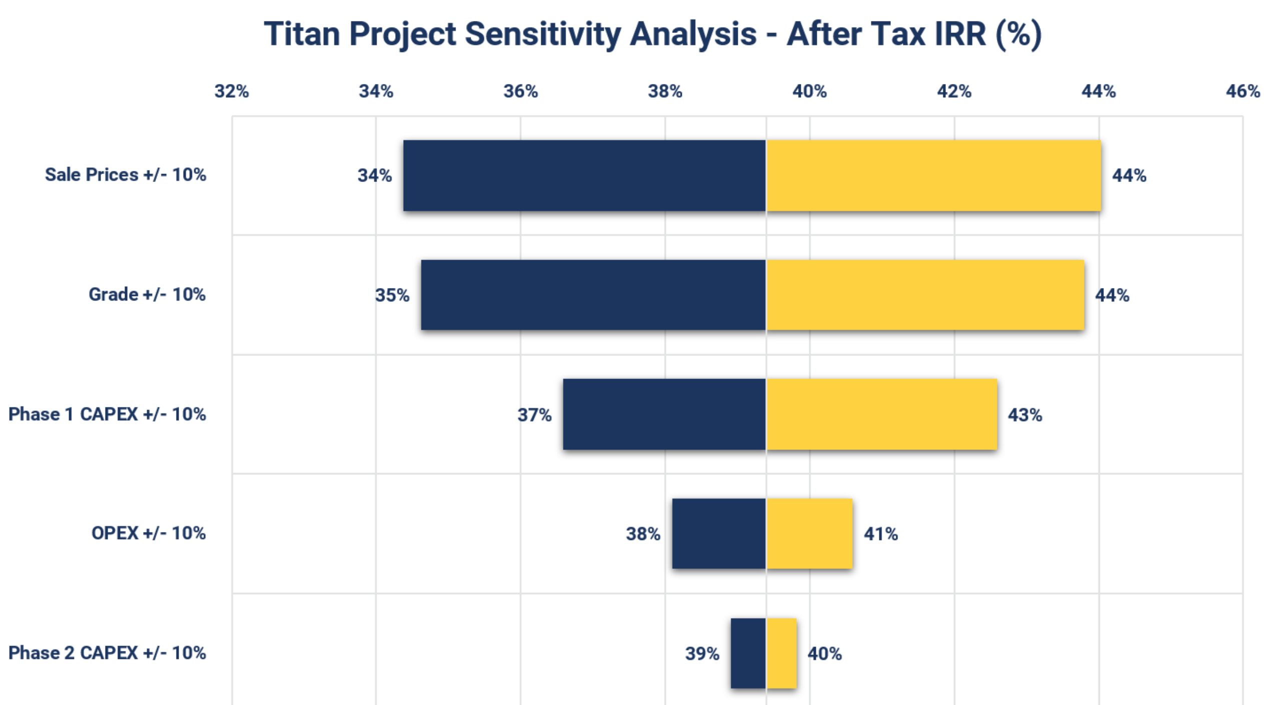


Figure 22: Titan Project sensitivity analysis - after tax IRR.

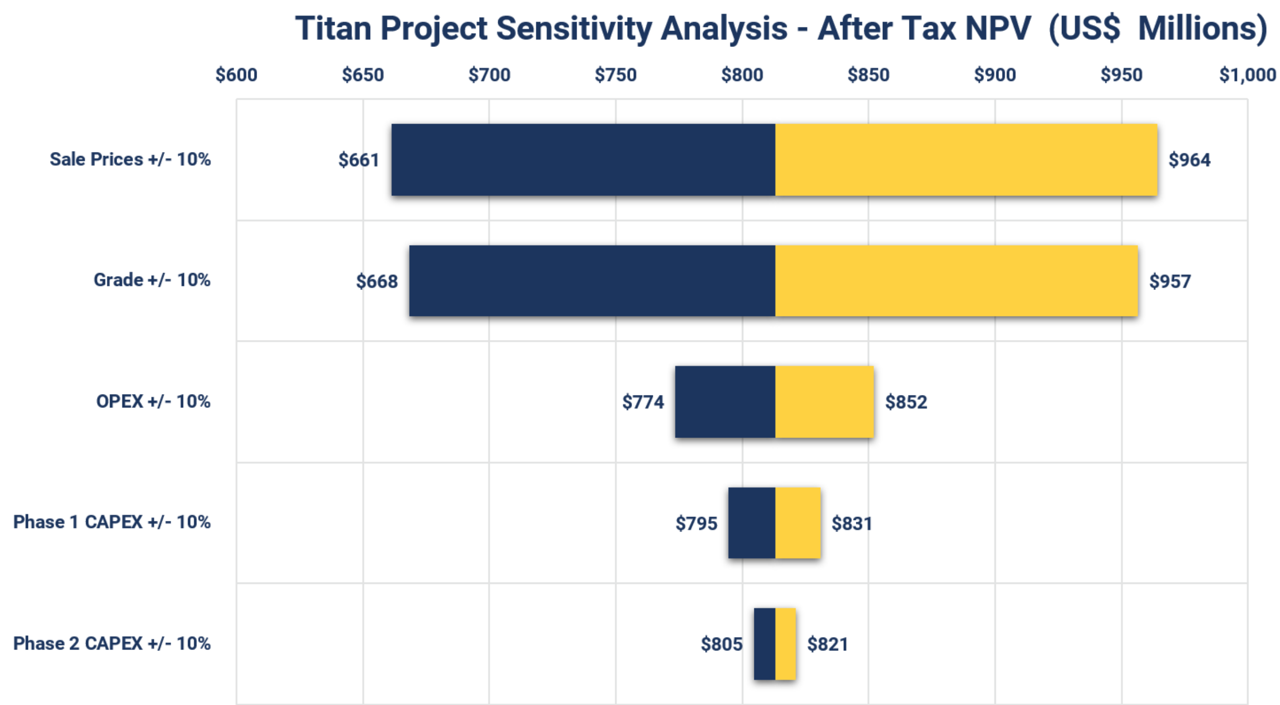


Figure 23: Titan Project sensitivity analysis - after tax NPV.

Environmental, Permitting and Social Considerations

The DFS includes environmental, permitting and social considerations for both the mine and WCP site and the MSP / REP site. The Project has been assessed against federal, state and local regulatory requirements, including Clean Water Act approvals, National Historical Preservation Act considerations, Endangered Species Act considerations, Migratory Birds Treaty Act and Bald and Golden Eagle Protection Act considerations, Clean Air Act requirements, Tennessee Mineral Surface Mining Law, water resources approvals, Resource Conservation and Recovery Act considerations and Tennessee radiological licensing and registration requirements where applicable.

Environmental Baseline Studies

Environmental baseline work includes critical issues analysis, wetland delineation and hydrologic determination field work, threatened and endangered habitat survey, cultural resources background research, baseline groundwater and surface water studies and environmental monitoring. Some prior environmental due diligence studies are outdated and will require appropriate review, updates and field work as applicable before final permits are obtained.

Permitting

Tennessee Department of Environment and Conservation (TDEC) granted IperionX the required state Surface Mining Permit (OM-70711-01) and National Pollutant Discharge Elimination System (NPDES) Permit (TN0070711) on August 14, 2023. The Tennessee Surface Mining Permit is a five-year permit and will need to be renewed and updated every five years. As mining planning progresses, these permits and agency approvals will require modification to incorporate the entirety of the future mine site. Environmental due diligence studies will also require appropriate re-reviews, updates, and field work as applicable. There is currently no work proposed in Federal Emergency Management Act (FEMA) floodplains. The Report in the Appendix provides a list of the key environmental permits that will be required for the proposed mine area. The necessary permits include those required by the United States Army Corps of Engineers (USACE), United States Fish and Wildlife Services (USFWS), Tennessee Historical Commission, TDEC Mineral and Geological Resources, TDEC Division of Water Resources and Tennessee Division of Radiological Health. TDEC also determined that IperionX's proposed sand processing operations would constitute an insignificant activity or insignificant emissions unit, as defined in part 1200-03-09-

.04(2)(a)3 of the Tennessee Air Pollution Control Regulations. The mineral separation plant and the rare earth plant are anticipated to be permitted as part of a standard development schedule, with the DFS identifying the relevant federal and state approvals and providing a framework for progressing the Project through permitting. The Report in the Appendix provides a list of the key environmental permits that will be required for the proposed mineral separation plant. The necessary permits include those required by the USACE, USFWS, Tennessee Historical Commission, TDEC Division of Water Resources, TDEC Air Pollution Control, Tennessee Division of Radiological Health, and Tennessee Division of Solid Waste Management.

Tailings, Waste and Water Management

Tailings and waste management are integrated into the mine plan. Tailings material is expected to be filtered at the WCP to an optimum moisture content of approximately 16-18% and placed like soil in backfilled lifts in mined-out pits as mining progresses. This approach is designed to minimize the tailings storage footprint and reclaim pit areas to near original surface elevations. Temporary out-of-pit waste storage areas are expected to be required through approximately Year 5, after which tailings and waste material are expected to be backfilled into the pit as mining progresses.

Water management considers pit dewatering, WCP supply, backfill stability and compliant discharge at NPDES outfalls. Groundwater inflows have been estimated using groundwater modeling. Pit inflows will be collected in sumps and pumped to settling ponds, with turbidity, suspended solids and pH controlled as required.

Social Considerations and Local Engagement

IperionX has engaged with the Tennessee Department of Environment and Conservation, the Tennessee Valley Authority, Tennessee state government officials, community members, business owners, local government officials, school systems, universities, technical schools and local and state government groups. The Company intends to continue identifying and engaging with stakeholders as the Project progresses.

IperionX currently anticipates that, during construction and operations, labor, goods, and services will be sourced from a combination of local, regional, and national suppliers, subject to availability, qualifications, commercial terms, and compliance with Project requirements.

While no binding commitments to local procurement or hiring have been made as of the Report date, IperionX generally intends to consider qualified local individuals and businesses in its hiring and procurement processes, consistent with standard industry practice, applicable laws, and operational needs.

Employment levels, workforce composition, and procurement strategies will ultimately depend on Project design, contractor selection, and prevailing market conditions. No reliance on preferential hiring or local procurement was incorporated into Mineral Resource or Ore Reserve estimates, capital cost estimates, or economic analyses presented in this DFS.

Project Timeline

Following completion of the DFS, the Company's project execution strategy is centered on a modular plant delivery approach designed to optimize schedule, cost certainty, and risk management. Subject to a Final Investment Decision (FID), activities will progress through permitting, financing, and detailed engineering, with priority placed on early finalization of modular design packages to support off-site fabrication. Module fabrication and assembly will be undertaken in parallel with site civil works and infrastructure development, enabling a streamlined construction phase through staged delivery and rapid on-site installation. The Company will also prioritize long-lead equipment procurement and integrated logistics planning to ensure alignment between fabrication, transport, and site readiness. This approach is expected to reduce overall construction duration and facilitate efficient commissioning and ramp-up to steady-state operations, while maintaining appropriate contingencies and interface management across all workstreams.

Key Milestones	Target Date
Early Contractor Involvement Start	July 2026
Phase 1 Construction Start	January 2027
Phase 1 Modular Plant Procurement Start	January 2027
Phase 1 Commissioning Start	June 2028
Phase 1 Production Ramp Up Complete	September 2028
Phase 2 Construction Start	June 2031
Phase 2 Production Ramp Up Complete	September 2032

Table 16: Titan Project key milestones.

Opportunities and Ongoing Work Programs

The DFS identifies a number of potential opportunities that could further enhance the Project. These opportunities are not included in the base case unless specifically stated and will require further work, approvals and analysis before they can be incorporated into future development cases.

- Expansion of the study area through additional drilling, mine planning and permitting.
- Potential development of adjacent properties, subject to drilling, resource definition, mine planning, permitting and economic analysis.
- Processing optimization, including recovery improvements, product quality improvements, reagent optimization, water management optimization and potential downstream integration.
- Modular execution and procurement optimization to reduce construction schedule risk and improve capital efficiency.
- Additional offtake, strategic investment, government financing or partnership opportunities aligned with U.S. critical minerals and titanium supply chain priorities.
- Integration with IperionX's titanium technologies and U.S. manufacturing strategy, subject to technical, commercial and regulatory assessment.

Key Risks

The DFS outcomes and project timeline remain subject to a range of risks and uncertainties typical of projects at this stage of development. Key risks include variability in capital and operating cost estimates, changes in commodity prices and market conditions, and the availability and timing of regulatory approvals and permits. Additional risks relate to securing project financing, contractor performance, long-lead equipment procurement, and potential delays associated with supply chain or logistics. The Company continues to actively identify, assess, and mitigate these risks through active engagement with key stakeholders; however, there can be no assurance that the Project will be developed within the currently anticipated timeframe, or that the DFS outcomes will be achieved.

Funding

The Company is progressing funding discussions in parallel with DFS activities to support advancement of the Titan Project towards development. A range of financing options are being evaluated, including a combination of debt, equity, and potential strategic partnerships or offtake-linked funding. Engagement with financial institutions, export credit agencies, and potential investors is ongoing, with the objective of securing a competitive and appropriately structured funding package aligned with the project development timeline. While these discussions are progressing constructively, there can be no assurance that funding will be secured on acceptable terms or within the anticipated timeframe. The Company considers it has reasonable grounds to believe that the required funding for development of the Titan Project may be available when required or at all, having regard to the Project's DFS outcomes, staged development profile, ongoing discussions with potential financing parties, strategic importance of the Project, and the range of funding options under consideration. No binding funding commitments have been entered into as at the date of this announcement.

Cautionary Statement

The Definitive Feasibility Study referred to in this announcement has been undertaken to assess the potential technical and economic viability of developing the Titan Project in Tennessee, United States. The DFS is a technical and economic assessment of the potential viability of the Project based on assumptions regarding mining, processing, infrastructure, operating costs, capital costs, commodity prices, permitting, environmental management, financing and other modifying factors.

Investors should note that there is no certainty that the assumptions underpinning the DFS will prove to be correct, or that the outcomes indicated by the DFS (such as production targets and financial forecasts) will be achieved. Development of the Project will require (among other things) financing, permits, procurement, construction, commissioning and operating performance consistent with the assumptions in the DFS. Access to funding (if available) may be subject to conditions outside IperionX's control and may be dilutive or otherwise affect the value of IperionX securities.

This announcement contains forward-looking statements. Forward-looking statements include (without limitation) statements regarding future mineral production, project development, capital costs, operating costs, commodity prices, revenues, cash flows, NPV, IRR, payback, mine life, permitting, construction, commissioning, market demand, offtake, financing and strategic outcomes. Actual results may differ materially from those expressed or implied by forward-looking statements.

The Production Target, and forecast financial information derived from that Production Target, are based entirely on Ore Reserves and does not include Inferred Mineral Resources. Mineral Resource and Ore Reserve estimates are necessarily imprecise and depend on interpretations and geological assumptions, minerals prices, cost assumptions and statistical inferences (and assumptions concerning other factors, including mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors) which may ultimately prove to be incorrect or unreliable. Mineral Resource and Ore Reserve estimates are regularly revised based on actual exploration or production experience or new information and could therefore be subject to change. In addition, there are risks associated with such estimates, including (among other risks) that minerals mined may be of a different grade or tonnage from those in the estimates and the ability to economically extract and process the minerals may become compromised or not eventuate. The Company's plans, including its mine and infrastructure plans, and timing, for the Titan Project, are also subject to change. Accordingly, no assurances can be given that the production targets, financial forecasts or other forecasts or other forward-looking statements or information in this announcement or the DFS will be achieved.

IperionX has concluded that it has a reasonable basis for providing the forward-looking statements included in this announcement and for holding the expectation that it will be able to complete the development of the Project, subject to the qualifications, assumptions and risks set out in this announcement and the underlying DFS.

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, financial forecasts, production targets, 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, as well as other uncertainties and risks set out in filings made by the Company from time to time with the Australian Securities Exchange and the U.S. Securities and Exchange Commission ("SEC").

Forward looking statements are based on the Company and its management's 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. 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. Except as required by applicable law or stock exchange listing rules, 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.

Non-IFRS financial measures

This announcement and the DFS contain certain financial measures (such as NPV and IRR) that are not recognized under International Financial Reporting Standards (IFRS). Although the Company believes these measures provide useful information about the Company's financial forecasts, they should not be considered in isolation or as a substitute for measures of performance or cash flow prepared in accordance with IFRS. As these measures are not based on IFRS, they do not have standardized definitions and the way the Company calculates these measures may not be comparable to similarly titled measures used by other companies. Consequently, undue reliance should not be placed on these measures.

Competent Persons Statements

The information in this announcement that relates to Exploration Results is based on, and fairly represents, information compiled and/or reviewed by Mr. Adam Karst, P.G., a Competent Person who is a Registered Member of the Society of Mining, Metallurgy and Exploration (SME) which is a Recognized Professional Organization (RPO). Mr. Karst is an employee of Karst Geo Solutions, LLC. 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.

The information in this announcement that relates to the Mineral Processing and Metallurgical Testing, Processing and Recovery Methods are based on, and fairly represents, information compiled and/or reviewed by Mr. Etienne Raffaillac, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr. Raffaillac is an employee of Mineral Technologies Pty Ltd. Mr. Raffaillac 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. Raffaillac consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to Mineral Resource Estimate is based on, and fairly represents, information compiled and/or reviewed by Mr. John Eckman, a Competent Person who is a Certified Professional Geologist, American Institute of Professional Geologists (#CPG-11383) and a registered member of the Society for Mining, Metallurgy & Exploration (SME #4197942), both of which are Recognized Professional Organizations (RPO). Mr. Eckman is an employee of Marshall Miller & Associates. Mr. Eckman 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. Eckman consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The information in this announcement that relates to Ore Reserve Estimate is based on, and fairly represents, information compiled and/or reviewed by Mr. Justin Douthat, a Competent Person who is a Registered Member of the Society of Mining, Metallurgy & Exploration (SME #4028345), which is a Recognized Professional Organizations (RPO). Mr. Douthat is an employee of Marshall Miller & Associates. Mr. Douthat 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. Douthat consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The information in this announcement that relates to Cost Estimates and Economic Analysis is based on, and fairly represents, information compiled or reviewed by Mr. Alexandre Roy, a Competent Person who is a Registered Member of Ordres des Ingenieurs du Quebec, which is a Recognized Professional Organization (RPO). Mr. Roy is an employee of Primero Group Americas Inc. Mr. Roy has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves" (the 2012 JORC Code). Mr. Roy consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

IPERIONX

TITAN PROJECT

TENNESSEE, U.S.

DEFINITIVE FEASIBILITY STUDY

SUPPORTING TECHNICAL INFORMATION REPORT

Report prepared for:
IperionX Limited

Report current at:
June 4, 2026

Report prepared by:

Competent Person Name	Section Responsibility
Adam Karst	Exploration Results
John Eckman	Mineral Resource Estimate
Justin Douthat	Ore Reserve Estimate
Etienne Raffaillac	Mineral Processing and Metallurgical Testing, Processing & Recovery Methods
Alexandre Roy	Cost Estimates and Economic Analysis

Karst Geo Solutions, LLC

Marshall Miller & Associates

Mineral Technologies
A Downer Company

PRIMERO

Supporting Technical Information Report

Forward-Looking Information

This Definitive Feasibility Study Supporting Technical Information Report contains forward-looking statements including, without limitation, statements regarding Mineral Resource and Ore Reserve estimates, recoveries and grade, future mineralization, future adjustments, and sensitivities and other statements that are not historical facts. These statements are not guarantees of future performance and undue reliance should not be placed on them. The assumptions used to develop forward-looking information and the risks that could cause the actual results to differ materially are detailed in the body of this report.

Forward-looking statements address activities, events, or developments that IperionX Limited (IperionX) expects or anticipates will or may occur in the future and are based on current expectations and assumptions. Although IperionX's management believes that its expectations are based on reasonable assumptions, it can give no assurance that these expectations will prove correct. Such assumptions, include, but are not limited to: (i) there being no significant change to current geotechnical, metallurgical, hydrological and other physical condition assumptions; (ii) permitting being consistent with current expectations (iii) political developments being consistent with its current expectations; (iv) certain exchange rate assumptions being approximately consistent with current levels; (v) certain price assumptions for zircon, rutile, ilmenite, and rare earth elements; and (vii) other planning assumptions.

Important factors that could cause actual results to differ materially from those in the forward-looking statements include, among others, risks that estimates of Mineral Resources and Ore Reserves are uncertain and the volume and grade of mineralization actually recovered may vary from the estimates presented in this report, risks relating to fluctuations in commodity prices; risks due to the inherently hazardous nature of mining-related activities; risks related to the jurisdiction in which IperionX operates, uncertainties due to health and safety considerations, uncertainties related to environmental considerations, including, without limitation, climate change, uncertainties relating to obtaining approvals and permits, including renewals, from governmental regulatory authorities; and uncertainties related to changes in law.

IperionX does not undertake any obligation to release publicly revisions to any "forward-looking statement," to reflect events or circumstances after the date of this report, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws. Investors should not assume that any lack of update to a previously issued "forward-looking statement" constitutes a reaffirmation of that statement. Continued reliance on "forward-looking statements" is at investors' own risk.

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1 Executive Summary

1.1 Introduction

A Definitive Feasibility Study (the DFS or the Study) on the Titan Project (the Project) was prepared for IperionX Limited (IperionX or the Company) by Marshall Miller & Associates, Inc. (MM&A). While MM&A fulfilled the responsibility as the integrator of the DFS, other consulting firms also completed vital aspects of the Study. Karst Geo Solutions, LLC (KGS) was responsible for exploration results for the Project. Mineral Technologies Pty Ltd (MT) completed the process plant design and related modular plant cost estimation, Primero Group Americas Inc. (Primero) completed the non-process infrastructure (NPI) design and related cost estimates, and was responsible for integrating the mining, process and NPI costs into a comprehensive discounted cash flow financial model for the DFS.

This DFS Supporting Technical Information Report (the Report) has been prepared to support the Company's Australian Securities Exchange (ASX) announcement of the Definitive Feasibility Study for the Titan Project. Information relating to Exploration Results, Mineral Resources and Ore Reserves has been prepared and reported in accordance with the JORC Code 2012. The technical information in this summary is based on work completed by the relevant Competent Persons and supporting technical specialists identified in this Report.

Per the definitions in Section 19.3, a "definitive feasibility study" is equivalent to a "feasibility study".

1.2 Property Description and Ownership

IperionX has a large regional ground holding, of which a small subset of the mineral tenure hosts the Mineral Resource and Ore Reserve estimates. For the purposes of this Supporting Technical Information, the term "property" is used for the larger ground holding, and the term "Study Area" is used for the area that hosts the Mineral Resource and Ore Reserve estimates.

The Titan Project is located near Camden, Tennessee, US, approximately 128 kilometers (km) (80 miles) west of Nashville, Tennessee and approximately 11 km (7 miles) northwest of Camden, Tennessee. The Study Area is centered at approximately 36.147349N, -88.20974W.

As at June 4, 2026, the Titan Project is comprised of approximately 40.8 km^2 (10,091 acres) of surface and associated mineral rights in Tennessee, of which approximately 6.0 km^2 (1,490 acres) are owned by IperionX, approximately 5.9 km^2 (1,457 acres) are subject to long-term lease by IperionX, and approximately 28.9 km^2 (7,144 acres) are subject to exclusive option agreements with IperionX. These exclusive option agreements, upon exercise, allow IperionX access to the surface property and associated mineral rights.

The Project is owned by IperionX Critical Minerals, LLC (IXCM), a wholly owned subsidiary of IperionX. IperionX has acquired surface, subsurface and water rights to the properties within the Mineral Resource area. For the optioned and leased land, IperionX will pay the landowner the greater of 1) US$75 per acre of the property per year, or 2) the production royalty, generally 5% of net revenues from products mined and removed from the property. All properties owned by IperionX or its subsidiary (TN Exploration, LLC) will not incur a royalty.

1.3 Accessibility, Climate, Local Resources, Infrastructure and Physiography

General access to the Study Area is via a well-developed network of primary and secondary roads. The Study site can be accessed via Highway 641 north 41.0 km (25.5 miles) from Interstate 40 near the town of Camden, Tennessee, Reynoldsburg Road for 1.6 km (1.0 mile), Pleasant Hill Road for 1.6 km (1.0 mile) and the Little Benton Road, a gravel road, for 4.8 km (3.0 miles). Little Benton Road goes through the Study Area.

The climate is temperate with warm summers and cold winters including the potential for snow and ice. Annual rainfall for the area is 136.6 centimeters (cm) (54 inches). It is expected that any future mining activity will operate year-round.

The existing infrastructure includes power and gas, with 161-kilovolt (kV*)* transmission lines near the Project area. IperionX intends to implement fully renewable power sourcing options for the Titan Project, including the assessment of existing on-grid solutions currently provided by existing power generators and suppliers in the general Study Area. Additional communications will be required with the Tennessee Valley Authority (TVA), local power supplier, and gas suppliers.

Water supply could be sourced from nearby surface water bodies or from shallow groundwater sources.

Personnel are assumed to live in surrounding communities. No accommodations camp would be required. Local active sand mining, gravel mining and timber operations could be sources of recruiting experienced operators.

1.4 Geological Setting, Mineralization, and Deposit

Heavy mineral sands are created through physical and mechanical concentration of detrital minerals liberated through weathering. This weathering portion of this process occurs inland, while the deposition of these minerals ultimately occurs along coastlines through features such as deltas, foreshore, shoreface, barrier islands, dunes and tidal lagoons.

The Study Area location in western Tennessee represents the eastern flank of the Mississippi Embayment, a large, southward-plunging syncline within the Gulf Coastal Plain. The McNairy Formation represents a pro-grading deltaic environment during a regressive marine sequence. This deposition model is supported by the coarsening upward sequence grading from the glauconitic clay-rich Coon Creek Formation to the finer grained lower member of the McNairy Formation to the coarser grained upper member of the McNairy Formation.

The main mineralized zone at the Study Area is hosted stratigraphically in the lower member of the McNairy Formation, which dips gently to the west in the Study Area. The upper zone is also mineralized in some areas. Mineralization in the lower member had been traced for over 6.0 km along strike.

The base of mineralization range is relatively level from 81 meters (m) to 112 m (266 feet (ft) to 367 ft) above current sea level. Mineralization varies from 5 m to 67 m (16 ft to 220 ft) thick and averages 28 m (92 ft) in thickness. Mineralization primarily occurs in two zones within the McNairy Formation. The main mineralized zones are interrupted by low-grade sand. The primary minerals associated with the mineralized horizons are altered ilmenite, zircon, rutile, staurolite, kyanite, monazite and xenotime. The Gangue minerals are predominantly quartz and clays. Though extensive basement faulting is present in the region, it does not appear to impact the stratigraphy at the scale of this Project.

1.5 Drilling and Sampling

Drilling on the Study Area comprises 156 drill holes. This includes 16 reverse circulation holes (total drilled length of 837 m or 2,746 ft) and 140 roto-sonic drill holes (total drilled length of 5,644 m or 18,517 ft). Across all Titan properties, including those outside of the Study, IperionX has drilled 313 holes (total drilled length of 11,382 m or 37,343 feet). All exploration drilling was completed by IperionX.

The area covered by the drilling is roughly 6.6 km (4.1 miles) (north-south) by 3.7 km (2.3 miles) (east-west); the area that hosts the Mineral Resource estimate is further broken up into several areas based on land holdings (land agreements). These range from 1.58 hectare (ha) *(*3.9 acres) for the smallest area to 161 Ha (397 acres) for the largest area. Drill hole spacing is generally 150 x 300 m (492 x 984 ft). Some areas have difficult access and drill spacing in those areas is wider spaced, approximately up to 300 x 600 m (984 x 1,969 ft).

There are an additional 11 roto-sonic drill holes completed as part of a hydrogeological study by HDR Engineering, Inc. (HDR). These holes were drilled on IperionX's behalf. In 2025, an additional 62 holes were drilled by S&ME, Inc. (S&ME) for geotechnical evaluations.

Geoprobe drill core samples, typically 3 m (9.8 ft) in length, were collected directly from the plastic sample sleeves at the drill site. Some interpretation was involved as the material could expand or compact as it was recovered from the core barrel into the plastic sleeve. Samples were collected at regular 1.5-m (4.9 ft) intervals unless geological contacts were encountered. Sample length ranged from 0.3 m (1.0 ft) to 4.5 m (14.8 ft).

The unconsolidated sonic cores were sampled by splitting the core in half lengthwise using a machete, then recovering an even split with a trowel along the entire length of the sample interval. The sample volume weights were about 2 kilograms (kg) (4.4 pounds (lbs)) and were appropriate for the analytical method(s) being used. Samples were collected directly to pre-labeled/pre-tagged sample bags; the remaining sample was further split into a replicate/archival sample. What sample remained after these steps was used to backfill the drill hole.

Drill samples were sent to the SGS facility in Lakefield, ON, Canada and Bureau Veritas in Perth, Australia. SGS is a qualified third-party laboratory that is independent of IperionX. SGS Lakefield is accredited as an ISO 17025 facility for selected analytical techniques. Samples were subjected to standard mineral sand industry assay procedures of size fraction analysis, heavy-liquid separation, and chemical analysis.

Accuracy monitoring was addressed by submission of in-house heavy mineral sands standards developed specifically for the Project. There is no commercially available standard reference material for heavy mineral sands. It is a common practice within heavy mineral sands exploration and operations to generate standards that represent a matrix match to the target material being analyzed.

1.6 Mineral Processing and Metallurgical Testing

Two testwork programs were conducted for the mineral resource area, one in 2021 and the second in 2023. All testwork was completed on behalf of IperionX.

Assays were conducted by SGS Lakefield, and Bureau Veritas in Perth, Australia, using X-ray fluorescence (XRF), laser ablation/inductively-coupled plasma mass spectrometry (ICP–MS) and quantitative evaluation of materials by scanning electron microscopy (QEMSCAN) analytical methods. The final products, ilmenite, rutile, zircon, rare earth mineral concentrate, were produced from the 2023 testwork. Ilmenite graded 64.9% TiO_2, and the rutile graded 91.2% TiO_2. The zircon graded 66.8% ZrO_2. The rare earth mineral concentrate had a total rare earth oxide (TREO) grade of 59.1%. The product grades generally align with 2021 scoping testwork results and were considered to be saleable products.

The testwork showed that high-quality ilmenite, rutile, zircon products could be achieved using conventional separation equipment through a typical wet concentrator plant (wet concentrator plant), and fine and coarse mineral separation plant (mineral separation plant) flowsheet. A rare earth mineral concentrate product was created at a high monazite recovery using a wet rare earth mineral concentrate circuit.

Circuit simulation models were generated for the wet concentration plant, rare earth mineral plant and mineral separation plant flowsheets to evaluate recycle streams and resultant mass flows. The expected future performance of the processing plant was based on metallurgical testwork results and benchmarked against other deposits that have similar characteristics to the Titan deposit. The simulated recoveries for in-size samples (+45- micron material) from ROM to products are: rare earth mineral recovery of 82.6%; ilmenite recovery of 79.7%; rutile recovery of 66.9%; zircon recovery of 77.6%.

1.7 Mineral Resource Estimates

The geological model was based on the geological interpretations of lithology and mineralization from recorded downhole drill records. MM&A modeled an overburden zone, a 'waste' material zone overlying the Upper McNairy and beneath the recorded overburden, the Upper McNairy member, the Lower McNairy member and the Coon Creek Formation zone.

Bulk density measurements collected range between 1.39 tonnes per cubic meter (t/m^3) and 1.76 t/m^3. The soil density analyses show the Upper McNairy and Lower McNairy units have a consistent average density of 1.57 grams per cubic centimeter (g/cm^3) which were used for the resource evaluation.

No total heavy mineral top cut was used, nor was it considered necessary for this deposit due to the geology, style, and consistency of mineralization. Variograms were run to test spatial continuity within the selected geological domains. Grade, slimes, and assemblage estimations were completed using inverse distance weighting to the second power interpolation, which is considered appropriate for this style of mineralization.

A primary ellipsoid search dimension of 212 x 425 x 3 m (semi-major, major, minor) was used for all assay data where the major axis was oriented to 30-degrees east of north to align with the approximate trend of mineralization. Successive search volume factors with increased search volumes were adopted to interpolate grade in areas of lower data density. No consistent plunge was apparent in mineralization. No dip or plunge angles were assigned to the search ellipsoids.

The reasonable prospects for economic extraction for the Mineral Resources were based on the parameters listed in Table 1-1.

Table 1-1: Assumptions Used in Defining Prospects of Economic Extraction

Parameter	Units	Value
Commodity price		
Rutile	US$/t	1,425
Ilmenite	US$/t	340
Rare earth mineral concentrate	US$/t	10,678
Zircon Concentrate	US$/t	912
Metallurgical recovery		
Rutile	%	70.6 (81.2% mineral in product)
Ilmenite	%	85.0 (95.8% mineral in product)
Heavy rare earth concentrate	%	89.5 (87.8% mineral in product)
Zircon concentrate	%	91.2 (46.9% mineral in product)
Operating costs		
Mining cost	US$/m^3	7.23
Processing cost	US$/ROM t	3.09
Transport cost	US$/ROM t	1.00
Reclaim/rehandle	US$/ROM t	Included in Mining cost
Incremental in pit management	US$/ROM t	Included in Mining cost
General and administrative cost	US$/ROM t	0.95
Dewatering	US$/ROM t	0.30
Wetlands mitigation cost	US$/Ha	60,000
Stream mitigation cost	US$/linear m	1,425
Royalty	%	5

Note: ROM = run of mine

Mineral Resources are reported using the Mineral Resource definitions set out in the 2012 JORC Code on a 100% basis. The reference point for the estimate is in situ and are inclusive of Ore Reserves. Mineral Resources are current as at June 4, 2026. The Competent Person responsible for the estimate is John Eckman. The mineral resource estimates are provided in Table 1-2.

Table 1-2: Mineral Resource Estimate and Total Heavy Minerals (THM) Assemblage

Mineral Resource Estimate	In situ Tonnes	THM (%)	THM (t)	THM Assemblage Zircon (%)	Rutile (%)	Ilmenite (%)	REE (%)
Inclusive of Reserve							
Measured (M)	120,434,000	2.5	3,060,000	11.1	9.5	40.9	1.5
Indicated (I)	28,388,000	2.9	828,000	11.8	9.2	52.0	1.5
Total M+I	**148,823,000**	**2.6**	**3,887,000**	**11.2**	**9.4**	**43.2**	**1.5**
Inferred (Inf)	0	0.0	0	0.0	0.0	0.0	0.0
Total M+I+Inf	**148,823,000**	**2.6**	**3,887,000**	**11.2**	**9.4**	**43.2**	**1.5**
Exclusive of Reserve							
Measured (M)	96,851,000	1.5	1,489,000	10.4	9.2	40.1	1.2
Indicated (I)	102,190,000	2.0	2,013,000	9.8	10.2	38.9	1.5
Total M+I	**199,041,000**	**1.8**	**3,502,000**	**10.0**	**9.8**	**39.4**	**1.4**
Inferred (Inf)	97,832,000	1.8	1,774,000	9.3	9.6	38.0	1.2
Total M+I+Inf	**296,872,000**	**1.8**	**5,276,000**	**9.8**	**9.7**	**39.0**	**1.3**
Grand Total							
Measured (M)	217,285,000	2.1	4,548,000	10.8	9.4	40.6	1.4
Indicated (I)	130,578,000	2.2	2,841,000	10.4	9.9	42.7	1.5
Total M+I	**347,863,000**	**2.1**	**7,389,000**	**10.6**	**9.6**	**41.4**	**1.4**
Inferred (Inf)	97,832,000	1.8	1,774,000	9.3	9.6	38.0	1.2
Total M+I+Inf	**445,695,000**	**2.1**	**9,163,000**	**10.4**	**9.6**	**40.8**	**1.4**

Notes to accompany mineral resource table:

1. Mineral Resources are reported using the definitions set out in the 2012 JORC Code and are current as at June 4, 2026. Mineral Resources are reported on an in situ basis, inclusive of Ore Reserves.
2. The Competent Person responsible for the estimate is John Eckman.
3. Mineral Resources are reported within a conceptual pit shell that uses the key assumptions summarized in Table 1-1 above.
4. Mineral Resources are reported above a cut-off grade of 0.4% THM.
5. Estimates have been rounded.

1.8 Ore Reserve Estimates

Ore Reserves were converted from Measured and Indicated Mineral Resources. Inferred Mineral Resources were set to waste. Ore Reserves were confined within a pit shell that used the parameters summarized in Table 1-3.

Table 1-3: Optimization Parameters

Group / Item	Unit	Value
Geometry		
Coordinate System	-	UTM-16N
Overburden slope	°	26.6
Face slopes	°	35
Inter-ramp slope	°	29
Overall slope	°	27.4
Berm width	m	5
Batter angle	°	35
Berm (batter) height (working)	m	10
Berm (batter) height (final wall)	m	10
Minimum mining width	m	25
Ramp width	m	25
Total depth	m	55
Block dimension X	m	25
Block dimension Y	m	25
Block dimension Z	m	1.524

(Continued below)

Group / Item	Unit	Value
Mining		
Production rate	tonne/year	3,529,000 to 10,588,000
Production schedule	Hours/Year	8760
Production schedule efficiency	%	85
Ramp grade	%	10
Concentrator recovery		
Rutile	%	70.6 (81.2% mineral in product)
Ilmenite	%	85.0 (95.8% mineral in product)
Heavy rare earth concentrate	%	89.5 (87.8% mineral in product)
Zircon	%	91.2 (46.9% mineral in product)
Cutoff grade (COG)	%	0.85 THM
Specific gravity (ore)	-	1.57
Specific gravity (waste rock)	-	1.72
Specific gravity (Coon Creek Formation)	-	1.54
Specific gravity (soil)	-	1.72
Restrictions	-	floodplain & wetlands
Swell factor	%	12
Pit Loss/Dilution	%	10 (in addition to low-grade interburden)
Vertical rate of advance	m	90
Battery limits	location	ROM Pile
Financial		
Mining cost	US$/m^3	7.23
Transportation cost	US$/ROM t	1.00
Processing cost	US$/ROM t	3.09
Reclaim/rehandle	US$/ROM t	Included in mining cost
Incremental in pit management	US$/ROM t	Included in mining cost
General and administrative cost	US$/ROM t	0.95
Dewatering	US$/ROM t	0.30
Wetlands mitigation cost	US$/ha	60,000
Stream mitigation cost	US$/ linear m	1,425
Royalty	%	5
Sales price rutile	US$/t	1,425
Sales price ilmenite	US$/t	340
Sales price rare earth concentrate	US$/t	10,678
Sales price zircon concentrate	US$/t	912

A detailed cut-off grade analysis was completed whereby additional optimizations were run at cut-off grades of 0.6% THM, 0.7% THM, 0.8% THM, and 0.85% THM to arrive at 3.2% THM grade feed to the wet concentrator plant. The final cut-off grade used for optimization, scheduling, and mine planning was set at 0.85% THM.

Floodplain restrictions were observed for the optimization process. Production requirements for the Titan Property were based on the target production of 3.5 Mt per year for Phase 1 (Years 1-4) and 10.0 Mt per year for Phase 2 (Years 5-14). Results of the Optimization and detailed mine schedule for the Titan Property yielded 117 Mt of ROM ore at a THM of 3.2 percent.

Geotechnical assessment resulted in a final wall berm (batter) height of 10 m with a batter angle 35 degrees and 5-m benches, resulting in an overall 27.4-degree slope wall Due to the geometry of the mining pits, small amounts of economic material may have been excluded from the mine plan tonnages, while small amounts of sub-economic/low-grade material may have been included and account for the dilution included as part of the Ore Reserve estimate.

Ore Reserves are reported using the Ore Reserve definitions set out in the 2012 JORC Code on a 100% basis. The Competent Persons considered pertinent Modifying Factors, inclusive of mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors, in converting a portion of the Measured and Indicated Mineral Resources to Ore Reserves. Ore Reserves are current as at June 4, 2026. The reference point for the Ore Reserve estimate is as delivered to the process facilities. The Competent Person responsible for the estimate is Justin Douthat. The Ore Reserve estimate is based only on Measured and Indicated Mineral Resources. Inferred Mineral Resources were treated as waste and were not used to support Ore Reserves or economic viability. The Ore Reserves are shown in Table 1-4.

Table 1-4: Titan Project – Estimate of Ore Reserves, ROM Basis

	Grand Total ROM Tonnes					THM Assemblage			
Unit	Proved	Probable	Total	THM (%)	THM (t)	Zircon (%)	Rutile (%)	Ilmenite (%)	REE (%)
Upper McNairy	24,565,000	2,415,000	26,980,000	2.3	620,000	6.2	6.2	23.6	0.2
Lower McNairy	68,740,000	21,307,000	90,047,000	3.4	3,086,000	12.7	10.5	48.3	1.9
Total	**93,306,000**	**23,722,000**	**117,027,000**	**3.2**	**3,706,000**	**11.6**	**9.8**	**44.2**	**1.6**

Notes to accompany Ore Reserve table:

1. Ore Reserves are reported using the definitions set out in the 2012 JORC Code and are current as at June 4, 2026. Ore Reserves are reported at the point of delivery to the process plant.
2. The Competent Person responsible for the estimate is Justin Douthat.
3. Ore Reserves are reported within a finalized mine design pit shell that uses the key assumptions summarized in Table 1-3 above.
4. Ore Reserves are reported above a cut-off grade of 0.85% THM.
5. Ilmenite includes leucoxene, pseudorutile, and ilmenite and REE includes monazite, xenotime, and unclassified REE.
6. Estimates have been rounded.

1.9 Mining Methods

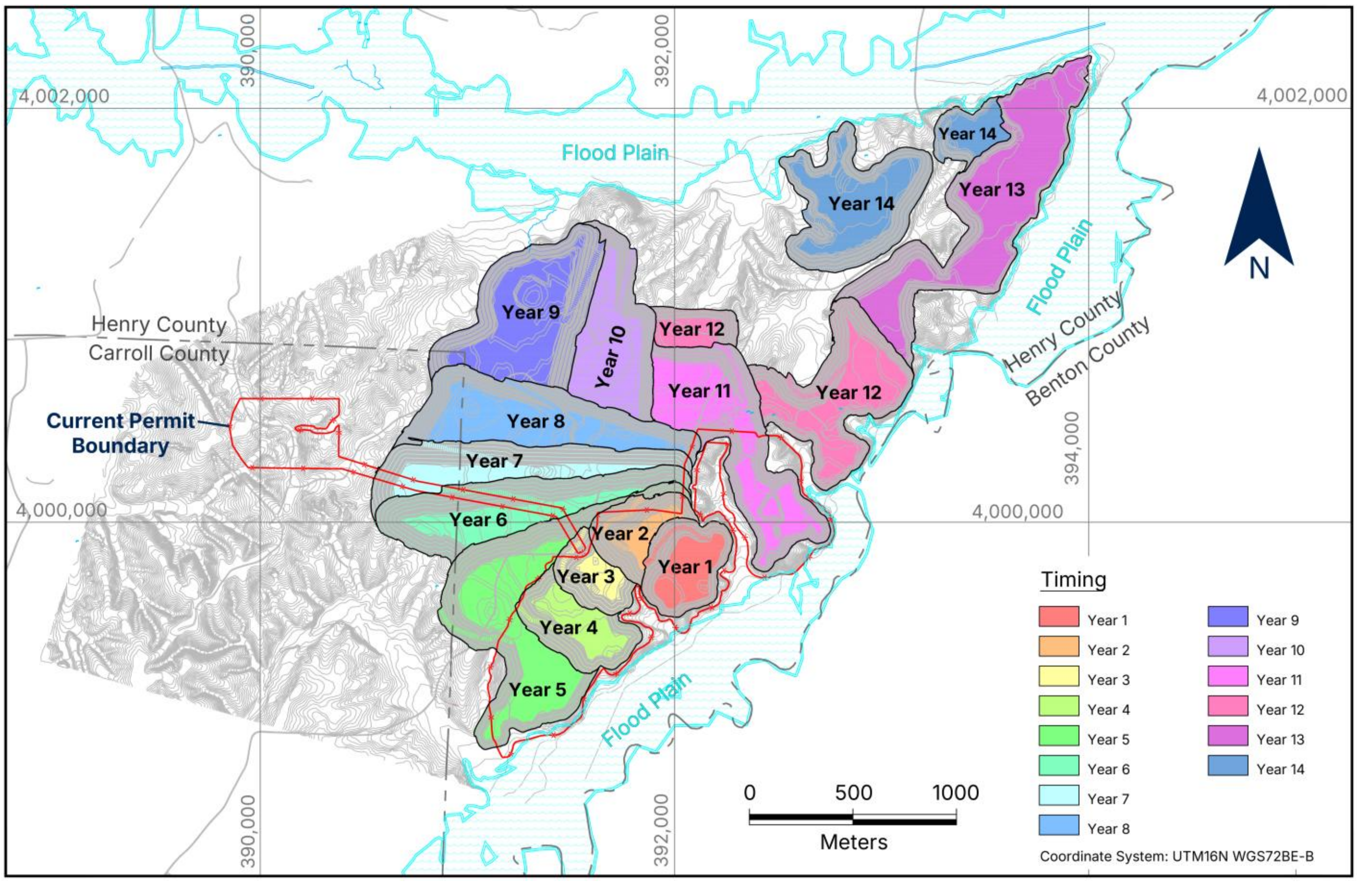
Mine planning involved geotechnical and hydrogeological assessment. The geotechnical assessment completed for the project considered both pit slope stability and reclaimed, backfilled tailings stability. The geotechnical assessments incorporated hydrogeological modeling results.

Mining contractors will provide all labor and material for support equipment including all mobile mining equipment, water truck, dozer capable of maintaining the waste disposal volumes, motor grader, utility loader backhoe, fixed or portable lights, pumps, and a utility articulated haul truck (for erosion control measures, cleaning, etc.). A combination of excavators and articulated trucks will be used to mine the ROM ore as well as all topsoil, overburden and interburden waste material. ROM stockpiles and initial waste disposal areas are designed to minimize haul distances. Conveyors will be utilized to transport ROM ore from the mine area to the wet concentrator plant, and dewatered tailings from the wet concentrator plant back to the pits for disposal in the final backfill.

A finalized DFS mine plan was created using K-MINE's Dynamic Design module for multiple years based on nested pits created from initial optimizations in order to create route profiles for equipment sizing and scheduling. These plans were developed by MM&A to allow mining contractors to match production requirements by year to excavators, articulated haul trucks and fixed and mobile conveyors which ultimately resulted in preparing cost analysis data used in mining cost modeling.

Mining operations for the Titan project site are based on providing 3.5 Mt per year for Phase 1 (Years 1-4) and 10.0 Mt per year for Phase 2 (Years 5-14) to the wet concentrator plant from the mining pits within the Titan project boundary and disposing of dewatered tailings and waste material (non-ore sand and soils) in the waste storage areas, topsoil storage area, and pit backfill areas. The areas to be mined in the 14-year mine schedule are shown in Figure 1-1.

Figure 1-1: Titan Mine Production Timing Map

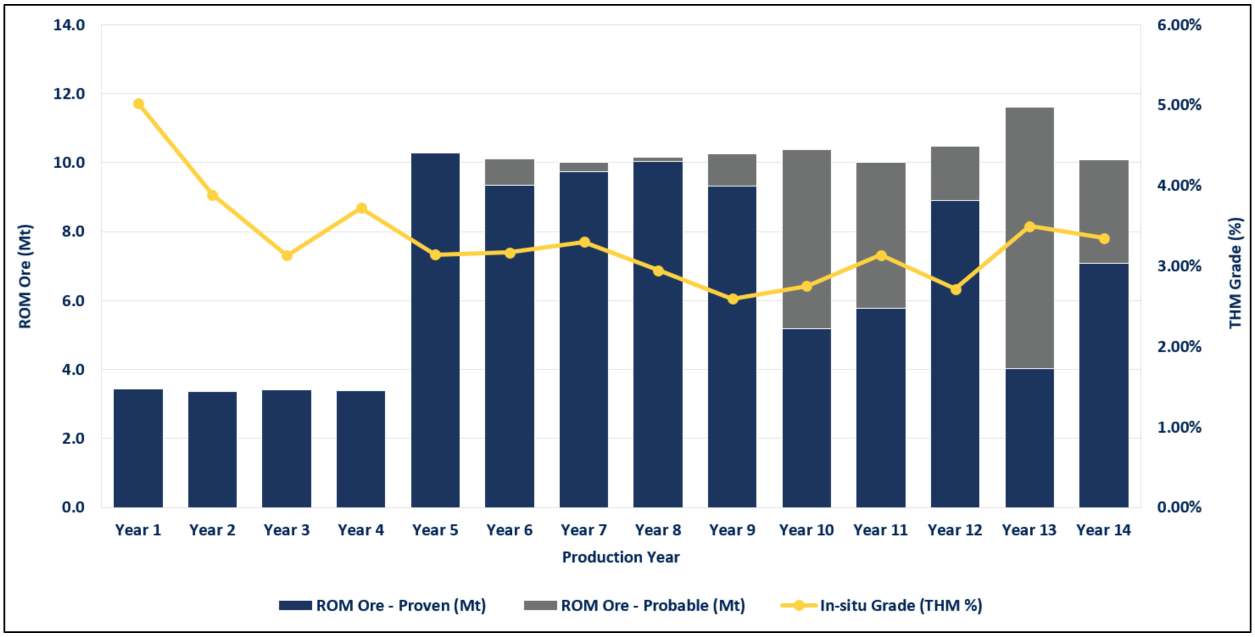


Note: Figure prepared by MM&A, 2026.

Results of the detailed mine schedule for the Titan project yielded 117 Mt of ROM ore with 3.2% THM over the 14-year mine life (see Figure 1-2). Production scheduling was based on providing 400 tph rougher feed, roughly 3.5 Mt per year of ROM ore to the WCP during Phase 1 (Years 1-4) and 1,200 tph rougher feed, roughly 10.0 Mt per year of ROM ore during Phase 2 (Years 5-14) and includes Proved and Probable Ore Reserves only for all years of operations. The Ore Reserve estimate and production target is approximately 117 million ROM tonnes over the 14-year mine period at a THM of 3.2 percent. Approximately 93.3 million tonnes or 80% of the Ore Reserves and production target estimates are Proved, while 23.7 million tonnes or 20% of the Ore Reserves and production target estimates are

Probable. All Ore Reserves were converted from Measured and Indicated Mineral Resources. Inferred Mineral Resources were treated as waste.

Figure 1-2: Annual Ore Production Tonnes and THM%

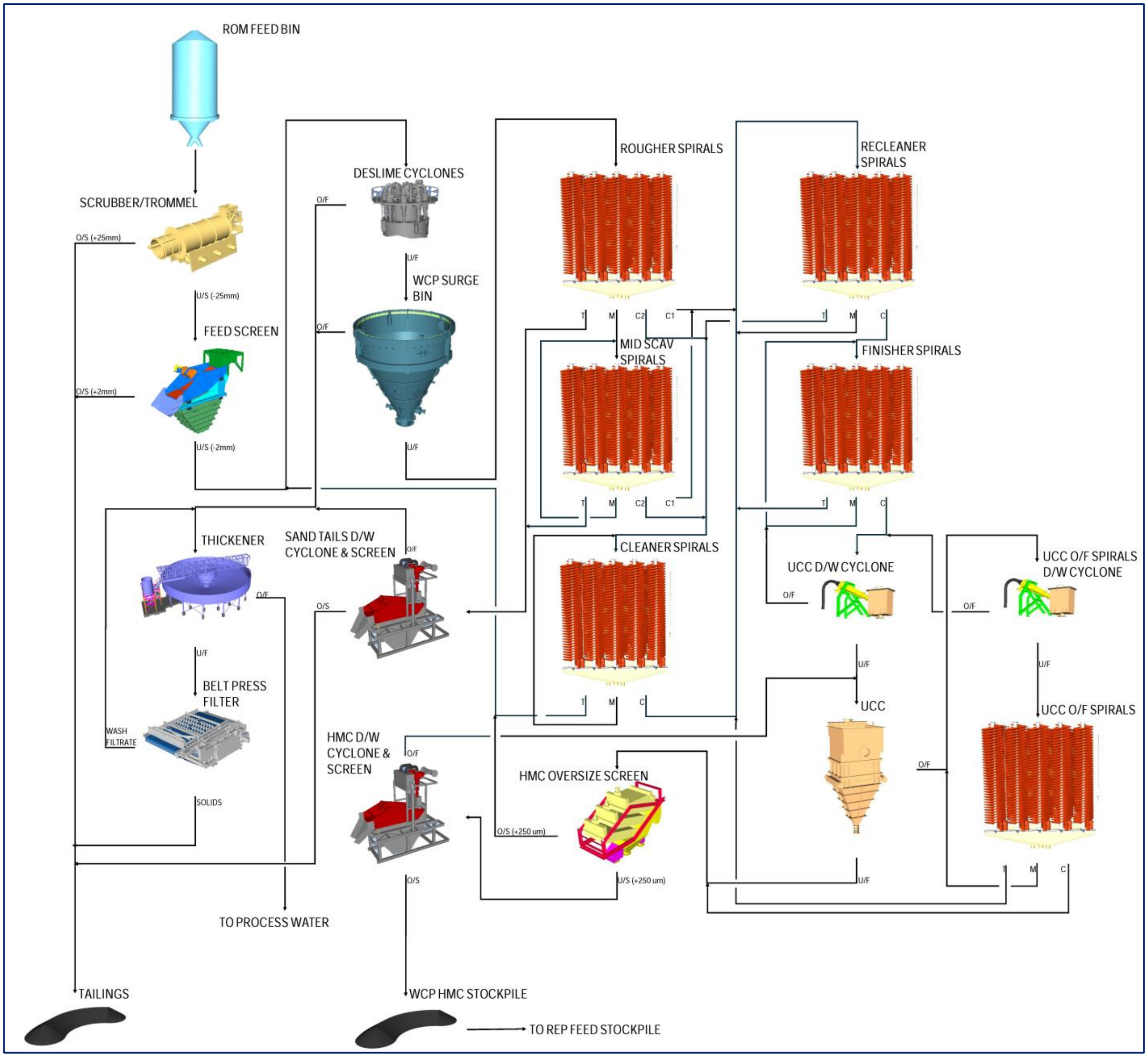


1.10 Processing and Recovery Methods

The proposed process and recovery methods outlined in the sections below were selected based on well-established and conventional approaches to processing mineral sands, including recovery of heavy mineral content using wet gravity separation equipment (such as spiral separators and up-current classifiers) followed by dry separation of titanium (ilmenite and rutile) and zircon minerals using electrostatic and magnetic separation equipment. With the increased focus on recovery of rare earth mineral content from mineral sand deposits, the use of flotation to extract these minerals (prior to dry mineral separation), and wet shaking tables to upgrade them, has become a more conventional approach and was selected for this flowsheet.

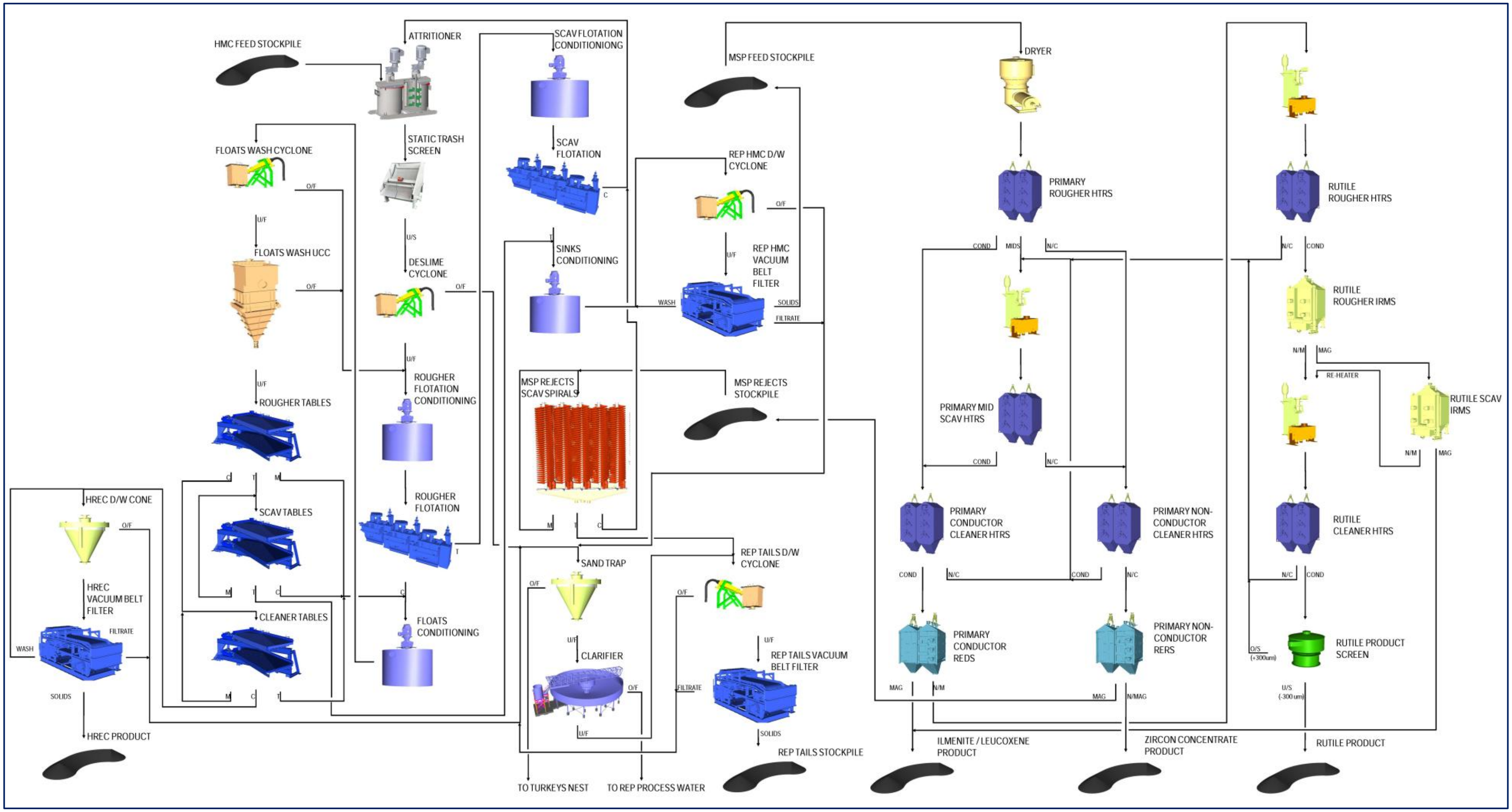
The principal process facilities will include the feed preparation plant, wet concentrator plant, concentrate upgrade plant, rare earth plant, mineral separation plant, and tailings dewatering circuit. The selected flowsheet, equipment selections, and plant layouts are based on conventional, well-proven mineral sands processing technologies and are supported by extensive prior testwork, process modelling and operational experience. The proposed flowsheets are shown in Figure 1-3 and Figure 1-4.

Figure 1-3: Process Flowsheet – Block Flow Diagram
(feed preparation, tailings dewatering circuit, wet concentrator and concentrate upgrade plants)



Note: Figure prepared by MT, 2026.

Figure 1-4: Process Flowsheet – Block Flow Diagram (rare earth and mineral separation plants)



Note: Figure prepared by MT, 2026.

Trade-off studies completed for tailings dewatering and zircon product pathways have informed key design decisions. The selected tailings dewatering configuration comprising thickening, belt filter presses, dewatering cyclones, and dewatering screens is considered feasible at feasibility study level to meet the project's moisture targets necessary to support progressive landform rehabilitation. The zircon trade-off study identified a medium-grade zircon concentrate as the preferred product pathway that balances metallurgical performance, regulatory compliance, processing simplicity, and market acceptance.

Key overall design criteria regarding the ROM feed include:

- ROM feed grade (in-size HM = heavy mineral content with particle size between 44-600 µm):
  - nominal (life of mine) 3.2%
  - high grade for initial mineral separation plant design 3.8%
  - high grade for expansion mineral separation plant design 3.4%
  - maximum grade 4.2% (with rate reduced to match heavy mineral concentrate production rate at 3.8% HM)
  - low grade 2.5%
- ROM feed (in-size HM) mineralogy:
  - 11.7% zircon
  - 9.8% rutile
  - 44.1% ilmenite
  - 1.6% rare earth minerals
- ROM feed oversize (>600 µm) content:
  - nominal 1.3%
  - maximum 2%
  - minimum 0.9%
- ROM feed slimes (<44 µm) content:
  - nominal 14.8%
  - maximum 26.9%
  - minimum 8.6%.

The DFS flowsheet was modelled to determine mass and water balances for design, as well as estimating grades and recoveries for (in-size) HM (through the feed preparation plant, wet concentrator plant, concentrate upgrade plant and tailings dewatering circuit), cerium dioxide (CeO_2) (through the feed preparation plant, wet concentrator plant, concentrate upgrade plant and rare earth plant) and titanium dioxide (TiO_2) and zirconium dioxide (ZrO_2) (through the feed preparation plant, wet concentrator plant, concentrate upgrade plant, rare earth plant and mineral separation plant).

The process plant was designed to support staged throughput development, commencing with a nominal 400 tonnes per hour (tph) rougher feed rate during Phase 1 and increasing to 1,200 tph during Phase 2 through the addition of parallel processing modules.

The upstream wet concentrator plant and associated feed preparation plant were designed to operate continuously at the nominated throughput rates, producing a heavy mineral concentrate (HMC) for downstream processing. The rare earth plant and mineral separation plant were designed to process the full expanded HMC throughput of up to 1,200 tph from commencement of operations. During Phase 1, the rare earth and mineral separation plants will operate at reduced utilization, supported by stockpiling and reclaim systems that decouple upstream and downstream operations and enable stable plant operation during staged ramp-up.

The overall performance estimates were also made for the process plant being fed with ROM material containing nominally:

- 3.2% (in-size) heavy mineral (HM) (with 11.7% zircon, 9.8% rutile, 44.1% ilmenite and 1.6% rare earth elements)
- 1.3% oversize (>600 microns)
- 14.8% slimes (<44 microns)

These overall performance estimates used the modelled grades and recoveries, as well as data estimated from metallurgical testwork for distribution of TiO_2 between ilmenite/leucoxene and rutile and ratio of CeO_2 to TREO, and are outlined below:

- Heavy mineral concentrate (HMC) (from wet concentrator plant (WCP) / concentrate upgrade plant (CUP))
  - approximately 3% mass of ROM feed
  - approximately 97% THM grade
  - approximately 90% HM (in-size) recovery
- HREC product
  - approximately 0.05% mass of ROM feed
  - approximately 25% CeO_2 (approximately 61.4% TREO) grade
  - approximately 91.4% CeO_2 recovery
- Rutile product
  - approximately 0.25% mass of ROM feed
  - approximately 91.1% TiO_2 (approximately 81.2% rutile) grade
  - approximately 64.3% rutile recovery
- Ilmenite/leucoxene product

  - approximately 1.2% mass of ROM feed
  - approximately 62.5% TiO_2 (approximately 95.8% ilmenite/leucoxene) grade
  - approximately 80.7% ilmenite/leucoxene recovery
- Zircon concentrate product
  - approximately 0.67% mass of ROM feed
  - approximately 34.4% ZrO_2 (approximately 51.1% zircon) grade
  - approximately 91.8% zircon recovery

1.11 Infrastructure

The property for the wet concentrator plant and mining pits associated with the Titan project is split between Benton and Carroll Counties in Tennessee with the proposed wet concentrator plant to reside in Carroll County.

The proposed rare earth plant and mineral separation plant will reside in Benton County outside the municipal limits of Camden, Tennessee. Distance between the wet concentrator plant and rare earth plant/mineral separation plant is approximately 29 km (18 miles) utilizing both county, state, and US routes. CSX Transportation (CSX) operates a railyard approximately 11 km (7 miles) from the mineral separation plant/rare earth plant site. Transportation of material between the mineral separation plant/rare earth plant and the railyard will be conducted by over-the-road trucking. Similarly, the movement of product from the wet concentrator plant to the mineral separation plant/rare earth plant will be conducted through over-the-road trucking.

Transportation of ROM and tailings materials between the mine pits and the processing plants will be conducted by conveyor belts. The main transportation belt will be dual purpose with the top belt taking ROM material from the pits to the plant and the bottom belt returning to the pits with the tailings.

Electricity is supplied via 161-kV transmission lines near the Project area. The power supply assumes a 100% renewable power supply from TVA.

The majority of the raw water supply will come from a mixture of water withdrawn from a nearby river and groundwater inflow to the pits, with the primary source being the water withdrawal point. Current estimations of groundwater inflow to the pits indicate that, if required, the pit inflow could provide most of the required flow, but an additional source of water would be necessary for the processing plant during different points of the 14-year mine plan.

To accommodate the need for a potable water supply at the wet concentrator plant, a potable water well will be drilled adjacent to the personnel facilities. At the mineral separation plant site, water will be supplied by the City of Camden.

Non-process infrastructure (NPI) buildings will be located at the WCP and MSP facilities for all operations and maintenance personnel either as vendor supplied modular buildings or engineered structures. NPI at the WCP will include a warehouse and ablutions building. NPI at the MSP will include an administration building, warehouse and laboratory and sample preparation building. Established design precedents from facilities with similar functions and requirements were used and the designs are consistent with the approved basis of design. This approach will ensure that the NPI at both the WCP and MSP reflect proven layouts and operational needs while maintaining alignment with regulatory, safety, and project standards.

1.12 Environmental, Permitting and Social Considerations

Environmental studies were completed from 2020 to 2025 covering aspects such as: Critical Issue Analysis, US Army Corps of Engineers (USACE) Wetland Delineation and Tennessee Department of Environment and Conservation (TDEC) Hydrologic Determination Field Work, Federal and State Threatened and Endangered Habitat Survey, Cultural Resources Background Research and Baseline Groundwater and Surface Water Study.

TDEC granted IperionX the required state Surface Mining Permit (OM-70711-01) and National Pollutant Discharge Elimination System (NPDES) Permit (TN0070711) on August 14, 2023. The Tennessee Surface Mining Permit is a five-year permit and will need to be renewed and updated every five years. The first renewal will be required by August 14, 2028. Neither the mineral separation plant nor the rare earth plant are currently permitted. TDEC also determined that IperionX's proposed sand processing operations would constitute an insignificant activity or insignificant emissions unit, as defined in part 1200-03-09-.04(2)(a)3. of the Tennessee Air Pollution Control Regulations.

The waste and tailings disposal plan is fully integrated with the overall mine plan. At the beginning of mining, waste and tailings material will be placed, as needed, in temporary waste piles on the ground surface located 1.) in the Year 11 mining area and 2.) in the area northeast of the wet concentrator plant. Tailings material will be filtered at the wet concentrator plant to an optimum moisture content of approximately 16 to 18 percent, The use of filtered tailings allows the material to be placed like soil in backfilled lifts in the pits as mining progresses, thus minimizing the tailings storage footprint and reclaiming the pit areas to near their original surface elevations. The temporary, out-of-pit waste storage areas are estimated to only be required through approximately Year 5 of mining, after which all tailings and waste material will be backfilled into the pit as mining progresses.

The financial model for the Titan Project includes cost for mine reclamation and closure within the contract mining operating cost of US$5.23 per cubic meter.

IperionX has actively engaged with TDEC, TVA, Tennessee state government officials, community members, business owners, local government officials, local school systems, universities, technical schools, and local and state government groups. IperionX will continue identifying and engaging with new groups and stakeholders as the mine is developed.

1.13 Capital Cost Estimates

The capital costs were developed in accordance with the requirements of a Class 3 estimate, consistent with the Association for the Advancement of Cost Engineering (AACE) Cost Estimating Classification System, as defined in AACE International Recommended Practice No. 17R-97. In keeping with the intended Class 3 estimate maturity, the estimate has been prepared to reach a target accuracy range of ±15%. The estimate is based on an estimate base date of Q2 2026 and is expressed in United States dollars (US$). No allowance was made for escalation.

Table 1-5 shows the Phase 1 (400 tph), Phase 2 (incremental 800 tph) and consolidated costs.

Table 1-5: Capital Cost Summary

Item	Phase 1 400 tph (US$)	Phase 2 – Incremental 800 tph (US$)	Total Phase 1+ Phase 2 (US$)
Direct Costs			
1000 - Site Wide - Mining	$23,238,000	$347,000	$23,585,000
1000 - Site Wide - NPI	$18,317,000	$0	$18,317,000
1000 - Site Wide - Balance of Scope	$18,499,000	$3,191,000	$21,690,000
2000 - Feed Preparation Plant	$10,087,000	$15,587,000	$25,674,000
3000 - Wet Concentrator Plant	$44,144,000	$62,212,000	$106,356,000
4000 - Mineral Separation Plant	$25,058,000	$33,436,000	$58,494,000
5000 - Rare Earth Plant	$33,181,000	$1,241,000	$34,422,000
8000 - Mining Unit Plant	$1,305,000	$2,133,000	$3,438,000
Direct Costs Sub-total	**$173,829,000**	**$118,147,000**	**$291,976,000**
INDIRECT COSTS			
EPCM	$22,414,000	$14,664,000	$37,078,000
Temporary Facilities and Services	$2,240,000	$1,248,000	$3,488,000
Vendor's ME Installation Assistance	$250,000	$190,000	$440,000
Contractor's Pre-Commissioning Assistance	$186,000	$245,000	$431,000
Commissioning & Testing	$1,898,000	$1,620,000	$3,518,000
Spare Parts	$929,000	$1,196,000	$2,125,000
First Fills	$143,000	$223,000	$367,000
Indirect Costs Sub-total	**$28,061,000**	**$19,386,000**	**$47,447,000**
TOTAL No CONTINGENCY nor OWNER'S COSTS	**$201,890,000**	**$137,533,000**	**$339,423,000**
Owner's Costs	$5,598,000	$1,638,000	$7,236,000
Contingency	$20,638,000	$14,027,000	$34,666,000
TOTAL CAPEX 400tph and 800tph	**$228,126,000**	**$153,198,000**	**$381,324,000**

Note: Totals may not sum due to rounding.

1.14 Operating Cost Estimates

The estimates have an accuracy of ±15%. The estimate base date is Q2, 2026, and the estimate was prepared using US$. Table 1-6 summarizes the estimated average operating costs per year.

Table 1-6: Operating Costs Summary

Operating Costs	US$/year		US$/t ore	
	Phase 1 Average	Phase 2 Average	Phase 1 Average	Phase 2 Average
Mining	21,506,000	64,335,000	6.32	6.22
Process Plant	15,521,000	27,967,000	4.56	2.70
Product Transport	3,559,000	8,901,000	1.05	0.86
Royalties	4,748,000	8,052,000	1.39	0.78
Total Operating Costs	**45,333,000**	**109,255,000**	**13.31**	**10.57**

Note: Totals may not sum due to rounding.

1.15 Market Studies

The Titan Project is differentiated within the US critical minerals landscape by its ability to produce multiple saleable mineral products from a single mineral sands project, including ilmenite, rutile, and zircon concentrates and a HREC, and providing exposure to titanium feedstocks, zirconium-bearing minerals and strategically important rare earth oxides from one US domestic source.

The Project is strategically differentiated as a permitted, near-term development opportunity capable of supplying multiple mineral products linked to US-designated critical minerals and strategic supply chains. In particular, the Project's heavy rare earth and yttrium-rich concentrate provide potential exposure to dysprosium, terbium and yttrium, elements that are essential for high-performance permanent magnets, advanced ceramics, radar systems, semiconductors and other defense-critical applications, and for which the US currently has limited domestic supply. In parallel, zircon production from the Project provides upstream feedstock relevant to zirconium- and hafnium-related value chains, which are also identified as critical under US policy frameworks and are important for nuclear, aerospace and high-temperature materials applications. The Project also aligns with broader US Government initiatives to develop end-to-end domestic and allied critical mineral supply chains.

Historical commodity prices for the five-year period preceding the FS (2021-2025) and the corresponding forecast averages are presented in Table 1-7.

Table 1-7: Historic and Forecast Prices (US$/t, real 2026 terms)

Product	Historic 2021-2025 (annual avg. US$/t)	Forecast 2028-2042 (annual avg. US$/t)
Rutile	1,335	1,471
Chloride ilmenite	318	353
Zircon*	1,818	1,907*

Source: TZMI and Argus Media. Historic prices converted to real 2026 US dollars. Forecast averages derived from TZMI (Issue 3, 2025) base case. *Zircon prices were used to calculate zircon concentrate prices.

Historical individual rare earth oxide prices used as context for the HREC pricing assumptions are summarized in Table 1-8.

Table 1-8: Historic and Forecast REO Prices (US$/kg, real 2026 terms)

Rare Earth Oxide	Historic 2021-2025 (annual avg, US$/kg)	Forecast 2028-2042 (annual avg. US$/kg)
La_2O_3	$1.0	$0.70
CeO_2	$1.3	$2.24
Pr_6O_{11}	$93.7	$158.64
Nd_2O_3	$97.3	$151.98
Sm_2O_3	$2.6	$7.65
Eu_2O_3	$30.1	$17.32
Gd_2O_3	$46.4	$692.41
Tb_4O_7	$1,429	$3,462
Dy_2O_3	$355	$952.07
Ho_2O_3	$123	$73.99
Er_2O_3	$45.9	$66.14
Yb_2O_3	$15.5	$20.53
Lu_2O_3	$871	$1,074
Y_2O_3	$8.2	$778.96

Source: Historic REO prices from Argus Media (2021-2025 annual averages, real 2026 US dollars); Forecasted prices from Argus Media, IperionX Rare Earth Concentrate Calculations (April 2026), 2028-2042 simple average with 2041-2042 held flat at 2040 values.

1.16 Economic Analysis

1.16.1 Cash Flow Model

The financial model was developed using second-quarter 2026 (Q2 2026) price forecasts and cost estimates, with all figures presented in US dollars and expressed in real terms. The analysis was performed on an unlevered basis, assuming 100% equity financing. A real discount rate of 8% was applied, consistent with industry benchmarks for mining projects in the US. No escalation was applied to operating costs or revenues over the life of the model.

The economic analysis demonstrates a robust financial profile based on a 2-phase construction and operation approach producing on average of approximately 86,000 tpa in Phase 1 and 214,000 tpa during Phase 2 over a 14-year mine life.

Using variable product pricing based on external market studies, the project generates US$1.93 billion free cash flow and the post-tax financial model, developed on an unlevered basis, yields a strong net present value at an 8% discount rate (NPV8) of US$813 million and Internal rate of return (IRR) of 39.4%, with a payback period of 3.63 years.

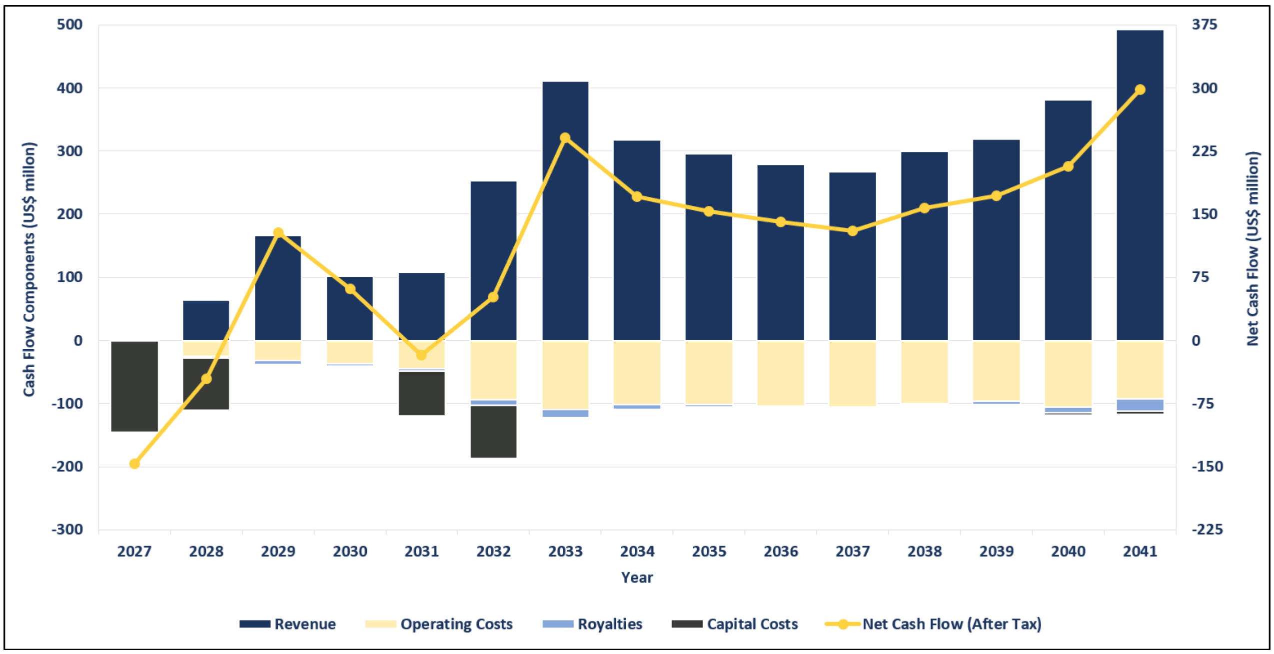
The key economic outcomes are outlined in Table 1-9.

Table 1-9: DFS Financial Results

DFS Financial Results	UoM	Value
Total EBITDA	US$ million	2,804
Pre-Tax NPV8	US$ million	1,016
Pre-Tax IRR	%	42.6
Pre-Tax Payback Period	Year	3.49
After-Tax NPV8	US$ million	813
After-Tax IRR	%	39.4
After-Tax Payback Period	Year	3.63
NPV/Initial Capital	US$	3.56
NPV/Total Capital	US$	2.13

The yearly real cash flows are demonstrated in Figure 1-5.

Figure 1-5: Titan Project After Tax Real Cash Flows



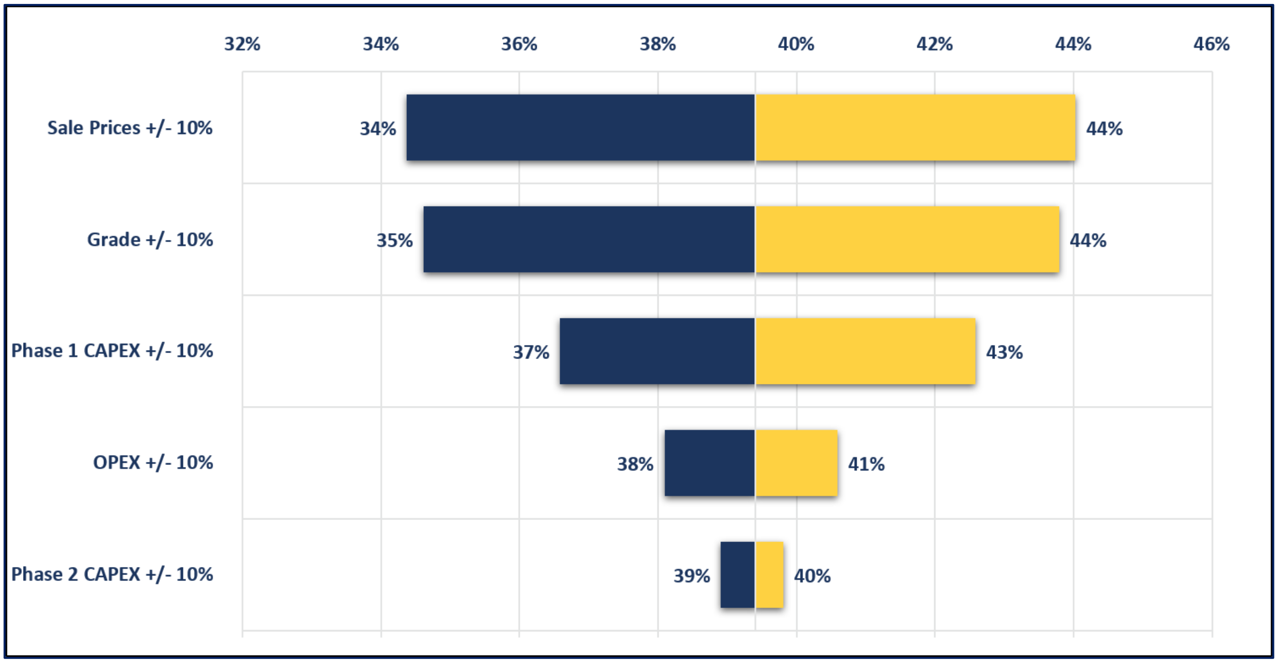
Note: Figure prepared by Primero, 2026.

1.16.2 Sensitivity Analysis

A sensitivity analysis was performed to assess Project sensitivity to: capital cost estimates, operating cost estimates, grade and product pricing.

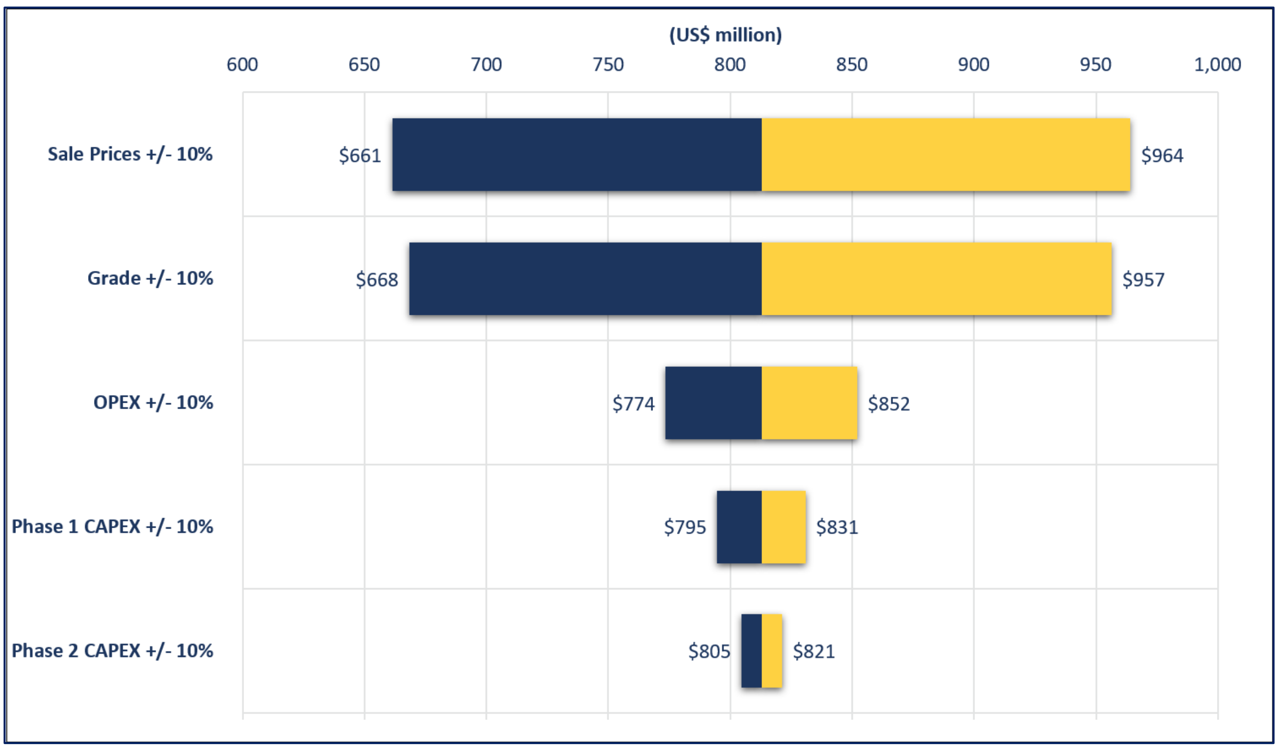
The results are summarized in Figure 1-6 and Figure 1-7 and demonstrate that the project is most sensitive to sales prices followed by grade.

Figure 1-6: Titan Project Sensitivity Analysis – After Tax IRR



Note: Figure prepared by Primero, 2026.

Figure 1-7: Titan Project Sensitivity Analysis – After Tax NPV8



Note: Figure prepared by Primero, 2026.

In terms of IRR, the Project is most sensitive, in order from most to least sensitive, to:

> product pricing
> grade
> Phase 1 capital costs
> operating costs
> Phase 2 capital costs

In terms of the NPV, the Project is most sensitive, in order from most to least sensitive, to:

> product pricing
> grade
> operating cost estimates
> Phase 1 capital costs
> Phase 2 capital costs

1.17 Risks and Opportunities

1.17.1 Risks

Noteable project risks identified by the Competent Persons that could potentially impact the proposed operations include:

1. Commodity pricing drops unexpectedly, due to overseas competition and flooding of the market.
2. Discharged water does not meet permit requirements for discharge from site, which may result in permit violations and public protests or environmental incidents.
3. Underperformance of the mining contractor may lead to lower-than-expected production levels.
4. Permits and/or mitigation measures related to mining through streams and wetlands are unsuccessful and prohibit full extraction of reserves within mine plan.
5. TVA is unable to provide the necessary electrical power to service the mine and plant operations prior to Phase 2 of the project.
6. Desliming circuit may allow slimes through to the wet concentrator plant which will result throughput reduction or restriction.
7. Periods of high slimes may slow plant throughput, due to thickener constraint on load handling capability.

8. Inability to maintain mineral separation plant building temperature and humidity impacting plant performance and recovery.

A nominal 10% contingency allowance was used for the direct and indirect costs of the design and supply estimate. Contingency allowance was not added to the budget estimate items. This was considered contractor's contingency which would be applicable to a fixed price design and supply contract. This contingency allowance sits outside of the Owner's contingency risk.

It is recommended the Owner's contingency account for the following additional key risks that are not accounted for in the design and supply cost estimate:

1. Cost escalation resulting from time and economic events.
2. Movement in foreign exchange rates.
3. Escalation and uncertainty in logistics costs due to timing being a long way out from contract execution.
4. Escalation resulting from changing suppliers from low-cost country vendors.
5. Escalation resulting from restriction in trade or changes to import tariffs.
6. Process performance not being achieved due to equipment supplied from low-cost countries not performing as intended.
7. Unable to obtain enforceable process and throughput performance guarantees from vendors.
8. Unable to use low-cost equipment and manufacturing supply chain due to sanctions on supply of equipment into international projects associated with rare earths.
9. Tailings dewatering equipment proves to be ineffective as planned and additional budget allocation is necessary to achieve required moisture contents.

1.17.2 Opportunities

1.17.2.1 Project Area

Opportunities include:

- Potential to add to the property holdings and increase the exploration potential for the mineral tenure to host prospective McNairy Formation units.
- If the mineralization currently classified as Inferred, can be upgraded with additional drilling and mining study support.
- Review of the mining area vs floodplain buffer allocations to determine if a portion of the buffer area can be included in the mine plan.
- Varying the cut-off grade, thereby increasing annual ROM ore tonnage.

- Increasing the revenue factor, thereby expanding the optimized pit shell and increasing annual ROM ore tonnage.
- Outside the Project area, the "Camden area" mineral tenure drill results suggest the potential to host additional mineralization. The area is favourable because erosion has removed the Upper McNairy Formation unit, exposing Lower McNairy Formation sands.

1.17.2.2 Processing

The following opportunities have been identified for further exploration in subsequent project phases:

- Increase extent of modularisation, particularly around the belt filter press once preferred vendor has been selected.
- Further optimize the extent of piping pre-assembly and balance the use of pipe racks to minimize site construction costs.
- Complete a transport study to investigate inland transport options to reduce risk and costs of freight to site.

2 Introduction

A Definitive Feasibility Study (the DFS or the Study) on the Titan Project (the Project) was prepared for IperionX Limited (IperionX or the Company) by Marshall Miller & Associates, Inc. (MM&A). While MM&A fulfilled the responsibility as the integrator of the DFS, other consulting firms also completed vital aspects of the Study. Karst Geo Solutions, LLC (KGS) was responsible for exploration results for the Project. Mineral Technologies Pty Ltd (MT) completed the process plant design and related modular plant cost estimation, Primero Group Americas Inc. (Primero) completed the non-process infrastructure (NPI) design and related cost estimates, and was responsible for integrating the mining, process and NPI costs into a comprehensive discounted cash flow financial model for the DFS.

This DFS Supporting Technical Information Report (the Report) has been prepared to support the Company's Australian Securities Exchange (ASX) announcement of the Definitive Feasibility Study for the Titan Project. Information relating to Exploration Results, Mineral Resources and Ore Reserves has been prepared and reported in accordance with the JORC Code 2012. The technical information in this summary is based on work completed by the relevant Competent Persons and supporting technical specialists identified in this Report.

Per the definitions in Section 19.3, a "definitive feasibility study" is equivalent to a "feasibility study".

Where Mineral Resources and Exploration Results or Ore Reserves are referenced, these have been prepared and disclosed in accordance with the JORC Code (2012 Edition) by appropriately qualified Competent Persons who are members of Recognised Professional Organisations.

The Mineral Resource and Ore Reserve information referenced in this Report has been prepared John Eckman and Justin Douthat, each of whom has relevant experience appropriate to the style of mineralisation and type of deposit described. This Report includes an update to the Mineral Resources as at June 4, 2026 and a statement of Ore Reserves as at June 4, 2026.

The supporting technical information expressed in this Report has been prepared by independent experts. The Competent Persons responsible for Mineral Resource and Ore Reserve estimates relied upon in this Report are also independent.

Other authors contributing to this Report are employed by IperionX Limited (IperionX) and are therefore not independent. Their contributions are limited to the preparation of technical, factual and descriptive information.

The authors have prepared this Report in accordance with the JORC Code 2012, and, to the best of their knowledge, there are no material conflicts of interest that would reasonably be expected to influence the conclusions of this Report.

In preparing the Report, reliance has been placed, where appropriate, on information, interpretations and data prepared by suitably qualified experts in specialist disciplines. Such reliance is considered reasonable given the scale and complexity of the Project, and responsibility for those specialist inputs remains with the respective contributors.

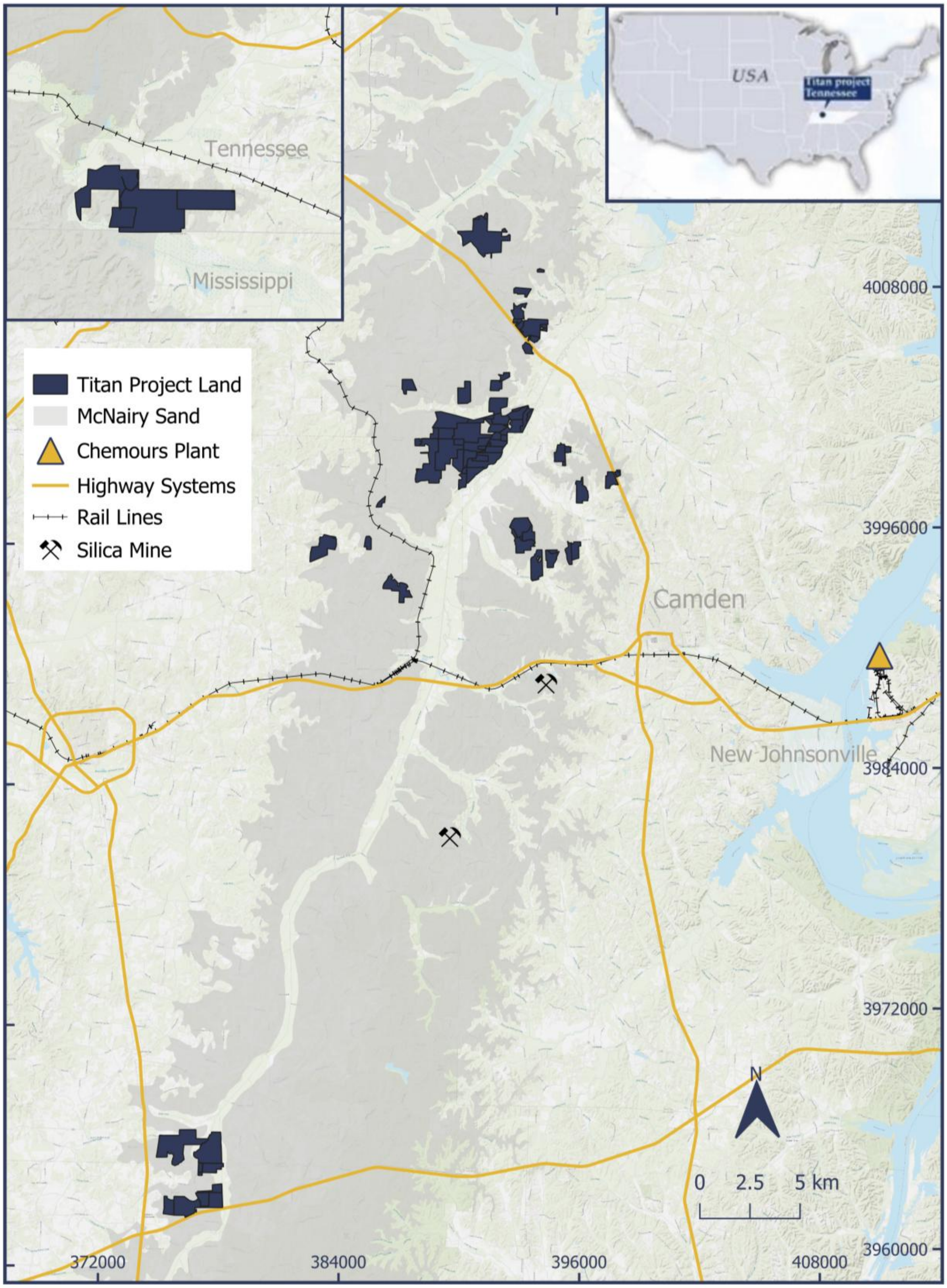
This Report has been prepared for public disclosure and is intended for use by investors, professional advisers, and other stakeholders seeking a high-level technical assessment of the Project. It does not constitute a recommendation to proceed with development and should not be relied upon for any purpose other than that for which it was prepared.

3 Property Description

3.1 Location

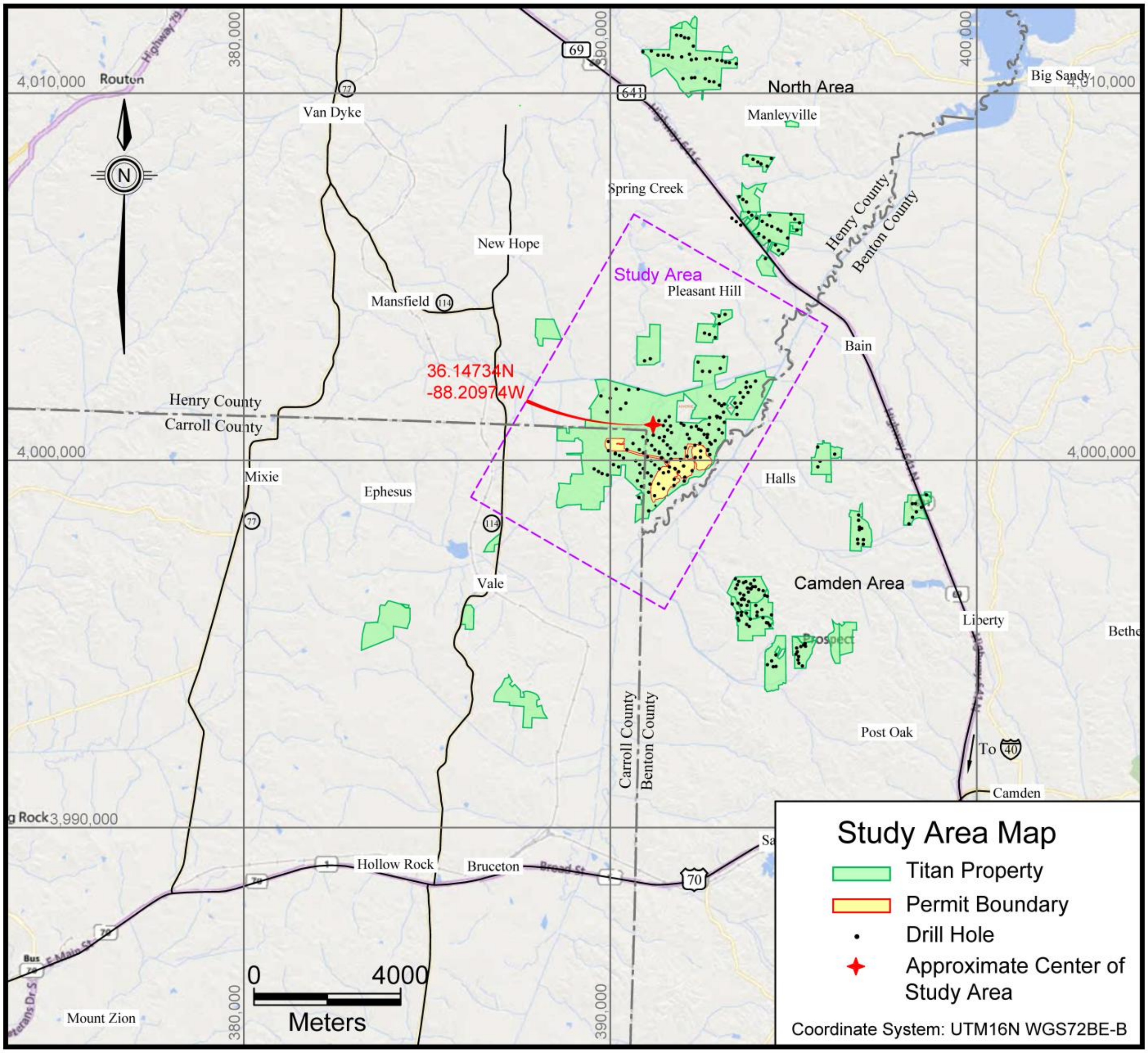
The Titan Project is located near Camden, Tennessee, US, approximately 128 kilometers (km) (80 miles) west of Nashville, Tennessee, and approximately 11 km (7 miles) northwest of Camden, Tennessee. IperionX has a large regional ground holding (see Figure 3-1), of which a small subset of the mineral tenure hosts the Mineral Resource and Ore Reserve estimates (Figure 3-2). For the purposes of this Report, the term "property" is used for the larger ground holding, and the term "Study Area" for the area that hosts the Mineral Resource and Ore Reserve estimates and is the subject of the DFS.

Figure 3-1: Titan Property Location



Date: 04/16/26 Coordinate System: Nad 83/UTM Zone 16N Map prepared by IperionX

Figure 3-2: Study Area



Note: Figure prepared by MM&A, 2026.

The Study Area is centered at approximately 36.147349N, -88.20974W. The Study Area is located on the Mansfield, Manleyville, Vale and Bruceton US Geological Survey (USGS) Quadrangles.

3.2 Physiography

The Property is in the south-central portion of the United States. The terrain includes gently rolling hills beside level drainages of the Big Sandy River and Bear Creek that dissect the Study Area.

Surface elevations at the Study Area range from approximately 175 meters (m) (574 feet (ft)) above sea level in the upland regions to approximately 100 m (328 ft) at the stream level.

Trees common to wooded areas of the property include several classic hardwood oaks (white, black, red and chestnut), hickory and maple trees. Other common trees include tulip poplar, American beech and black gum. Understory trees include dogwood and eastern redbuds. Common plants and flowers of wooded or non-wooded property include ferns, asters, goldenrod, ironweed, cardinal flower and beebalms. Agricultural fields are also common in this region.

3.3 Access

General access to the Study Area is via a well-developed network of primary and secondary roads. The site can be accessed via Highway 641 north 41 km (25 miles) from Interstate 40 near the town of Camden, Tennessee, Reynoldsburg Road for 1.6 km (1.0 mile), Pleasant Hill Road for 1.6 km (1.0 mile) and Little Benton Rd, a gravel road, for 4.8 km (3.0 miles). Little Benton Road goes through the Study Area.

US Interstate I-80 is 35.4 km (22 miles) to the south of the Study Area. Tennessee overall has a network of highways, including eight interstate highways, which can provide ready access to most of the US consumer markets.

Tennessee is the third largest rail center in the US. The CSX Transportation (CSX) Memphis subdivision mainline runs through Camden (approximately 4.8 km [3.0 miles] south of the Titan Project). The Kentucky-West Tennessee Railway connects to this mainline approximately 2.4 km (1.5 miles) east of the Titan Project.

There are more than 1,600 km (994 miles) of navigable waterways in Tennessee, which access all other major waterways in the eastern US. A major barge-loading point is located 24 km (15 miles) from the Titan Project.

There are four commercial airports near Camden, including two international airports at Memphis (approximately 217 km [135 miles] to the southwest) and Nashville (approximately 137 km [85 miles] to the east).

3.4 Climate and Length of Operating Season

Camden has a humid subtropical climate with hot and muggy summers and cold and wet winters. The temperature typically varies from -0.5 degrees Celsius (°C) to 32.7°C and is rarely below -8°C or above 36°C. August is the hottest month for Camden with an average high temperature of 31.6°C. Annual rainfall for the area is 136.6 centimeters (cm) (53.8 inches).

Considering the climate of the Camden area, mine operations at Little Benton should be possible year-round. Severe weather events may briefly interrupt mine operations.

3.5 Ownership Interest

The Study Area is owned by IperionX Critical Minerals, LLC (IXCM), a wholly-owned subsidiary of IperionX.

3.6 Mineral Title

As at June 4, 2026, the property consists of approximately 40.8 square kilometers (km^2) (10,091 acres) of surface and associated mineral rights in Tennessee, of which approximately 6.0 km^2 (1,490 acres) are owned by IperionX, approximately 5.9 km^2 (1,457 acres) are subject to long-term lease by IperionX, and approximately 28.9 km^2 (7,144 acres) are subject to exclusive option agreements with IperionX. These exclusive option agreements, upon exercise, allow IperionX access to the surface property and associated mineral rights.

The property land list is provided as Table 3-1. The claim locations of the Study Area are shown in Figure 3-3.

Table 3-1: Property Land List

Land Status	km²	Acreage*	Owner	Parcel # (s)	County	Ownership Interest	Grant Date	Expiry Date
Owned	6.03	1,490	IperionX Critical Minerals LLC	168.014.03 167.006.00 171.009.00 171.009.01 171 005.03 171.009.03 171.009.04 005 002.00 044 016.01 171 002.00 171 003.00	Carroll Henry	Surface, Mineral, Water	-	N/A
Leased	0.024	6	Holcomb, W	171 009.02	Henry	Surface, Mineral, Water	21-May-26	30-Oct-49
Leased	0.37	91	Borchert	171 013.00	Henry	Surface, Mineral, Water	29-Aug-24	30-Oct-49
Leased	0.34	84	Pettyjohn	171 008.00	Henry	Surface, Mineral, Water	31-Jan-25	31-Jan-50
Leased	0.98	242	Whistling Wings, LLC	171 011.00 175 013.01 023 002.0	Carroll Henry	Surface, Mineral, Water	24-Oct-23	24-Oct-43
Leased	1.02	252	Wilson	171 010.01 005 003.00 171 010.00	Carroll Henry	Surface, Mineral, Water	17-Jul-25	30-Nov-49
Leased	3.03	748	Dolan	006.030.00 026.009.00 025.017.00 171.001.00 022.020.00	Carroll Henry	Surface, Mineral, Water	31-Mar-26	31-Mar-51
Leased	0.14	34	Holcomb, RE	168.005.02	Henry	Surface, Mineral, Water	10-Apr-26	02-Jan-51
Optioned	0.59	146	Farmer	168.011.00	Henry	Surface, Mineral, Water	15-Jan-21	15-Jan-27

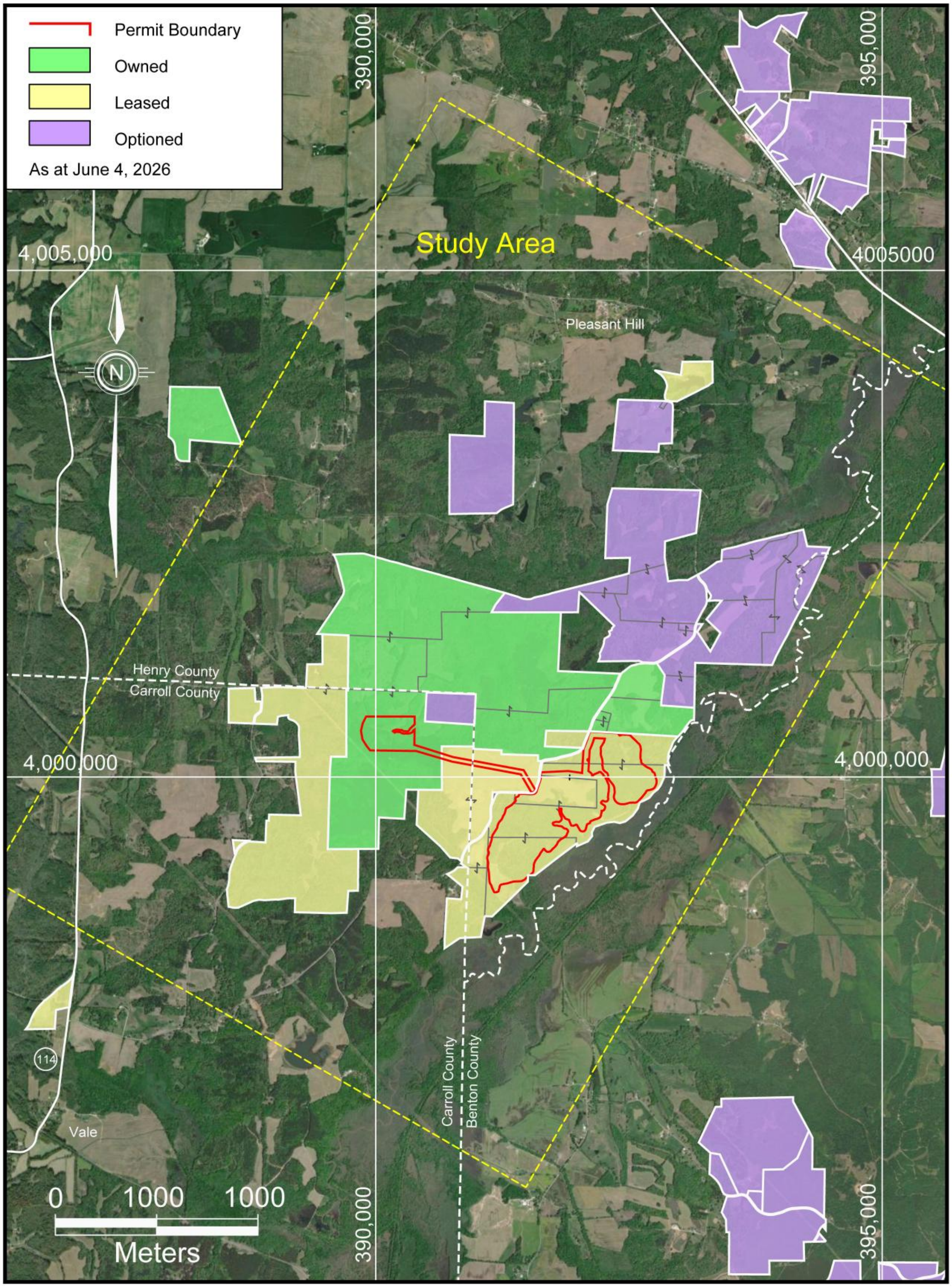
Land Status	km²	Acreage*	Owner	Parcel # (s)	County	Ownership Interest	Grant Date	Expiry Date
Optioned	2.80	693	Sanders, Timothy	134.014.01 150.008.05 151.008.03 152.009.00 152.011.00 152.013.03 152.020.01 168.018.01 168.019.04 168.013.00 005.002.01	Carroll Henry	Surface, Mineral, Water	30-Nov-20	15-Jan-27
Optioned	0.26	65	Holcomb, Richard JD	168.005.00 168.005.01	Henry	Surface, Mineral, Water	15-Jan-21	15-Jan-32
Optioned	0.59	147	Palmer, Kyle	064.022.00 063.005.01	Benton	Surface, Mineral, Water	1-June-21	1-June-27
Optioned	2.42	599	Palmer, Mark & Jackie	063.005.00 063.006.00 061.010.00 064.020.00 064.021.00	Benton	Surface, Mineral, Water	30-May-21	30-May-27
Optioned	1.72	424	Patterson/Medema	171.005.00 168.017.00 171.005.01 048.017.00 171.005.02 171.005.04 169.017.01	Benton Henry	Surface, Mineral, Water	30-May-21	30-May-27
Optioned	0.42	103	Hudson/Plant	060.001.00	Benton	Surface, Mineral, Water	4-Mar-21	4-Mar-32
Optioned	2.52	622	Noles, Kenneth & Mary	129.027.00 129.027.01 135.005.01 129.028.00	Henry	Surface, Mineral, Water	21-Apr-21	21-Apr-32
Optioned	9.12	2,254	McDonald. Michael	162.009.001 162.018.00 163.009.00 162.009.00	McNairy	Surface, Mineral, Water	30-Oct-21	30-Oct-32
Optioned	2.01	497	Todd, Gary	165.019.00 010.001.00	Carroll Henderson	Surface, Mineral, Water	15-Sep-21	15-Sep-32
Optioned	0.55	136	Wright, Anita	050.020.00 050.036.01	Benton	Surface, Mineral, Water	15-Jun-21	15-Jun-32
Optioned	4.72	1,166	Olive, Bobby, Tiffany	166.011.00 010.014.00 010.013.00 011.037.03 010.014.01	Carroll Henderson	Surface, Mineral, Water	30-Aug-21	30-Aug-32
Optioned	0.63	155	Sanders, Weldon & Betty	151.008.00 151.009.00 151.009.04 151.009.03	Henry	Surface, Mineral, Water	15-Jan-21	15-Jan-27
Optioned	0.55	137	Markham, Donnal	064.010.00 064.007.00	Benton	Surface, Mineral, Water	15-Nov-21	15-Nov-32

*The areas are rounded to the nearest whole number. N/A = not applicable.

IperionX's option to lease agreements, upon exercise, allow IperionX to lease the surface property and associated mineral rights from the local landowners, and generally have expiration dates between 2027 and 2032. During the option period, the option to lease agreements provide for annual option payments and bonus payments during periods when drilling is conducted. IperionX's annual option payments are US$75.00 per acre and the drilling bonuses generally average approximately US$1.00 per drill foot. IperionX's obligation to make annual option payments and drilling bonus payments cease if the company exercises the option to lease.

As at June 4, 2026, the Study area is comprised of approximately 13.4 km^2 (3,317 acres) of surface and associated mineral rights, of which approximately 4.9 km^2 (1,212 acres) are owned by IperionX, approximately 4.6 km^2 (1,147 acres) are subject to long-term lease by IperionX, and approximately 3.9 km^2 (958 acres) are subject to exclusive option agreements with IperionX. The Study area holdings are shown in Figure 3-3.

Figure 3-3: Parcels Status of the Study Area



Note: Figure prepared by MM&A, 2026.

3.7 Surface Rights and Water Rights

IperionX has acquired surface, subsurface and water rights to the properties within the area that hosts the Mineral Resource and Ore Reserve estimates. Some of the properties have been acquired in fee simple by IperionX, with IperionX now being the sole owner of the surface, subsurface and water rights for such properties. IperionX has entered into long-term ground leases for other properties, with the right to control the surface, subsurface and water rights related to those properties for the term of the respective ground leases. For the rest of the properties, IperionX holds an option to lease such properties conditioned on annual option payments that are current and ongoing. The option agreements grant IperionX the right to evaluate the surface, subsurface and water rights to such optioned properties.

3.8 Royalties

For the optioned and leased land, IperionX will pay the landowner the greater of 1) US$75 per acre of the property per year, or 2) the production royalty, generally 5% of net revenues from products mined and removed from the property. All properties owned by IperionX or its subsidiary (TN Exploration, LLC) will not incur a royalty.

4 Geology and Exploration Results

4.1 Property and Production History

No previous heavy mineral sand mining has occurred in the region, and there has been no historical or current commercial mineral production from the Project area to date.

Reportedly, the general Study Area has been explored for heavy mineral sands since the 1950s, as the McNairy Formation was known to contain high concentrations of heavy minerals such as rutile, zircon, rare earth minerals and others based on work by federal and state agencies.

DuPont de Nemours, Inc., Kerr-McGee Corporation, RGC Mineral Sands Inc., Iluka Resources Inc., Altair International Inc., and Astron Corporation Limited are known to have evaluated the McNairy Formation-hosted deposits in the Titan Project region at various times.

IperionX conducted exploration drilling in 2020, 2021 and 2022 across the Property, which provided the drill and samples records for Mineral Resource estimates).

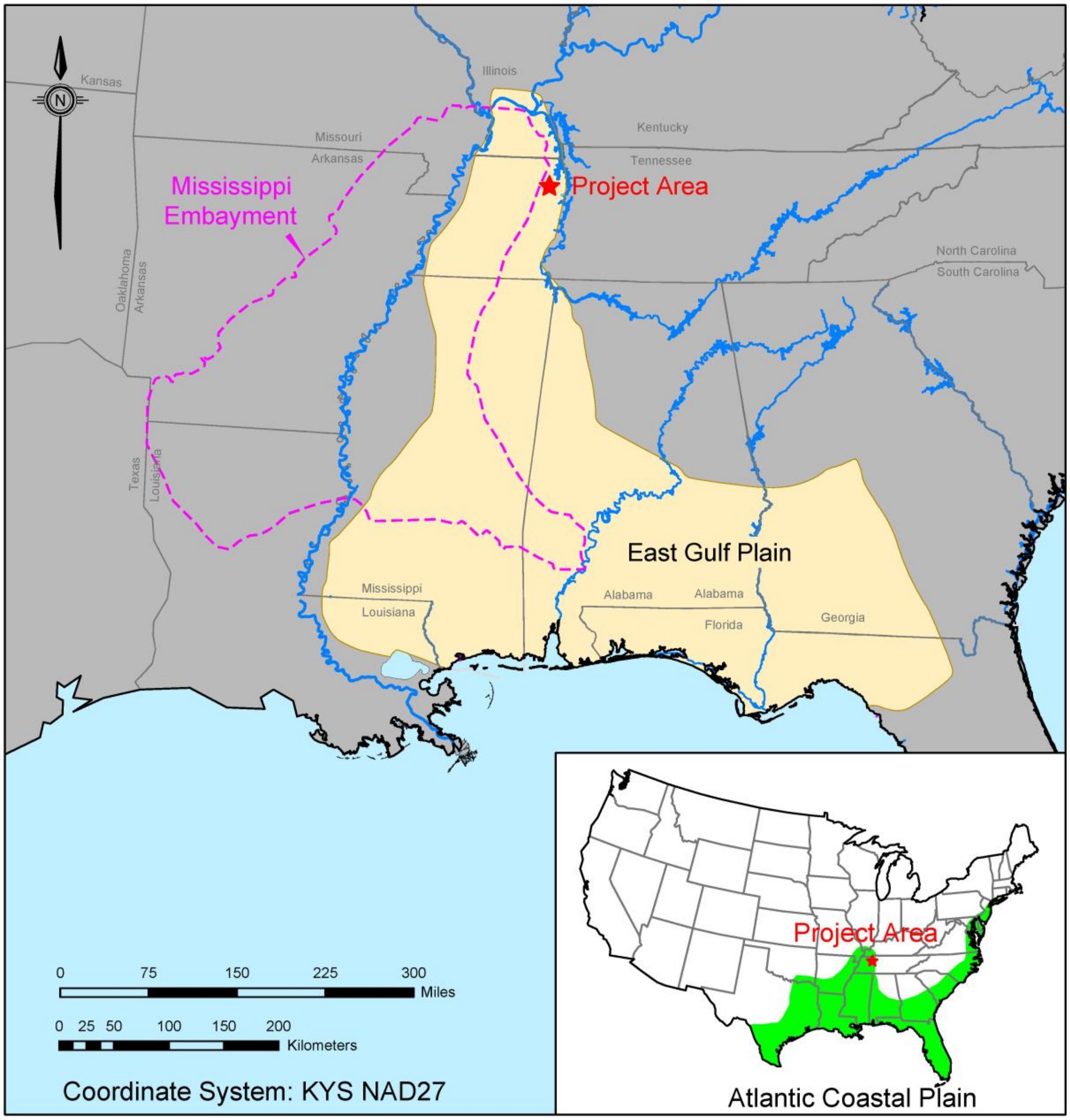
An initial Mineral Resource estimate was prepared in 2021 by KGS, with an update in 2023 by MM&A.

In 2025, IperionX commissioned 130 quantitative evaluations of materials by scanning electron microscopy (QEMSCAN) analyses from 43 existing drill hole locations mainly on the owned and leased Study Area tracts.

4.2 Regional Geology

Regionally, the Project Area is situated in the East Gulf Plain within the Atlantic Coastal Plain Physiographic Province of the US. The East Gulf Plain syncline of the Mississippi Embayment has a shallow southward plunge, exists east of the Mississippi River, and extends from southern Illinois south into Mississippi and Alabama (Figure 4-1). Locally, the basin is filled with Cretaceous to recent Quaternary age sedimentary rocks and sediments. The deposition represents a pro-grading deltaic environment during a regressive (sea-level lowering) sequence.

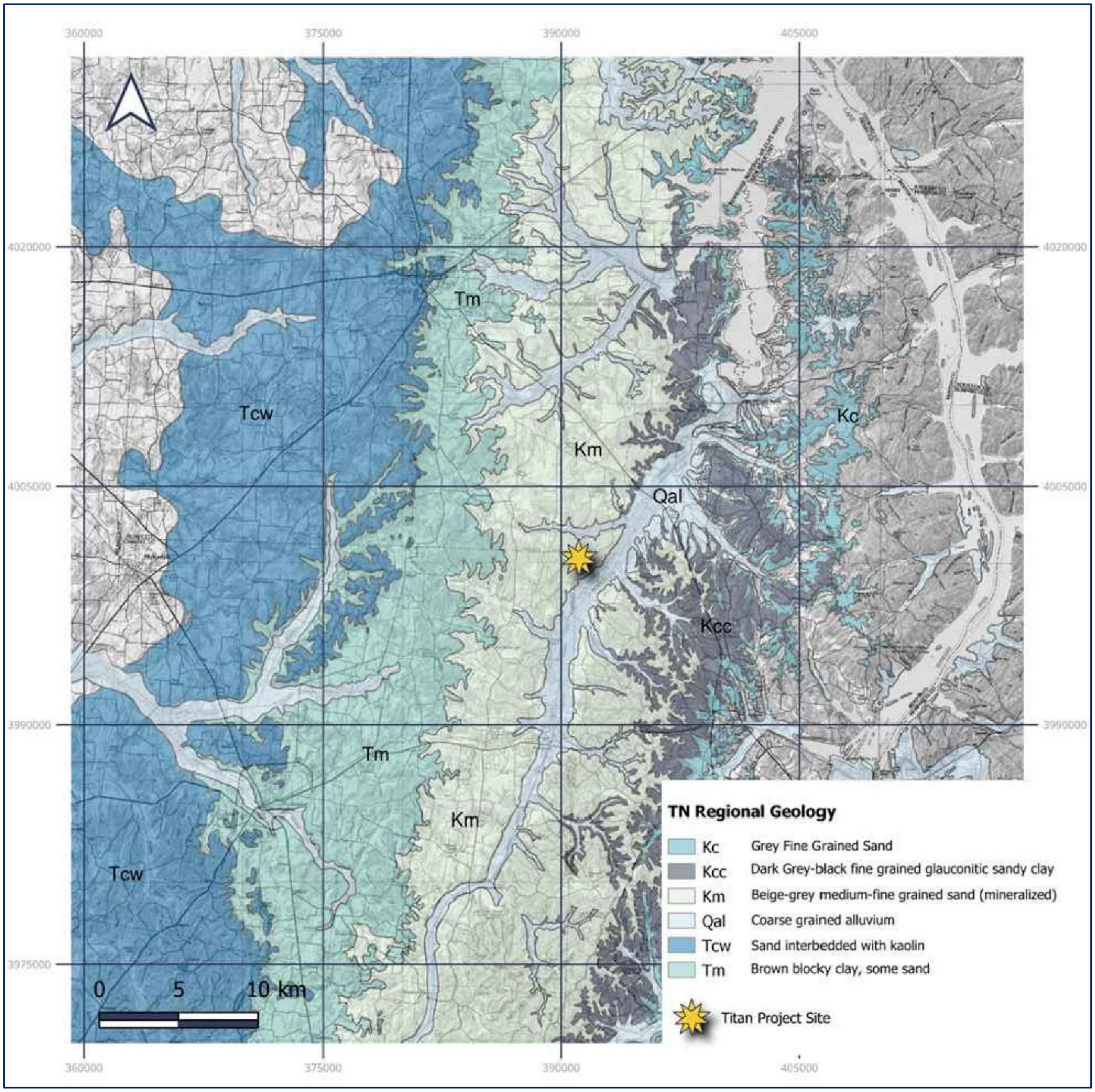
Figure 4-1: East Gulf Plain



Note: Figure prepared by MM&A, 2026.

Figure 4-2 shows the regional geology encompassing the Titan Project.

Figure 4-2: Regional Geologic Map Encompassing Titan Project

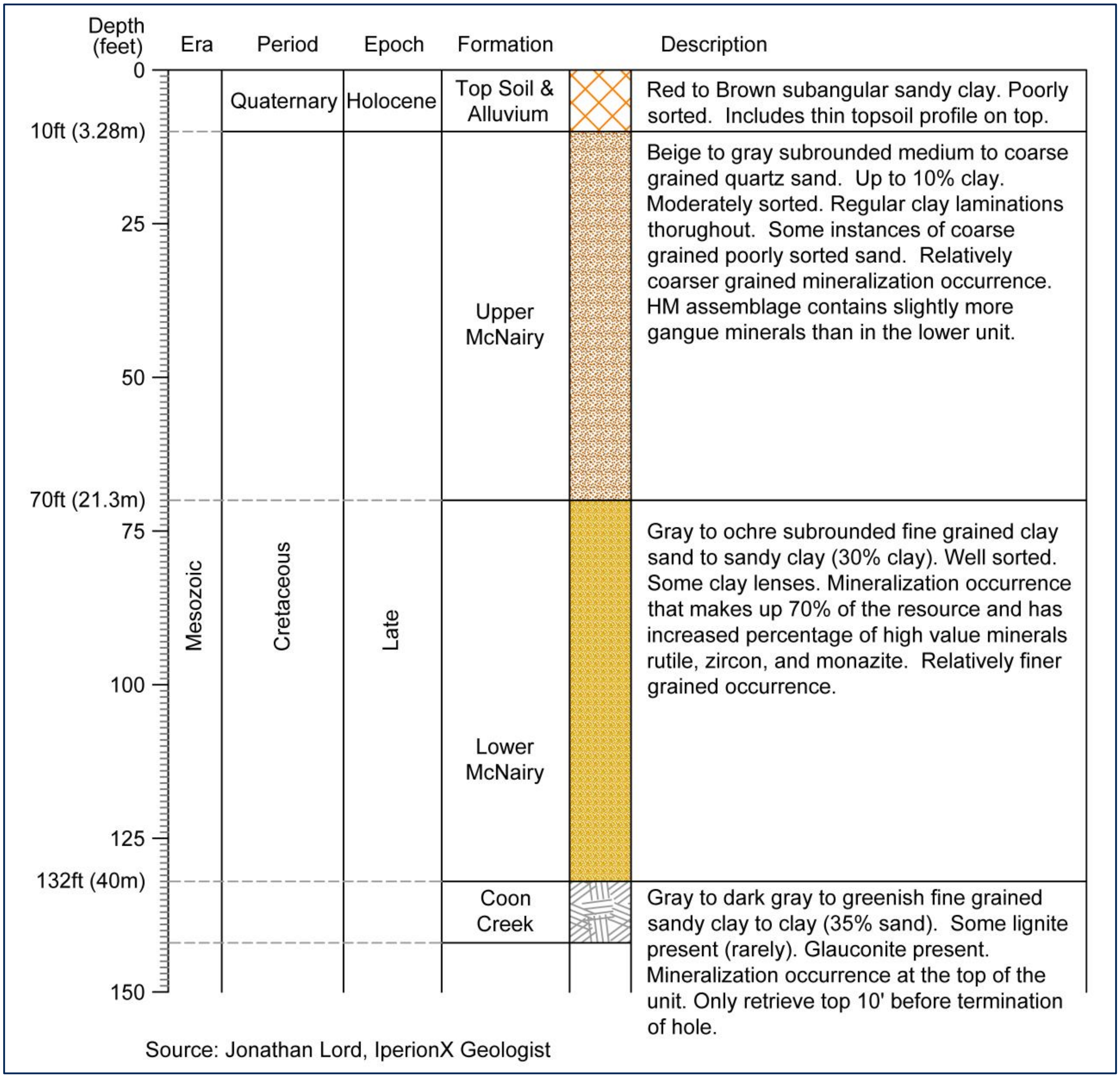


Geologic Map Key:
Qal- Quaternary, Tcw- Claiborne and Wilcox Formation, Tm- Midway Group including Porters Creek Clay and Clayton Formation, Km- McNairy Sand, Kcc- Coon Creek Formation, Kc- Coffee Sand.
Source: mrdata.usgs.gov/geology/state/. Published [2017]

4.3 Local Geology

The local near-surface geology represents a pro-grading deltaic environment during a regressive marine sequence (Figure 4-3).

Figure 4-3: Idealized Stratigraphic Column



This is evidenced by the coarsening upward sequence grading from the glauconitic clay-rich Coon Creek Formation to the finer-grained lower member of the McNairy Formation, to the coarser-grained upper member of the McNairy Formation.

4.4 Deposit Geology

4.4.1 Lithologies

Stratigraphically, the subsurface of the Study Area consists of the McNairy and Coon Creek Formations (refer to Figure 4-3) underlying a thin brown topsoil layer plus alluvial deposits that are often light to burnt orange in color.

The McNairy Formation dips gently to the west and consists of two members, the Upper McNairy Formation member (a beige sand) and the Lower McNairy Formation member (a beige, or beige-orange or white clayey sand). In some drill holes, the Lower McNairy Formation sand becomes grayer in color closer to the top of the Coon Creek Formation.

The top of the Coon Creek Formation is often clayey sand or clay, usually gray or black in color, occasionally beige in color. Drill records indicate the average thicknesses of the Upper and Lower McNairy Formation members in the Study Area are approximately 18 m (59 feet) and 19 m (62 feet), respectively. The McNairy Formation thickness can vary with topography. In the Study Area, the formation thickness ranges from 5 m to 67 m (16 feet to 220 feet) with the greatest thicknesses to the west. Where the formation thins, commonly the Upper McNairy Formation member is commonly thin or absent, and the Lower McNairy occurs directly below the overburden. The average elevation of the McNairy Formation ranges between near 136 m (446 feet) at the top of the Upper McNairy Formation to near 106 m (348 feet) at the base of the Lower McNairy Formation.

In the exploration drill logs, material above the Upper McNairy Formation was logged as alluvium and topsoil. In many cases, topsoil was assigned to material other than the thin organic topsoil that actually existed. On review of the geotechnical drill hole logs and soils reports, the topsoil interval of the area is approximately 7.62 cm to 30.48 cm thick (3 to 12 inches).

4.4.2 Structure

Though basement faulting is present in the region, it does not appear to impact the sedimentary stratigraphy at the Project scale.

4.4.3 Mineralization

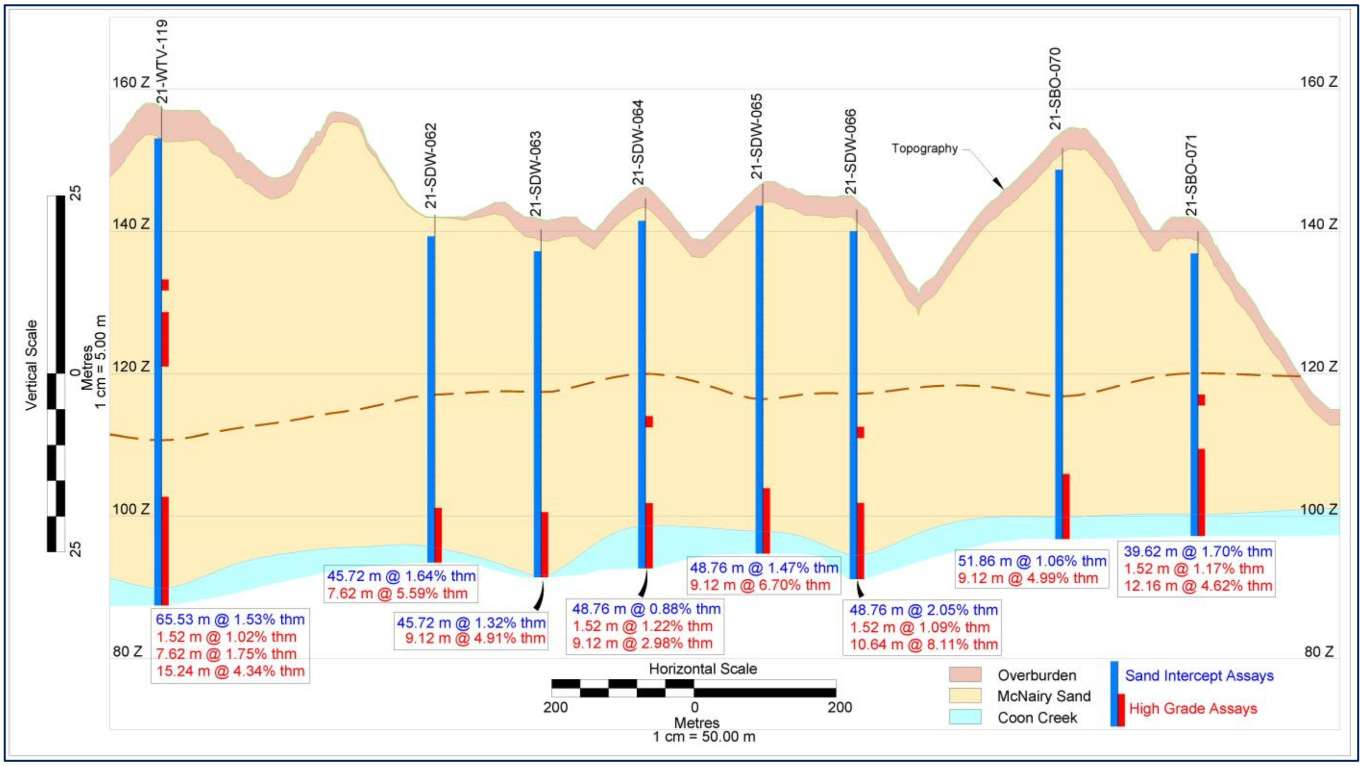
The heavy mineral sands are hosted in the McNairy Formation sands, with the higher heavy minerals grades mainly in the lower portion of the Lower McNairy Formation member. Titan mineral sands consist mainly of two principal product streams, titanium (Ti) [rutile (TiO_2), ilmenite ($FeTiO_3$), pseudorutile ($Fe_2Ti_3O_9$)] minerals and zircon ($ZrSiO_4$) but also contain rare earth elements [monazite, xenotime], staurolite ($Fe^{2+}{}_2Al_9O_6(SiO_4)_4(O,OH)_2$) and other products of lesser amounts [tourmaline].

The McNairy Formation upper member mineralized extent is more limited at the Project and in places is separated from the Lower McNairy Formation member by a barren coarse sand (Figure 4-4). Mineralization in both members had been traced for over 6.0 km along strike.

The host McNairy Formation varies from 5 m to 67 m thick (16 to 220 ft), averages 28 m (92 ft) in thickness. The mineralization generally consists of thick zones of stacked heavy mineral sand laminations; however, some more massive bands of mineralization are present where individual laminations are not present. The primary minerals associated with the mineralized horizons are altered ilmenite, zircon, rutile, staurolite, kyanite, monazite and xenotime with some variation in the proportion of these minerals between the upper and lower members. Generally, the finer-grained Lower McNairy Formation member contains more high-value heavy mineral sands including rutile, zircon, monazite, and xenotime than the upper coarser-grained McNairy Formation member. The gangue minerals are predominantly quartz and clays.

The range of samples collected by drillhole through the deposit are seen in Figure 4-4. The sand intercept assay trace indicates the range of samples collected for analysis. The high-grade assay trace represents samples with greater than 1.0 percent Total Heavy Minerals (% THM).

Figure 4-4: Example of Mineralization in Relation to Stratigraphy



Note: Figure prepared by MM&A, 2026.

4.5 Exploration Activities

IperionX has completed no geological mapping or geophysical surveys in the Project area. All exploration is conducted using drill methods. The property retains exploration potential to the north, east, and south.

Exploration potential could include additional drill holes east of the Big Sandy River and along strike to the southwest and northeast of the Study Area.

4.6 Drilling

Drilling in the overall property area occurred in 2020, 2021, and 2022 and totals 313 holes (11,382 m or 37,342 ft), as summarized in Table 4-1.

All drilling was completed by IperionX.

Table 4-1: Titan Exploration Drilling Summary

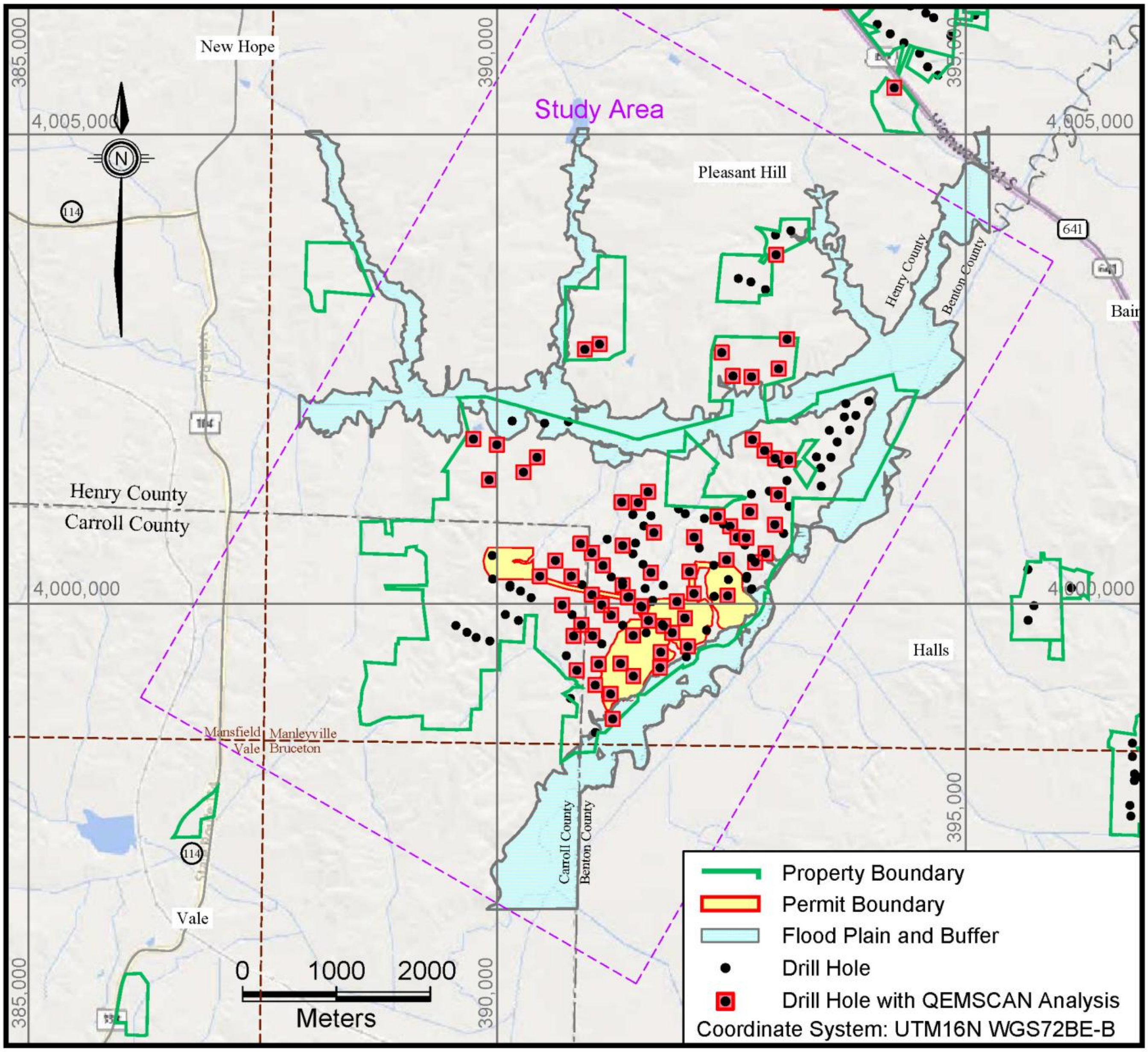
Resource Area	IperionX					HLS Sample Count	Mineral Composition Analysis	
	Type	Drill Hole Count	%	Length (m)	Length (Avg. m)		Analyzed Count	% of Area Hole Count
Study	RC	16	5	837	52			
Study	Sonic	140	45	5,645	40	4,130	84	60
Property (Camden)	Sonic	86	27	1,960	23	1,282	13	15
Property (North)	Sonic	64	20	2,630	41	1,687	3	5
Property (Other tracts)	Sonic	7	2	311	44	687	0	0
		313		11,383		7,786	100	

Note:
HLS - Heavy Liquid Separation
RC - Reverse Circulation

There are an additional 11 roto-sonic drill holes that were completed as part of a hydrogeological study by HDR. In 2025, S&ME, Inc. (S&ME) drilled an additional 44 holes with a total drilled depth of 1,693 m (5,554 ft) for mine pit slope geotechnical evaluations and 18 holes with a total drilled depth of 160 m (525 ft) for Wet Concentrator Plant (wet concentrator plant) geotechnical assessment, simultaneous to the geological model development for the DFS. Like the HDR holes, the S&ME holes were not used for resource development.

Drilling in the Study Area comprises 156 drill holes, this includes 16 reverse circulation (RC) drill holes (837 m or 2,746 ft) and 140 roto-sonic drill holes (5,645 m or 18,520 ft) (see Table 4-1). Drill hole collar locations are shown in Figure 4-5.

Figure 4-5: Titan Exploration Drilling Summary in Study Area



Note: Figure prepared by MM&A, 2026.

The area covered by the drilling is roughly 6.6 km (4.1 miles) (north-south) by 3.7 km (2.3 miles) (east-west). The area that hosts the Mineral Resource and Ore Reserve estimates is further broken up into several areas based on land holdings (land agreements). These range from 1.58 ha (3.9 acres) for the smallest area to 161 ha (397 acres) for the largest area (refer to Figure 3-3).

All drilling for the Study Area that is used in Mineral Resource estimation has been roto sonic. The roto-sonic method alternates advancement of a core barrel and a removeable casing (casing is used when needed to maintain sample integrity). 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 was used to create a head to reduce the expansion of the clay-rich Coon Creek Formation sediments. Expansion of the Coon Creek Formation lithologies by up to 0.9 m (2.9 feet) length in the core barrel has been observed.

Field procedures included coring 3-m (9.8-ft) sections of material at a time with a roto-sonic drill rig. All holes were drilled at a 90-degree angle to horizontal (vertical holes), which is essentially perpendicular to mineralization. Generally, holes are drilled without the use of water and typically without the use of casing. After each 3-m (9.8-ft) section was extracted, drill teams recovered the core in equal length plastic sleeves. Geologists then divided the core into two 1.5-m (4.9-ft) sections that were prepared for laboratory testing for lithologic significance and heavy mineral potential.

After termination, holes were backfilled, and global positioning system (GPS) coordinates were taken once the drill rig was moved from the drill hole. Field notes were recorded in the database.

Core logging core material characteristics were both qualitative (physical characteristics) and quantitative (estimation of THM% and the percent slimes (%Slimes)). Once the core was divided into 1.5-m (4.9-ft) sections, core samples were photographed and logged on paper tickets with lithological and mineralogical parameters to determine a main geological unit, and mineralized zone. Qualitative parameters included lithology, grain-size, roundedness, sorting, colour and formation, while the quantitative parameter consisted of heavy mineral percent (HM%) estimates. The combined log parameters were used to help determine the depositional environment.

Field analysis included the geologist panning samples for heavy mineral percentages using samples collected down the center of each 1.5-m (4.9-foot) section and molded into spheres approximately 4 cm (1.6 inch) in diameter. This was done for a first approximation of THM %.

After categorization, two 2-kilogram (kg) samples were taken down the center of each section, mimicking the panning sample. One sample was kept for IperionX records, and one was used for laboratory tests including Heavy Liquid Separation.

Quality check samples were taken 2% of the time and duplicates were taken 3% of the time. Holes were terminated 3 m (13 feet) into the Coon Creek Formation, which was identified by its dark grey color and sticky clay texture. Total depth of each drill hole was recorded, as well as any drilling issues/concerns that could impact sample representativeness.

All pertinent sample information (geology, sample ID, etc.) was collected on sequentially numbered tag books provided by the laboratory. The tag was inserted into the sample bag and the information from the tag book was entered nightly into the GeoSpark Consulting Inc. (GeoSpark) database. A chip tray was maintained for each drill hole to keep a representative sample for each interval for later use during geological interpretation.

Heavy mineral estimations can be impacted by several factors in the field, so it was important to implement procedures that addressed this possible occurrence. High-grade bands within a section can significantly increase overall HM%. This was avoided by taking an equal distribution of a panning sample in a line down the middle of a core section.

High clay content can also affect the portrayal of heavy minerals in the pan. This is caused by unprocessed clay fragments that can contain heavy minerals that were not liberated. To prevent this issue, IperionX's geologists made sure to wear down all clay bits through water and mechanical movements.

Material such as "sluff" or sand that had fallen into, or down the hole and was then retrieved as part of the next 3-m (9.8 ft) core interval, can create an erroneous view of lithology. To prevent this issue, geologists were briefed on what sluff looked like in the core, particularly because homogenized sludge may look like a previously retrieved section. Sluff was usually only about 0.3 m (0.9 ft) of material in the 3-m (9.8 feet) length. Where sluff was identified, it was cut from the core section.

Each core was measured, and the recovery was calculated as length of recovered core divided by length drilled (typically 3 m [9.8 ft]). Recovery was generally greater than (>) 95%.

Drill collars were surveyed by IperionX personnel using a Trimble hand-held GPS instrument. Drill hole collars have an accuracy of approximately 10 m (32.8 ft). All drilling was vertical. As the drill holes are short (<40 m depth on average), no down-hole surveys were taken as there was limited chance that in the short core run in unconsolidated sediments that the drill holes would deviate significantly.

4.7 Sample Preparation and Analyses

Roto-sonic drill core samples, typically 3 m (9.8 ft) in length, were collected directly from the plastic sample sleeve at the drill site. Some interpretation was involved as the material could expand or compact as it was recovered from the core barrel into the plastic sleeve. Samples were collected at regular 1.5-m (4.9-ft) intervals unless geological contacts were encountered. Sample length ranged from 0.3 m (1.0 ft) to 4.5 m (14.8 ft).

The unconsolidated sonic cores were sampled by splitting the core in half lengthwise using a machete, then recovering an even split with a trowel along the entire length of the sample interval. The sample weights were about 2 kg (4.4 lbs) and were appropriate for the analytical method(s) being used and ensured adequate sample volume was collected. Samples were collected directly to pre-labeled/pre-tagged sample bags. The remaining sample material was further split into a replicate/archival sample. Left over sample material after these steps was used to backfill the drill hole.

Soil samples were collected by S&ME during a geotechnical drilling campaign. Target depth intervals were provided to the S&ME drill team to collect samples from the Upper and Lower McNairy members, and the Coon Creek Formation. In the field, sample depths and intervals were logged with the percent sample recovery. Soil samples were collected from 10 holes of the 44 holes S&ME drilled for geotechnical purposes. From the ten holes, 40 soil sample intervals were logged in the boring logs. Of the 40 samples logged, 23 samples had adequate recovery for density analysis. Poor core recovery was the main reason that logged samples did not report a density value.

Density results were provided by S&ME in Laboratory Determination of Density of Soil Specimens forms, which include ASTM International (ASTM) test D7263.

After identifying the geologic units by depth, MM&A compiled the available density results from the laboratory forms and computed a weighted-average density. Below is a summary of the density information.

The soil density analysis shows the Upper McNairy and Lower McNairy units have a consistent density of 1.57 tonnes per cubic meter (t/m³), see Table 4-2.

Table 4-2: Unit Density Summary

Geology	No. of Samples	Dry Unit Wt. (t/m³)	Drill Hole Numbers
Overburden	2	1.72	MB-04, MB-10,
Upper McNairy Formation unit	7	1.57	MB-04, MB-12, MB-13, MB-16, MB-21, MB-25, MB-34
Lower McNairy Formation unit	10	1.57	MB-04, MB-12 (2), MB-16 (2), MB-21, MB-24, MB-25, MB-34, MB-36
Coon Creek Formation	4	1.54	MB-04, MB-10, MB-13, MB-25

Exploration drilling samples were sent to the SGS facility in Lakefield, ON, Canada (SGS Lakefield) and Bureau Veritas in Perth, Australia. SGS Lakefield is a qualified third-party laboratory that is independent of IperionX. SGS Lakefield is accredited as an ISO 17025 facility for selected analytical techniques. Bureau Veritas holds ISO 17025 accreditations for selected analytical techniques.

Samples were subjected to standard mineral sand industry assay procedures of size fraction analysis and heavy-liquid separation.

Samples were initially weighed, homogenized and an approximate 1 kg subsample was submitted for analysis. The remaining material was retained for potential later testwork. The subsamples were dry screened at 44 micron (325 mesh) for slimes and 595 micron (30 mesh) for oversize. The oversize material was weighed, and the remaining mass was attributed to the slimes fraction.

An 85-gram aliquot of the -30/+325 sand was submitted to heavy-liquid separation via methylene iodide diluted with acetone to target a specific gravity of 2.95 gram per cubic centimeter (g/cm^3), as this is more dense than non-valuable minerals and less dense than the target heavy minerals, allowing for the target minerals to sink in the solution. The >2.95 g/cm^3 portion was dried and weighed to calculate the percent heavy minerals within this size fraction by dividing the mass of heavy minerals by the total mass of the -30/+325 aliquot.

The THM content was calculated by adding the percent slimes and oversize to the total using the formula:

Heavy minerals mass =
-30/+325 mass+(-30/+325 mass * % slimes)+(-30/+325 mass * % oversize)

Of the 140 roto-sonic holes drilled on the Study area, composite samples from 84 holes were analyzed for mineral composition. From 84 holes, 1,669 m (5,476 feet) sampled are from the Lower McNairy Formation. Samples from the Upper McNairy Formation include 1,344 m (4,409 feet) from 71 holes.

Composites based on geological domains were submitted for QEMSCAN analysis for mineralogical assemblage data. The mineral species determined using QEMSCAN by SGS Lakefield were further combined and/or divided into groups representing anticipated products based on metallurgical testwork for inclusion in the geological block model.

Drill holes with QEMSCAN analysis were identified in Figure 4-5. Composite samples of the Upper and Lower McNairy Formation geologic units were analyzed separately. The sample composites were selected by IperionX based on THM percent from the drill hole sample assays. IperionX grouped the samples into two groups, mineralized (UM_M, LM_M) or background (UM_B, LM_B) based on a 1.0-percent average THM division. Mineralized composite sample groups yielded an average THM percent >1.0 (UM_M, LM_M) and background sample groups yielded an average THM percent less than (<) 1.0 (UM_B, LM_B). Because the mineralized zones of the Upper McNairy and Lower McNairy Formation units are often near the top and at bottom of the respective units with lower (background) grades in between, the order of composite samples by depth, per drill hole is UM_B / UM_M / UM_B / LM_B / LM_M or some combination of this order.

For each composite, the average THM% was calculated from the samples and then labeled as either background or mineralized. The THM% composite average is calculated for the sample interval from a weighted average of the sample THM%, to the cumulative composite THM% value. Therefore, a laboratory QEMSCAN composite is comprised of greater measured quantities of individual samples with higher THM percent than those from lower THM percent samples.

The assemblage minerals include titanium minerals (rutile, leucoxene, pseudorutile and ilmenite; the zirconium mineral zircon; rare earth element minerals (monazite, xenotime, and unclassified rare earth element minerals); and other minerals (staurolite, tourmaline, aluminum-silicates, quartz, other-silicates and other minerals).

4.8 Quality Assurance and Quality Controls

Accuracy monitoring was addressed by submission of in-house heavy mineral sands standards developed specifically for the Project. There is no commercially-available standard reference material for heavy mineral sands deposits. It is a common method within heavy mineral sands exploration and operations to generate standards that represent a matrix match to the target material being analyzed. A low-grade (~1% heavy minerals) and a high-grade (>2% heavy minerals) standard were produced with materials (heavy mineral and silica sands) from the Study Area to ensure matrix and mineralogical representativeness. Each material was analyzed by SGS Lakefield to generate mean and standard deviations. Standards and blanks were inserted at a 2.5% rate (one for every 40 samples). These standards and blanks were placed loose in a standard sample bag that was labeled sequentially as to mimic a typical drill sample and passed through the laboratory process “blind”. A record of the standards inserted, and the sample IDs are kept in the project database so that data can be matched up and reviewed. Standards were created multiple times during the project and each time a new dataset was generated to compare against.

A quality control standard failure was considered to be any single standard three standard deviations from the true value for the comparison for each sample, or two out of three consecutive samples between two and three 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 standard samples (i.e., number samples on either side) were reviewed to determine if the standard failures were material to the overall data for that batch or if the laboratory had had any procedural issues that need to be addressed. If necessary, samples were re-analyzed. Eleven standards (six high- and five low-grade) were submitted during the drilling campaign for analysis and results were all within three standard deviations of the mean of the standard.

Sampling precision was monitored by selecting a sample interval at a 3% rate (three for every 100 samples) and taking a second sample from the replicate over the same sample interval. These samples were consecutively numbered after the primary sample and recorded in the sample database as “field duplicates” and the primary sample number recorded. Field duplicates were ideally collected when sampling mineralized sonic core intervals containing visible THMs (panning). A total of 71% of the duplicate samples were in samples grading 0.5% THM or higher.

IperionX considered that field duplicates should have an average coefficient of variation of <10%, whereas laboratory duplicates should have an average coefficient of variation of <5%. For the drilling results reported, 83 field duplicates were submitted to the laboratory with results showing a coefficient of variation of <10%. Analysis of field duplicates indicates a relative precision of 31, indicating that the drill sampling was the greatest source of uncertainty in the sampling procedure.

Analytical precision was monitored using HLS duplicates that the laboratory produced at a rate of approximately three in 100 samples. The use of an 85 g sub-sample for HLS resulted in a relative precision of 4% based on repeat analyses of standard reference materials at SGS Lakefield. This sub-sample mass was considered to be appropriate for the grain size being sampled.

4.9 Data Verification

During drill exploration, KGS conducted several site visits throughout the drilling campaigns, visited the MT laboratory and the SGS Lakefield facility, and observed metallurgical testing programs. KGS reported that:

> "The site visits provided visual confirmation of mineralization, drill hole locations, bulk sample collection and logging and sampling procedures. KGS is satisfied with the metallurgical testing procedures as witnessed during the Mineral Technologies laboratory inspection. The laboratory procedures witnessed during the KGS inspection of SGS Lakefield are considered acceptable."

QPs from MM&A conducted a site visit to the Project area from April 15–16, 2025. MM&A received geologist's lithological data logs for 31 exploration holes from the 2021-2022 drilling campaigns. The log information was recorded on logging tickets, each with a laboratory sample number. In review of the log records, MM&A found them to be consistent in format and content. Core photos for 177 holes were also provided. Core photos included the sample ticket numbers that matched the geologist log ticket. For each sample, the ticket number and associated lithologic and depth information were recorded in the GeoSpark database, by hole. For 15 holes, MM&A paired drill logs with the core photo in Microsoft® PowerPoint slides). The pairings provided a manageable screening of each geologist log and photo together.

QEMSCAM laboratory records were provided by IperionX, and MM&A used the QEMSCAN laboratory sheets to review mineral assemblage records or values. Comparison of the 2023 values to the 2025 results showed a decrease of the REE* percent values. This resulted in 10 drill hole samples from 10 drill holes that intersected the Lower McNairy Formation being sent for re-testing using QEMSCAN. The re-test results for the mineral assemblage compared well with the original values, except for tourmaline and the REE*. (REE* equals monazite + xenotime + unclassified REE.) SGS Lakefield attributed the difference to software processing for the 2025 results. SGS subsequently revised QEMSCAN results for all the 2025 composites to correct the tourmaline and monazite results. After the data procedures review, MM&A accepted the SGS Lakefield re-testing results and deemed it appropriate to include both the 2023 and 2025 QEMSCAN results for use in Mineral Resource estimation.

MM&A is of the opinion that sufficient data have been obtained through the exploration and sampling programs to support the geological interpretations of the mineral sands deposit situated on the Project. The data are of sufficient quantity and reliability to reasonably support the Mineral Resource and Ore Reserve estimates in this Report.

5 Mineral Resource Estimate

5.1 Estimation Method

The resource database contains sonic drill data collected between 2020, 2021 and 2022. Laboratory analyzed samples from these holes occurred between 2020 and 2025. Data are from 140 drill holes (5,645 m or 18,520 ft of total drilled length) and includes 3,360 THM assay samples (heavy liquid) and 269 THM composite mineralogy (QEMSCAN) determinations. Of these totals, 56% of the heavy mineral assay samples and 59% of the mineral composites are from the Lower McNairy Formation member.

Geological interpretations were compiled using Vulcan software version 2021.1. Variography of heavy mineral samples was completed using Vulcan software version 2025.1, which was also used for model development and grade interpolation.

The designated floodplain area of the Big Sandy River and the Bear Creek tributary impact the Mineral Resources. Floodplains are excluded from the resource estimate area. The floodplain exclusion area crosses the Study Area, isolating resource blocks to the north.

The top of the Upper McNairy Formation unit, the base of the Upper McNairy Formation/top of the Lower McNairy Formation unit and the base of the Lower McNairy Formation units were modeled from drill intercepts extracted from the lithologic database records. The material between the top of the Upper McNairy Formation and the topography was designated as overburden and waste.

Bulk densities were assigned globally by unit based on the densities in Table 4-2.

Assayed samples of THM% in the Lower McNairy Formation were used to derive variograms. Variogram features exhibit the spatial continuity of the sample spacing. The variogram sill factor along with the known drill hole spacing were used to support the Mineral Resource confidence classification ranges of the deposit

A block model was created to encompass the Study Area extent and estimate the mineral sands deposit resources. The model was oriented with a bearing of 30 degrees east of north, an orientation near the apparent depositional trend of the mineral sands. Block cell dimensions of the model are 25 m*25 m*1.524 m (X*Y*Z). For block model development, the digital topographic surface established the overlying bounding surface. Blocks above the topography were coded as air and excluded from any resource or volume estimates. Gap spaces that exist between the base of the overburden and the top of the Upper McNairy Formation were assigned to waste material (and were therefore handled with the overburden).

No total heavy mineral top cut was used, nor was it considered necessary for this deposit considering the geology, type, and consistency of mineralization. No sample compositing was used for Samples Assay

Data estimations. The straight sample method did honor the identified geologic formation breaks of the data records.

Grade estimations were conducted for the Upper McNairy and Lower McNairy geologic units separately. Grade interpolations were completed using an inverse distance weighting to the second power (ID2) algorithm. MM&A used a primary ellipsoid search dimension (Pass 1) of 212 m*425 m*3 m (X*Y*Z) to interpolate all the assay data (THM, oversized material, slime). No dip or plunge angles were assigned to the search ellipsoid. When data were insufficient for a block estimate from the first pass ellipsoid, a secondary, tertiary and quaternary search ellipsoid were used with increased search volumes.

The resource classification was determined based on drill hole density reflecting the geological confidence; firstly, from hole locations with QEMSCAN analysis and secondly from all drill holes with total heavy minerals and the geostatistical variogram model. To prevent stand-alone classification pods, radial arcs from points of measurement were required to intersect with an adjacent arc of the same classification. Therefore, isolated, stand-alone drill holes with QEMSCAN samples were not assigned Measured classification and similarly, stand-alone drill holes with total heavy minerals were not assigned an Indicated classification.

5.2 Reasonable Prospects of Eventual Economic Extraction

The reasonable prospects for economic extraction of the Mineral Resources were based on parameters listed in Table 5-1. An assumed vertical slope was used for the basis of the in-place resource estimates.

Table 5-1: Assumptions Used in Defining Reasonable Prospects of Economic Extraction

Parameter	Units	Value
Commodity price		
Rutile	US$/t	1,425
Ilmenite	US$/t	340
Rare earth mineral concentrate	US$/t	10,678
Zircon concentrate	US$/t	912
Metallurgical recovery		
Rutile	%	70.6 (81.2% mineral in product)
Ilmenite	%	85.0 (95.8% mineral in product)
Heavy rare earth concentrate	%	89.5 (87.8% mineral in product)
Zircon	%	91.2 (46.9% mineral in product)
Operating costs		
Mining cost	US$/m^3	7.23
Processing cost	US$/ROM t	3.09
Transport cost	US$/ROM t	1.00
Reclaim/rehandle	US$/ROM t	Included in mining cost
Incremental in pit management	US$/ROM t	Included in mining cost
General and administrative cost	US$/ROM t	0.95
Dewatering	US$/ROM t	0.30
Wetlands mitigation cost	US$/ha	60,000
Stream mitigation cost	US$/ linear m	1,425
Royalty	%	5

The operating cost assumptions are based on a scenario where material is mined, transported to a process plant using a conveyor belt, immediately processed, and the process residue is dewatered and immediately returned to the mined area as backfill via a conveyor belt.

A bottom cut-off grade of 0.4% THM was used in the constraining pit shell, on the basis that the incremental cost of selectively extracting this material, hauling it to a long-term stockpile, and subsequently reclaiming and re-placing the material into a mine void for progressive rehabilitation would be higher than the net cost (operating cost less revenue) of the central case method. The central case method is the processing of this material, extracting the contained valuable critical minerals for sale and immediately returning the remaining material, mostly silica sand, back to the deposit void. An additional pit optimization was completed to generate the finalized mine plan pit shell used in the conversion of Mineral Resources to Ore Reserves.

5.3 Mineral Resource Statement

The Mineral Resources for the Project are reported on an in-situ basis and are reported in accordance with the JORC Code (2012).

The Mineral Resource estimates are stated in Table 5-2 as at June 4, 2026. The information in this Report that relates to Mineral Resource estimates was prepared by Competent Persons John Eckman.

IperionX confirms that it is not aware of any new information or data that materially affects the information included in the original announcements. All material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. IperionX confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

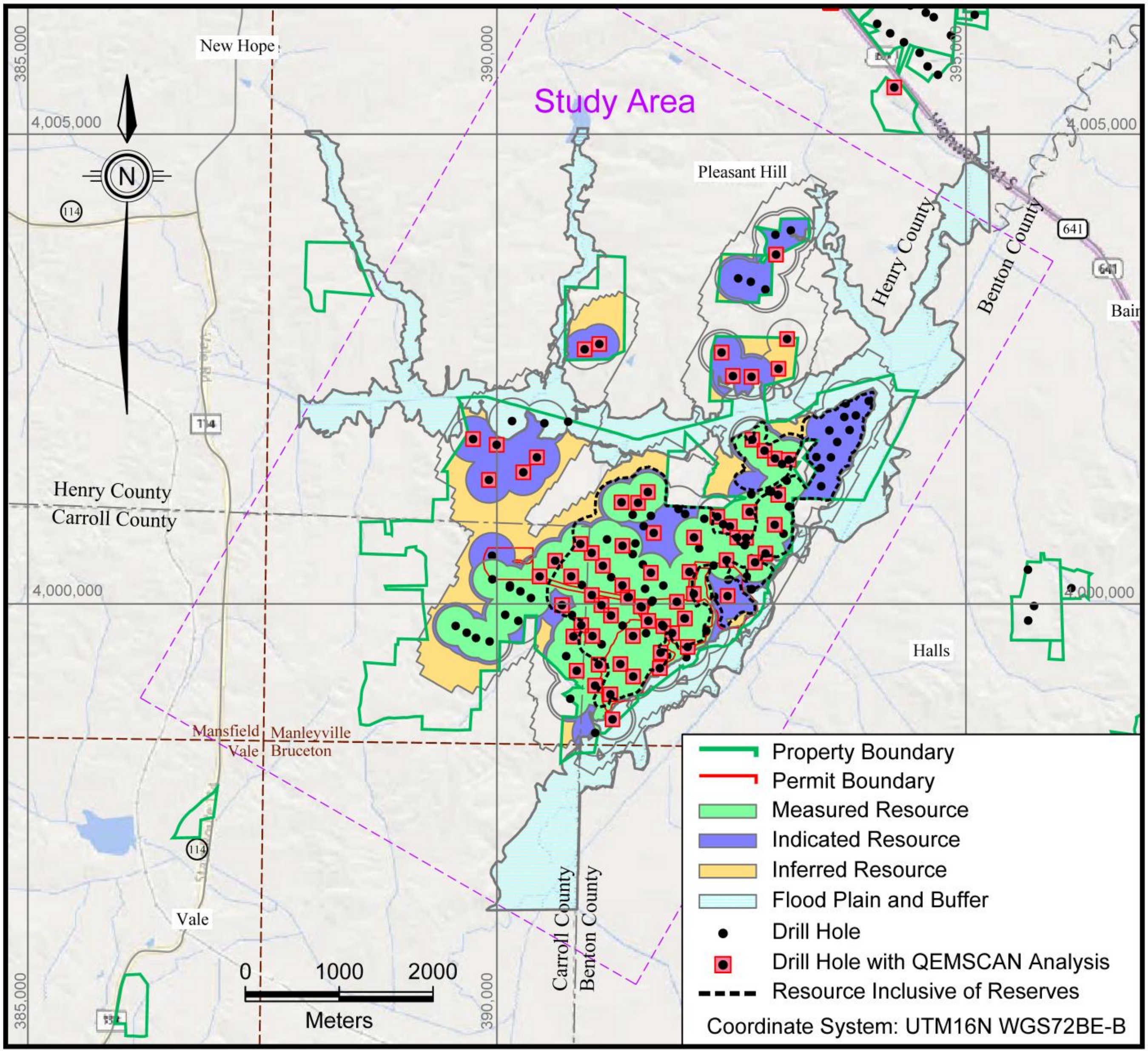
Table 5-2: Mineral Resource Estimate and Total Heavy Minerals Assemblage

Mineral Resource Estimate	In situ Tonnes	THM (%)	THM (t)	THM Assemblage Zircon (%)	Rutile (%)	Ilmenite (%)	REE (%)
Inclusive of Reserve							
Measured (M)	120,434,000	2.5	3,060,000	11.1	9.5	40.9	1.5
Indicated (I)	28,388,000	2.9	828,000	11.8	9.2	52.0	1.5
Total M+I	**148,823,000**	**2.6**	**3,887,000**	**11.2**	**9.4**	**43.2**	**1.5**
Inferred (Inf)	0	0.0	0	0.0	0.0	0.0	0.0
Total M+I+Inf	**148,823,000**	**2.6**	**3,887,000**	**11.2**	**9.4**	**43.2**	**1.5**
Exclusive of Reserve							
Measured (M)	96,851,000	1.5	1,489,000	10.4	9.2	40.1	1.2
Indicated (I)	102,190,000	2.0	2,013,000	9.8	10.2	38.9	1.5
Total M+I	**199,041,000**	**1.8**	**3,502,000**	**10.0**	**9.8**	**39.4**	**1.4**
Inferred (Inf)	97,832,000	1.8	1,774,000	9.3	9.6	38.0	1.2
Total M+I+Inf	**296,872,000**	**1.8**	**5,276,000**	**9.8**	**9.7**	**39.0**	**1.3**
Grand Total							
Measured (M)	217,285,000	2.1	4,548,000	10.8	9.4	40.6	1.4
Indicated (I)	130,578,000	2.2	2,841,000	10.4	9.9	42.7	1.5
Total M+I	**347,863,000**	**2.1**	**7,389,000**	**10.6**	**9.6**	**41.4**	**1.4**
Inferred (Inf)	97,832,000	1.8	1,774,000	9.3	9.6	38.0	1.2
Total M+I+Inf	**445,695,000**	**2.1**	**9,163,000**	**10.4**	**9.6**	**40.8**	**1.4**

Notes to accompany Mineral Resource table:

1. Mineral resources are reported using the definitions set out in the 2012 JORC Code and are current as at June 4, 2026. Mineral Resources are reported on an in situ basis, inclusive of Ore Reserves.
2. The Competent Person responsible for the estimate is John Eckman.
3. Mineral Resources are reported within a conceptual pit shell that uses the key assumptions summarized in Table 5-1 above.
4. Mineral Resources are reported above a cut-off grade of 0.4% THM.
5. The Study Area contains 199.0 Mt of Mineral Resources (Measured + Indicated) exclusive of Ore Reserves (Figure 5-1).
6. Estimates have been rounded.

Figure 5-1: Resource by Classification



Note: Figure prepared by MM&A, 2026.

5.4 Factors That May Affect The Mineral Resource Estimate

Specific factors that may affect the estimates include:

- changes to property control (i.e. owned, leased or optioned tracts)
- changes to forecast commodity and final product price assumptions
- changes in local interpretations of mineralization geometry and continuity of mineralized zones
- changes to metallurgical recovery assumptions

- changes to assumptions as to deleterious elements
- changes to the input assumptions used to derive the conceptual open pit shell that is used to constrain the estimates
- changes to the cut-off values applied to the estimates
- variations in geotechnical, hydrogeological and mining assumptions
- changes to environmental, permitting and social license assumptions.

6 Ore Reserve Estimate

6.1 Conversion of Mineral Resources to Ore Reserves

Ore Reserves were converted from Measured and Indicated Mineral Resources. Inferred Mineral Resources were treated as waste.

MM&A developed a mine plan and reserve estimate using K-MINE Group's (K-MINE) Planning and Optimal Pit Boundaries modules. The initial cutoff grade for Ore Reserve estimation was set at 0.4% THM based on previous work. Upon coordination with process engineers designing the wet concentrator plant, it was determined that a cutoff grade yielding a rougher feed grade of 3.2% THM would yield better recoveries through the process plant. A detailed cutoff grade analysis was completed whereby additional optimizations were run at COGs of 0.6% THM, 0.7% THM, 0.8% THM, and 0.85% THM to arrive at 3.2% THM grade feed to the wet concentrator plant. The final cutoff grade used for optimization, scheduling, and mine planning was set at 0.85% THM. This selection was supported by a sensitivity analysis. Price coefficients (or revenue factors) were set up as part of the optimization process with a range of 20% to 110% with a 10% price correlation step for the final products. It was decided to proceed using a 90% price coefficient, which provides the best correlation between maximizing profit and maximizing the Ore Reserves mined. Floodplain restrictions were observed for the optimization process. Production requirements were based on the target production of 3.5 Mt per year for Phase 1 (Years 1-4) and 10.0 Mt per year for Phase 2 (Years 5-14).

Geotechnical assessment resulted in a final wall berm (batter) height of 10 m with a batter angle 35 degrees and 5-m benches, resulting in an overall 27.4-degree slope wall. Due to the geometry of the mining pits, small amounts of economic material may have been excluded from the mine plan tonnages, while small amounts of sub-economic/low-grade material may have been included and account for the dilution included as part of the Ore Reserve estimate.

Production data outputs from LOM plan sequencing were processed into Microsoft® Excel spreadsheets and summarized on an annual basis for incorporation into the economic model.

Revenue streams as projected in the economic portions of the report assume a sales realization (FOB-mine) of US$1,425 per tonne for rutile final product, US$340 per tonne for ilmenite final product, US$912 per tonne for zircon concentrate, and US$10,678 for rare earth elements concentrate. Product prices were provided by IperionX based on "TZMI Titanium Feedstock Price Forecast to 2029, Issue 2, 2025" and Adamas Intelligence "Value of IperionX Monazite Concentrate, Q3, 2025" Market Reports. The DFS economic analysis in Section 15 uses higher overall commodity prices in aggregate than Mineral Reserve price assumption. This difference reflects updated market information available at the time of completion of the DFS economic model. A separate pit optimization economic review and sensitivity analysis demonstrates that the project remains economically viable at the Ore Reserve commodity price assumption. The conversion of Ore Reserves (ROM-basis) via concentration and chemical processing to final products or concentrates are included in IperionX's business plan, and as such, the costs of such processes and appropriate revenue streams are included in financial modeling.

Resource modeling and mine optimization as described in the Report were used as a basis for the Ore Reserve estimate using the geologic model described in Section 5 as the basis of the conversion from Mineral Resources to Ore Reserves. Proved and Probable Ore Reserves were derived from the defined resource considering relevant processing, economic (including technical estimates of capital, revenue, and cost), marketing, legal, environmental, socio-economic, and regulatory factors.

The optimization parameters used in conversion are provided in Table 6-1.

Table 6-1: Optimization Parameters

Group / Item	Unit	Value
Geometry		
Coordinate System	-	UTM-16N
Overburden slope	°	26.6
Face slopes	°	35
Inter-ramp slope	°	29
Overall slope	°	27.4
Berm width	m	5
Batter angle	°	35
Berm (batter) height (working)	m	10
Berm (batter) height (final wall)	m	10
Minimum mining width	m	25
Ramp width	m	25
Total depth	m	55
Block dimension X	m	25
Block dimension Y	m	25
Block dimension Z	m	1.524
Mining		
Production rate	tonne/year	3,529,000 to 10,588,000
Production schedule	Hours/Year	8760
Production schedule efficiency	%	85
Ramp grade	%	10
Concentrator recovery		
Rutile	%	70.6 (81.2% mineral in product)
Ilmenite	%	85.0 (95.8% mineral in product)
Heavy rare earth concentrate	%	89.5 (87.8% mineral in product)
Zircon	%	91.2 (46.9% mineral in product)
Cutoff grade (COG)	%	0.85 THM
Specific gravity (ore)	-	1.57
Specific gravity (waste rock)	-	1.72
Specific gravity (Coon Creek Formation)	-	1.54
Specific gravity (soil)	-	1.72
Restrictions	-	floodplain & wetlands
Swell factor	%	12
Pit Loss/Dilution	%	10 (in addition to low-grade interburden)
Vertical rate of advance	m	90
Battery limits	location	ROM Pile
Financial		
Mining cost	US$/m³	7.23
Transportation cost	US$/ROM t	1.00

Group / Item	Unit	Value
Processing cost	US$/ROM t	3.09
Reclaim/rehandle	US$/ROM t	Included in mining cost
Incremental in pit management	US$/ROM t	Included in mining cost
General and administrative cost	US$/ROM t	0.95
Dewatering	US$/ROM t	0.30
Wetlands mitigation cost	US$/ha	60,000
Stream mitigation cost	US$/ linear m	1,425
Royalty	%	5
Sales price rutile	US$/t	1,425
Sales price ilmenite	US$/t	340
Sales price rare earth concentrate	US$/t	10,678
Sales price zircon concentrate	US$/t	912

6.2 Ore Reserves Statement

The Ore Reserves for the Project are reported as delivered to the process plant (ROM basis) and are reported in accordance with the JORC Code (2012).

Ore Reserves are reported using the Ore Reserve definitions set out in the 2012 JORC Code on a 100% basis. The Competent Persons considered pertinent Modifying Factors, inclusive of mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors, in converting a portion of the Measured and Indicated Mineral Resources to Ore Reserves. The Ore Reserve estimates are stated in Table 6-2 as at June 4, 2026. The information in this Report that relates to Ore Reserve estimates was prepared by Competent Persons Justin Douthat. The Ore Reserve estimate is based only on Measured and Indicated Mineral Resources. Inferred Mineral Resources were treated as waste and were not used to support Ore Reserves or economic viability.

Table 6-2: Titan Project – Estimate of Ore Reserves, ROM Basis

	Grand Total ROM Tonnes					THM Assemblage			
Unit	Proved	Probable	Total	THM (%)	THM (t)	Zircon (%)	Rutile (%)	Ilmenite (%)	REE (%)
Upper McNairy	24,565,000	2,415,000	26,980,000	2.3	620,000	6.2	6.2	23.6	0.2
Lower McNairy	68,740,000	21,307,000	90,047,000	3.4	3,086,000	12.7	10.5	48.3	1.9
Total	**93,306,000**	**23,722,000**	**117,027,000**	**3.2**	**3,706,000**	**11.6**	**9.8**	**44.2**	**1.6**

Notes to accompany Ore Reserve table:

1. Ore Reserves are reported using the definitions set out in the 2012 JORC Code and are current as at June 4, 2026. Ore Reserves are reported on a ROM basis.
2. The Competent Person responsible for the estimate is Justin Douthat.
3. Ore Reserves are reported within a finalized mine design pit shell that uses the key assumptions summarized in Table 6-1 above.
4. Ore Reserves are reported above a COG of 0.85% THM.
5. Ilmenite includes leucoxene, pseudorutile, and ilmenite and REE includes monazite, xenotime, and unclassified REE.
6. Estimates have been rounded.

6.3 Factors That May Affect The Ore Reserves Estimate

Specific factors that may affect the estimates include:

> changes to property control (i.e. owned, leased or optioned tracts)

> changes to forecast commodity and final product price assumptions

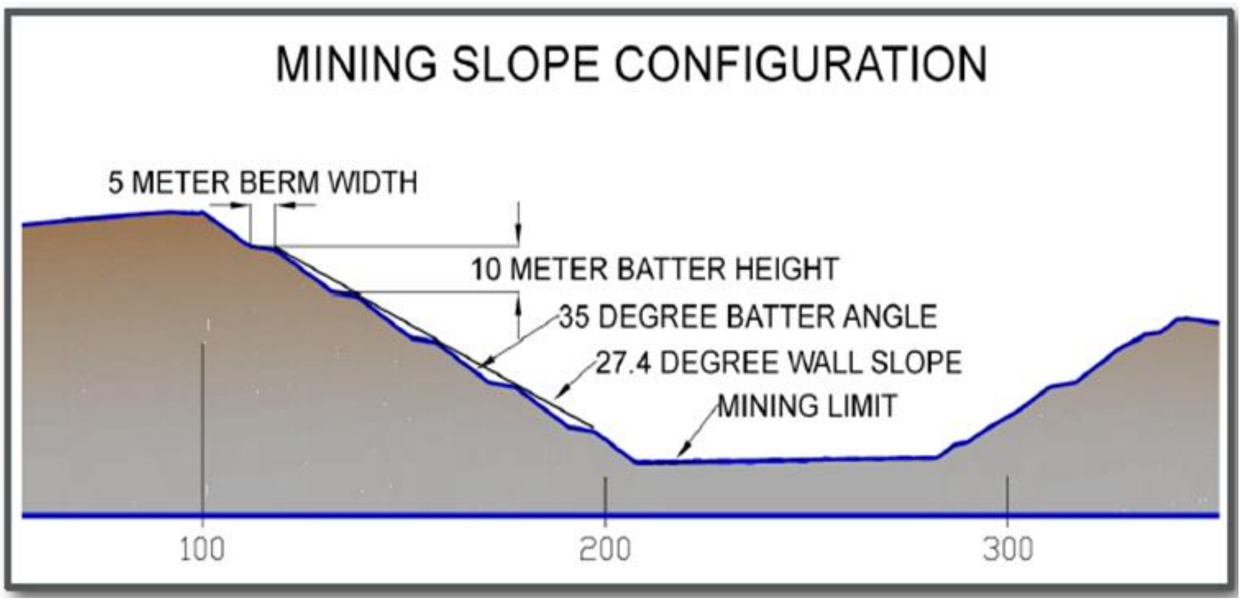
> changes in local interpretations of mineralization geometry and continuity of mineralized zones
> changes to metallurgical recovery assumptions
> changes to assumptions as to deleterious elements
> changes to the input assumptions used to derive the finalized mine design open pit shell that was used to constrain the estimates
> changes to the cut-off value applied to the estimates
> variations in geotechnical, hydrogeological and mining assumptions
> changes to pit optimization assumptions
> changes to mine designs
> changes to environmental, permitting and social license assumptions.

7 Mining Method and Production Schedule

7.1 Geotechnical Assumptions

The pit slope stability information for the Project is based primarily on field and laboratory data. The pit slope parameters used for the current pit optimization results are summarized in Figure 7-1.

Figure 7-1: Pit Slope Geometric Parameters



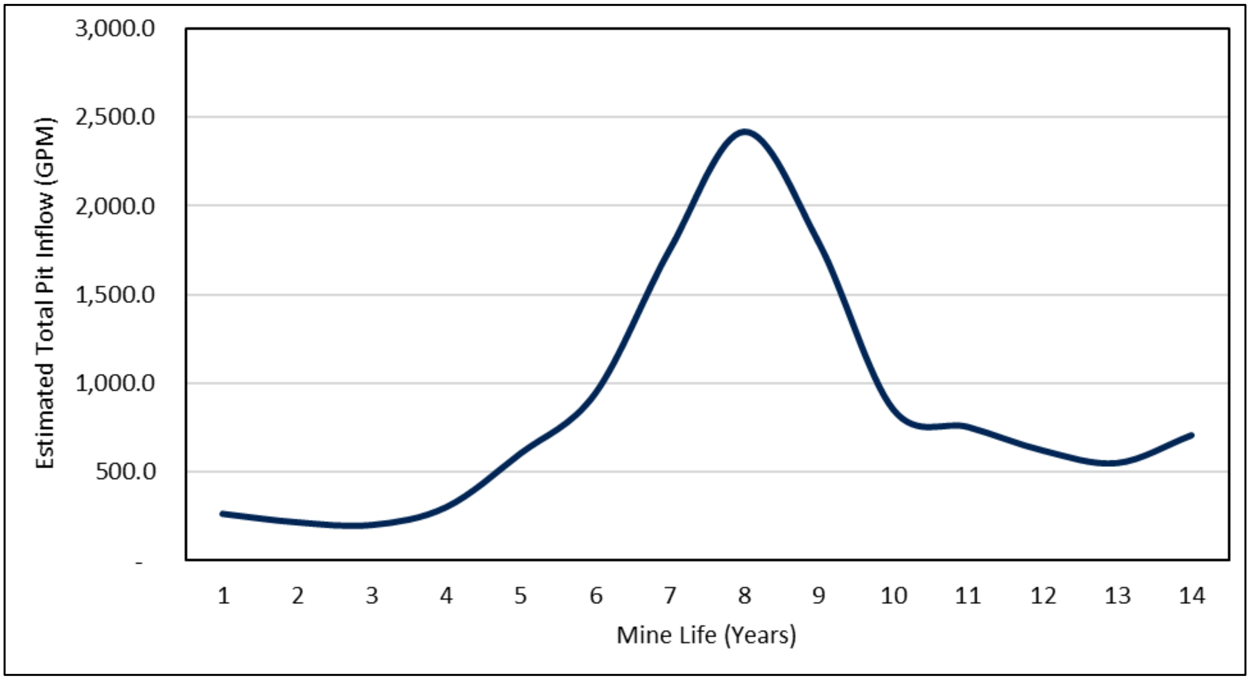
Note: Figure prepared by MM&A, 2026.

7.2 Hydrogeological Assumptions

HDR completed groundwater models for two separate dewatering scenarios, one considering dewatering wells along the pit perimeter and another considering a reduced number of dewatering wells along the pit perimeter in combination with a series of slurry walls also along the pit perimeter.

A graph of the estimated total pit groundwater inflow variations over the life of mine is presented in Figure 7-2.

Figure 7-2: Graph of Estimated Mine Inflow Over Life of Mine



Note: Figure prepared by HDR, 2026.

Project scheduling and necessary iterations that occurred through the life of the Titan Project resulted in the groundwater flow modeling being conducted on a slightly different mine plan, as compared to the finalized mine plan used for this DFS.

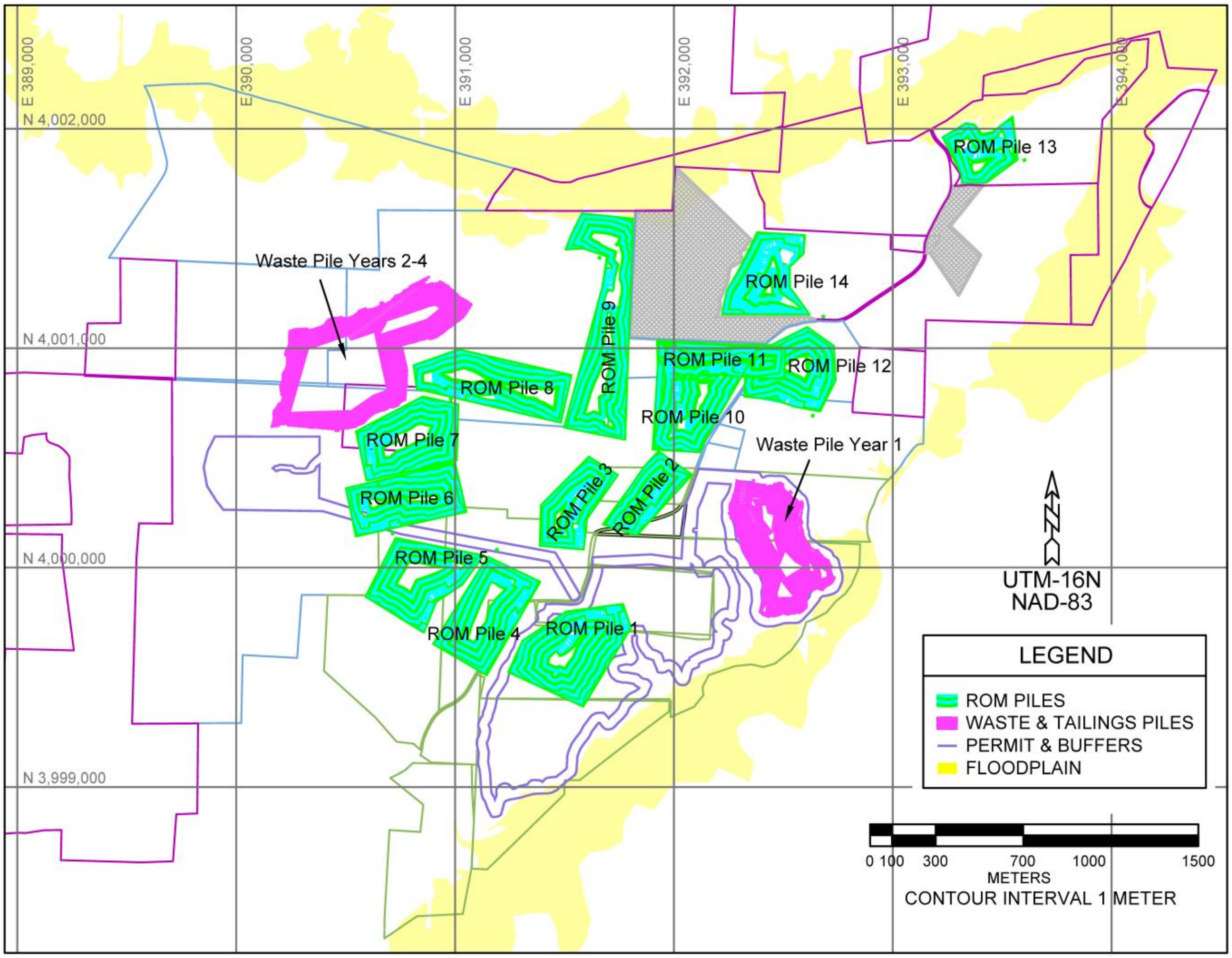
7.3 Mining Method

Based on a review of the key criteria (productivity, flexibility, separating plant-pit operations, operating cost, capital cost, ore selectivity and sensitivity to potentially wet pit floor), MM&A recommended an excavator and truck mining method, with mining activities completed by a contractor. This assumes the mobile equipment fleet is owned by the contractor. This option had the lowest initial and overall life-of-mine capital, and lowest net present value (NPV) for the three methods evaluated.

A finalized DFS mine plan was created using K-MINE's Dynamic Design module for multiple years based on nested pits created from initial optimizations in order to create route profiles for equipment sizing and scheduling. These plans were developed by MM&A in order to allow mining contractors to match production requirements by year to excavators, articulated haul trucks and fixed and mobile conveyors, which ultimately resulted in preparing cost analysis data used in mining cost modeling and are examples of typical mine plan sections and haulage profiles, respectively. Yearly plans incorporated ore production to the wet concentrator plant, waste production to on-site waste dumps, and the associated conveyor lines for each destination. Ore production was primarily dictated by wet concentrator plant ROM feed requirements and secondarily dictated by pit size and scheduling of exhausted pits for tailings and waste backfill.

Disposal of dewatered tailings and waste material (non-ore sand and soils) will be in the Waste Storage Areas, Topsoil Storage Area, and Pit backfill areas (Figure 7-3).

Figure 7-3: Waste & ROM Pile Plan and Profile Views

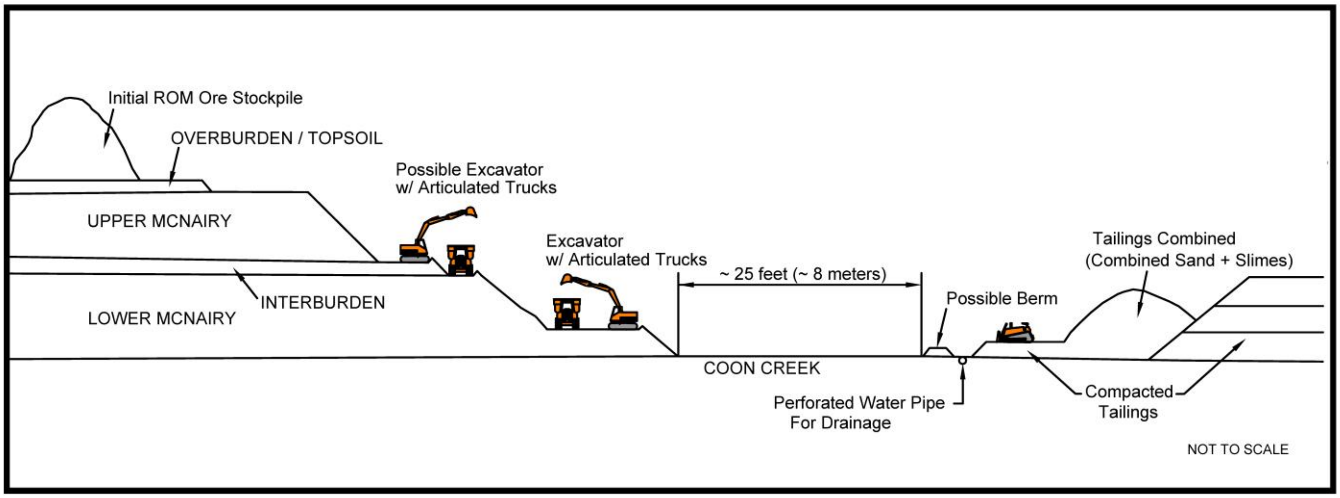


Note: Figure prepared by MM&A, 2026.

A combination of excavators and articulated trucks will be used to mine the ROM ore as well as all topsoil, overburden and interburden waste material. ROM stockpiles and initial waste disposal areas were designed to minimize haul distances. Conveyors will be used to transport ROM ore from the mine area to the wet concentrator plant, and dewatered tailings from the wet concentrator plant back to the pits for disposal in the final backfill.

Articulated trucks will transport ROM ore from the excavator to the ROM stockpile where it will be screened to remove oversize material and conveyed to the wet concentrator plant. A contractor will load ROM ore from the stockpile into the hopper that feeds the conveyor. Tailings material will be dewatered as part of the wet concentrator plant process and transported back to the mined pits and storage areas via conveyors for dry stacking. Figure 7-4 shows a typical profile of the proposed mining method.

Figure 7-4: Schematic Pit Diagram



Note: Figure prepared by MM&A, 2026.

After dewatering as part of the wet concentrator plant processing operations, combined (sand and slimes) tailings will be disposed of by stacking within the pit void behind the mining face. Tailings in Year 1 are to be stored in the Waste Pile East and pit waste (interburden) is to be backfilled into the pit area. Tailings will be transported from the plant area to Waste Pile East by conveyor and the contractor will place tailings with dozers. Pit waste will be hauled by the contractor from the working face to the pit backfill areas and spread with dozers.

Tailings in Years 2-4 are to be stored in the Waste Pile North near the plant area and pit waste is to be backfilled into the pit areas. Permitting for the Waste Pile North has not been completed at this time, but the DFS financial model includes the capital costs to permit this area. Tailings disposal in Years 2-4 will be transported by conveyor to Waste Pile North and the contractor will place the tailings with dozers. Pit waste will be hauled by the contractor from the working face to the pit backfill areas and spread with dozers.

Beginning in Year 5 there is sufficient room for tailings and waste to be backfilled into the pit areas. Tailings will be hauled by the contractor from a bin located at the ROM pile to the pit backfill areas. Pit waste will be hauled by the contractor from the working face to the pit backfill areas and spread with dozers. Tailings from Year 1 stored in the Waste Pile East will need to be moved to pit backfill in Year 10 so the area can be mined in Year 11. The volume of material to be rehandled by the contractor in Year 10 is approximately 2,077,000 m^3.

All final mine and backfill surfaces are completed in Year 14.

7.4 Equipment Requirements

Mining contractors will provide all labor and material to support equipment, including all mobile mining equipment, water truck, dozer capable of maintaining the waste disposal volumes, motor grader, utility loader backhoe, fixed or portable lights, pumps, and a utility articulated haul truck (for erosion control measures, cleaning, etc.).

Table 7-1 summarizes the expected major mining equipment to support the proposed mine plan. Support equipment will consist of mid-size excavators, agricultural loaders, track loaders, compactors, diesel pumps, custom maintenance trucks, fuel/lubrication trucks, road management tractors or graders and water trucks.

Table 7-1: Required Equipment to be Provided by Contractors

Make	Type	Model	Phase 1	Phase 2
Caterpillar	Hydraulic Excavator	Cat 395	2	6
Caterpillar	Articulated Haul Truck	Cat 745	18	32
Caterpillar	Dozer	D8	2	4
Caterpillar	Dozer	D6XE	1	1
Caterpillar	Articulated Truck	725 Water Truck	1	1
Caterpillar	Scraper	Tractor & Box	1	1
Caterpillar	Dozer	D11T	2	5
Caterpillar	Wheel Loader	982XE	8	10
Caterpillar	Hydraulic Excavator	Cat 352	2	2
Caterpillar	Compactor	825 Compactor	1	1
Kenworth	Support	Mechanic/Service Truck	2	5
Caterpillar	Grader	16G/H Motor Grader	1	1
Kenworth	Support	Fuel/Lube Truck	1	2

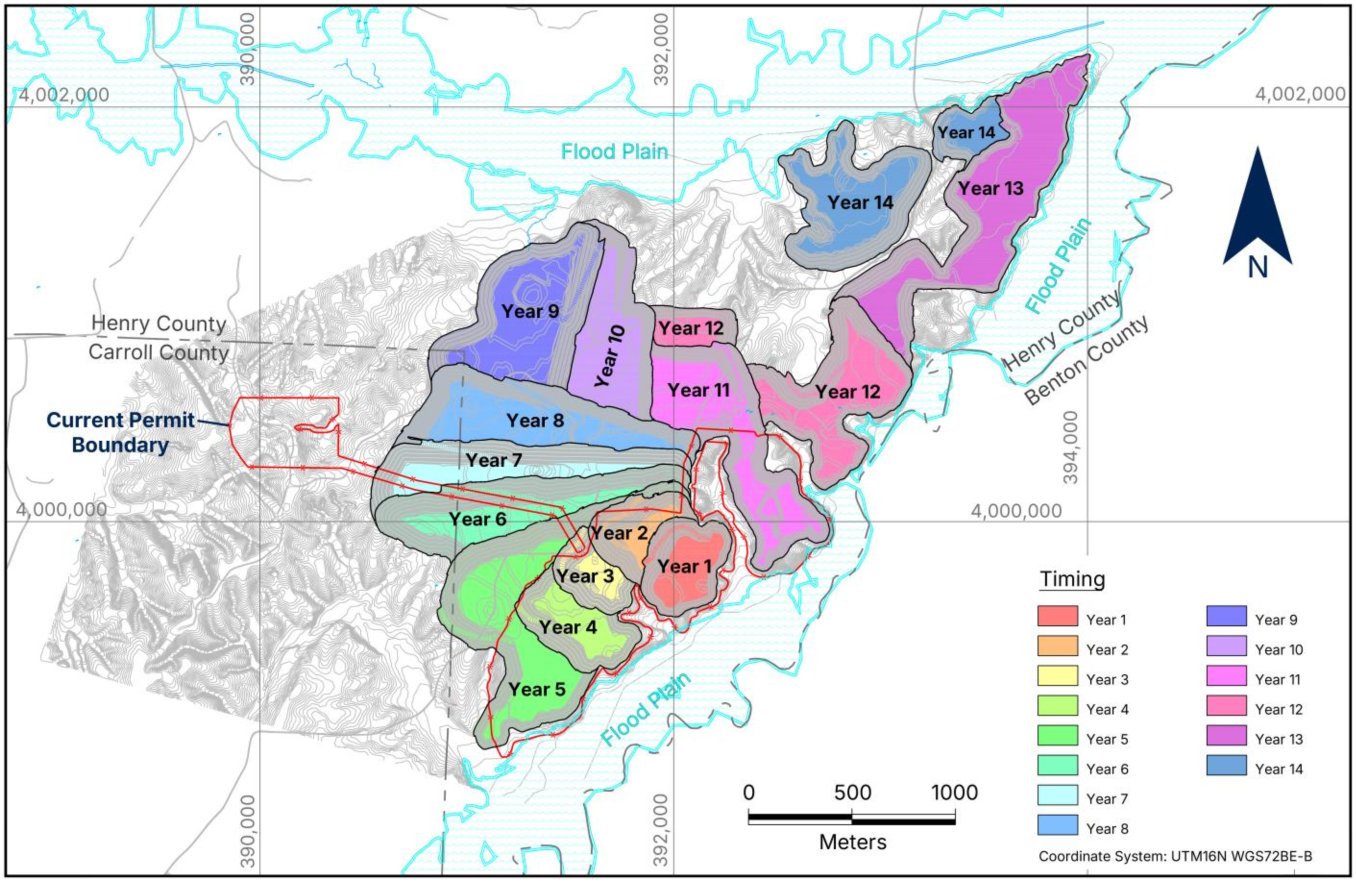
7.5 Production Schedule

Production scheduling was based on providing 400 tph rougher feed, roughly 3.5 Mt per year of ROM ore to the wet concentrator plant during Phase 1 (Years 1-4) and 1,200 tph rougher feed, roughly 10.0 Mt per year of ROM ore during Phase 2 (Years 5-14). The following parameters were used for production scheduling:

- concentrator ROM feed of 3.5 Mt to 10.0 Mt ROM ore per year
- Proved and Probable Ore Reserves only for all years of operations
- target output of 3.2% THM over the LOM
- minor amounts of sub-economic material that report in the design shells add planned dilution to the projected ROM material.

The proposed mine plan by year is shown in Figure 7-5 and in Table 7-2.

Figure 7-5: Titan Mine LOM Production Timing Map



Note: Figure prepared by MM&A, 2026.
Outer boundaries of the pits denote the designed finalized outline of the mine.

Results of the detailed mine schedule for the Titan project yielded 117 Mt of ROM ore with 3.2% THM over the 14-year mine life (see Figure 7-6). Production scheduling was based on providing 400 tph rougher feed, roughly 3.5 Mt per year of ROM ore to the WCP during Phase 1 (Years 1-4) and 1,200 tph rougher feed, roughly 10.0 Mt per year of ROM ore during Phase 2 (Years 5-14) and includes Proved and Probable Ore Reserves only for all years of operations. The Ore Reserve estimate and production target is approximately 117 million ROM tonnes over the 14-year mine period at a THM of 3.2 percent. Approximately 93.3 million tonnes or 80% of the Ore Reserves and production target estimates are Proved, while 23.7 million tonnes or 20% of the Ore Reserves and production target estimates are Probable. All Ore Reserves were converted from Measured and Indicated Mineral Resources. Inferred Mineral Resources were treated as waste.

Figure 7-6: Annual Ore Production Tonnes and THM%

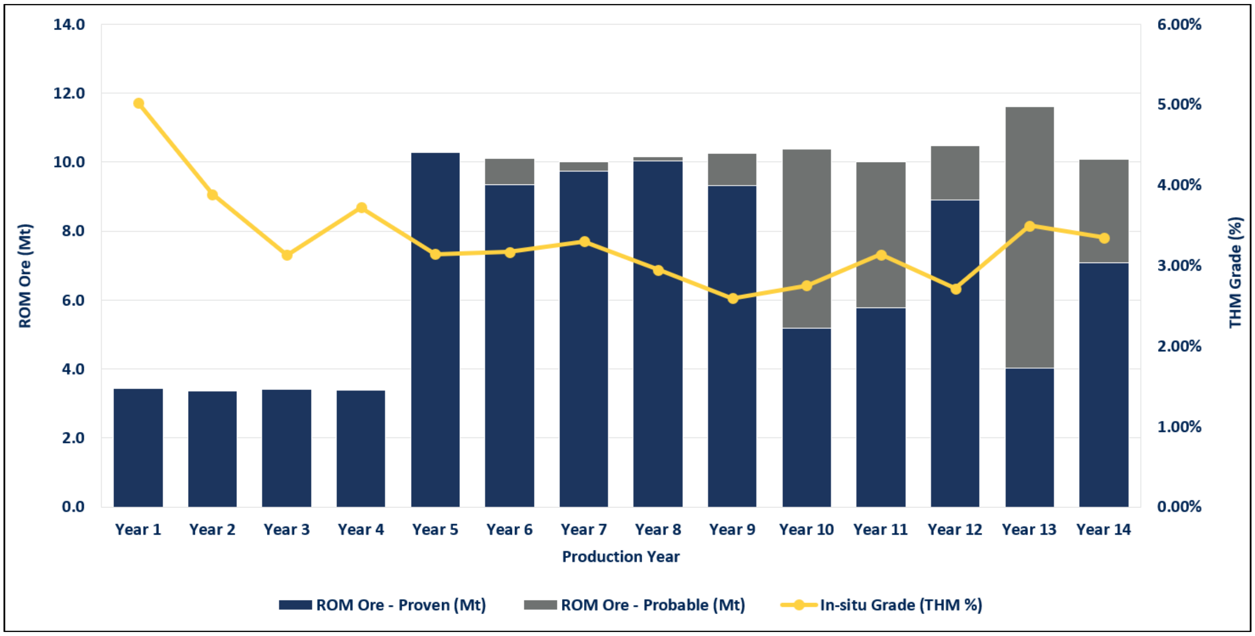


Table 7-2: LOM Production Schedule

Period	Location	Tonnage Breakout				Volume Breakout				Ore Breakout		
		Total Weight (Mt)	Total Ore Weight (Mt)	Total Waste Weight (Mt)	Stripping Ratio by Weight	Total Volume (Millon m³)	Total Ore Volume (Millon m³)	Total Waste Volume (Millon m³)	Tailings Volume from Mineral (Millon m³)	UM Proven & Probable (Mt)	LM Proven & Probable (Mt)	Total Proven & Probable Ore Mineral (Mt)
Year01	Southeast	6.25	3.43	2.82	0.82	3.92	2.19	1.74	2.08	0.27	3.16	3.43
Year02	Southeast	6.26	3.37	2.89	0.86	3.91	2.15	1.77	2.06	1.51	1.86	3.37
Year03	Southeast	5.48	3.42	2.06	0.60	3.44	2.18	1.26	2.11	2.13	1.29	3.42
Year04	Southeast	8.31	3.40	4.91	1.45	5.23	2.16	3.07	2.08	0.90	2.49	3.40
Year05	Southeast	25.31	10.28	15.02	1.46	15.97	6.55	9.42	6.34	2.51	7.77	10.28
Year06	Southwest	20.02	10.11	9.91	0.98	12.61	6.44	6.17	6.23	5.44	4.67	10.11
Year07	Southwest	19.08	10.02	9.06	0.90	12.04	6.38	5.65	6.17	4.98	5.04	10.02
Year08	Southwest	21.09	10.16	10.93	1.08	13.31	6.47	6.83	6.28	3.96	6.21	10.16
Year09	Central	18.84	10.25	8.60	0.84	11.90	6.53	5.37	6.36	1.78	8.47	10.25
Year10	Central	18.27	10.39	7.88	0.76	11.54	6.62	4.93	6.43	0.98	9.41	10.39
Year11	Central	17.92	10.01	7.91	0.79	11.21	6.37	4.84	6.17	0.69	9.31	10.01
Year12	East	15.07	10.49	4.58	0.44	9.45	6.68	2.77	6.50	0.48	10.01	10.49
Year13	Northeast	17.18	11.62	5.56	0.48	10.76	7.40	3.36	7.14	0.39	11.23	11.62
Year14	Northeast	13.52	10.09	3.44	0.34	8.50	6.42	2.08	6.21	0.95	9.14	10.09
Totals:		**212.60**	**117.03**	**95.58**	**0.84**	**133.79**	**74.54**	**59.25**	**72.18**	**26.98**	**90.05**	**117.03**

Note: UM = Upper McNairy.
LM = Lower McNairy

8 Mineral Processing and Metallurgical Testing

8.1 Overview

Two testwork programs were conducted within the Mineral Resource estimate area, one in 2021 and the second in 2023. All testwork was completed on behalf of IperionX.

Testwork was completed by, or under the supervision of, MT. The company is a reputable testing organization with significant experience in mineral sands flowsheet development, with laboratories located in Florida, US, and in Queensland, Australia. The laboratories are ISO 9001, 45001 and 14001 accredited. MT is independent of IperionX. A portion of the testwork was completed at IperionX's Camden mineral demonstration facility, under the supervision of MT personnel. Neither facility is accredited for metallurgical testwork procedures; this is routine for metallurgical testing facilities as there is currently no organization that certifies laboratories specifically for metallurgical testwork.

Assays were conducted by SGS Lakefield, and Bureau Veritas in Perth, Australia, using X-ray fluorescence (XRF), laser ablation/inductively-couple plasma mass spectrometry (ICP–M*S*) and QEMSCAN analytical methods. Bureau Veritas is independent of IperionX and holds ISO 17025 accreditations for selected analytical techniques.

8.2 2021 Metallurgical Test Results

Three bulk samples were processed by MT through pilot equipment designed to emulate a full-scale feed preparation plant, wet concentrator plant, monazite flotation/concentrate upgrade plant and a mineral separation plant (mineral separation plant).

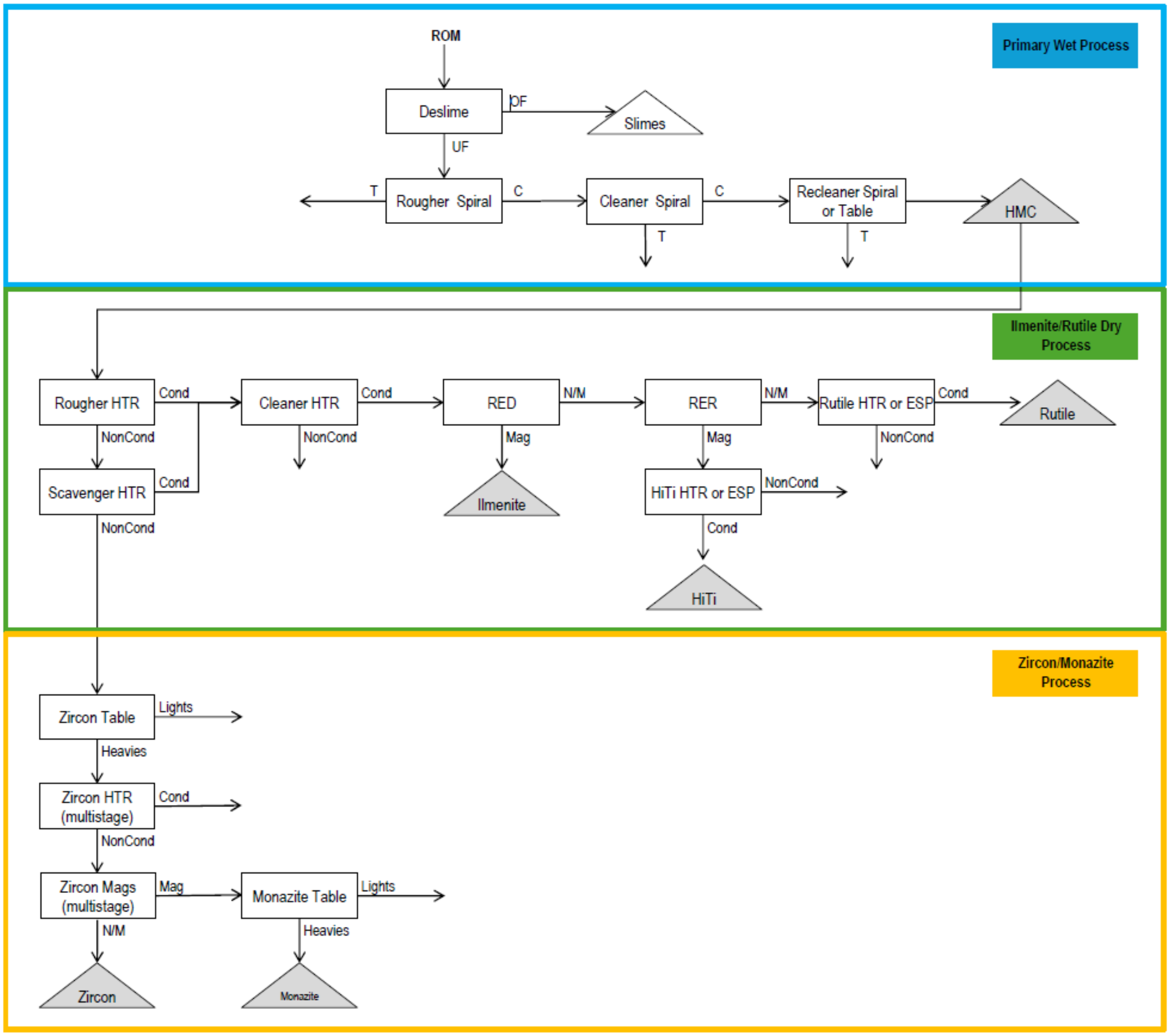
The samples were taken from drill holes 20-SWW-004 (B004), 21-SBF-047 (B047), and 20-SWW-014 (B014). The B004 and B047 samples were sourced from the Lower McNairy Formation. B014 was sourced from the Upper McNairy Formation. Mineralization in the Upper McNairy Formation is significantly coarser than mineralization in the Lower McNairy Formation. The approximate mass of each sample was:

- B004: approximately 512 kg of sample
- B047: approximately 496 kg of sample
- B014: approximately 483 kg of sample.

Testwork demonstrated that the Upper and Lower McNairy Formation mineralized zones could be separated using processing stages common to most mineral sands operations.

The 2021 metallurgical testwork block flow diagram is shown in Figure 8-1.

Figure 8-1: 2021 Metallurgical Testwork Block Flow Diagram



Note: Figure prepared by MT, 2026.

8.2.1 Sample Preparation and Deslime Circuit

Samples B004 and B047 were fluidized in a drum before being pumped via submersible pump to a deslime circuit. The material was then pumped to a 100-millimeter (mm) hydrocyclone fitted with a 20-mm apex and 35-mm vortex finder. Based on visual observation during closed loop testing, this combination resulted in the most reliable performance with minimal loss of +45 micron solids to the overflow stream as determined by test sieving at 325 mesh. Timed samples were collected, consolidated, dried, weighed, and submitted for assay. The deslime circuit was then converted to open circuit operation, and the entire bulk sample was processed.

Sample B014 was processed using conventional preparation equipment, including a feed belt and rotary trommel fitted with a 2-mm screen. The 20-mm apex and 35-mm vortex finder combination were used for sample B014. After identifying the appropriate operating conditions, the deslime circuit was converted to open circuit, and the entire bulk sample was processed.

The preparation and deslime testwork demonstrated that:

- Both the Lower McNairy Formation (B004 and B047) and Upper McNairy Formation (B014) samples contained elevated slimes, primarily highly cohesive clays.
- The deslime process liberated clays and ultra-fines from the mineralization. All three samples showed reduction in -45-micron content when comparing the analysis to the deslime underflow.
- The deslime process resulted in a modest increase in titanium dioxide (TiO_2)/zircon dioxide (ZrO_2) grade for samples B047 and B014. Sample B004 saw a minor increase in ZrO_2 grade and a minor decrease in TiO_2 grade.

8.2.2 Wet Process Circuit

After desliming, each sample was subjected to release curve testing and bulk processing through the general flowsheet. Each stage of spiral testing followed the same general process: material was pumped over the spiral on the test rig in a closed-circuit loop at a desired flow rate and pulp density. Multiple tests were conducted at a similar mass flow rate and pulp density while varying splitter positions to generate sets of product samples. These samples were then assayed giving rise to a suite of grade and recovery data points, which were used to generate spiral release curves for each combination of mineralization and operating conditions. After release curve testing was completed for each stage, the entirety of each feed material was processed at the estimated best spiral operating conditions, based on experience with similar mineralization, as well as in-process observations. Care was taken to ensure the addition rate of new feed material matched the product withdrawal rate.

The wet process circuit testwork demonstrated that:

- After desliming, both the Lower and Upper McNairy Formation samples were amenable to conventional wet gravity separation via spiral separators.
- The MG12 spiral is superior to the FM1 spiral for rougher stage processing of Lower McNairy Formation mineralization. The MG12 showed the highest separation efficiency for both samples at higher capacity than is achievable on an FM1 spiral.
- The MG12 spiral is better for rougher stage processing of Upper McNairy Formation mineralization.
- The MG12 spiral performed well in the cleaner stage for all samples.
- Additional upgrade stages will be required to reach generally acceptable heavy mineral concentrate grades on finer Lower McNairy Formation mineralization.

8.2.3 Dry Process Circuit

Heavy mineral concentrate generated from the B004, B047, and B014 samples was used for dry process evaluation.

After attrition, scrubbing, and drying, each heavy mineral concentrate sample was subjected to dry processing through the flowsheet. The B004 and B047 samples were processed using the same conventional flowsheet, however additional separation stages were added to the B014 flowsheet due to elevated aluminosilicate mineral content.

The dry process circuit testwork demonstrated that the Lower McNairy and Upper McNairy Formation samples were amenable to conventional dry physical separation via:

- screening
- MT Carrara HTR400 high-tension roll separator
- MT Carrara electrostatic plate separator
- MT Readings rare earth drum magnetic separator
- MT Readings rare earth roll magnetic separator
- MT Readings induced roll magnetic separator

The following conclusions were drawn from the 2021 testwork:

- Both the Lower and Upper McNairy Formation mineralization will require thorough desliming to properly prepare the ore for wet gravity processing.
- Both the Lower and Upper McNairy Formation mineralization types are amendable to conventional wet gravity processing via spiral separators. The MG12 is the better spiral model for rougher and cleaner duty.
- Ilmenite, rutile, zircon, and monazite concentrate products can be produced from both Lower and Upper McNairy Formation mineralization.
- Further testing is required to outline wet processing flowsheets and equipment configurations to maximize recovery, particularly of the fine Lower McNairy Formation mineralization.
- The finer Lower McNairy Formation mineralization poses a challenge in dry processing. Additional processing stages will likely be required to improve ilmenite, rutile, and zircon recovery.

8.3 2023 Metallurgical Test Results

MT completed additional metallurgical testwork in early 2023. The testwork was based on one bulk sample and three variability samples.

The main bulk sample of 12.7 tonnes (t) was composed of approximately 30% Upper McNairy and 70% Lower McNairy Formation mineralization, representing the average material that might be mined in the initial years of any future mining operations. Samples used to make up the bulk sample were taken from drill holes 20-SWW-014, 20-SDW-020, 20-SDW-021, 21-SGH-034,21-SGH-035, 21-SGH-037, 21-SDW-054,21-SDS-055, 21-SWW-069, 21-SSP-083, 21-SGH-084, and 21-SGH-086.

Three bulk composite samples ranging from 2 to 3 t were prepared for the variability testwork, taken from drill holes 20-STV-008, 20-STS-016, and 21-SDS-058. The composites consisted of different ratios of Upper McNairy and Lower McNairy Formation material, with the mass percentage of Upper McNairy Formation in the three composites being 0%, 37.5% and 50%. The objective of the variability testwork was to quantitatively assess potential product quality with qualitative estimates of recovery of three composite samples that reflected different mineralized domains.

8.3.1 Feed Preparation

The feed preparation process was conducted at IperionX's mineral demonstration facility near Camden with the supervision of MT personnel.

The 10 t (dry) of raw test sample material was packed into 208-liter (55-gallon) drums. The contents of the drums were washed through a 0.635 cm (¼ inch) punch plate into a mixing tank. Any oversize from the punch plate was collected and dried.

Sufficient material and water were added until a cyclone feed pump discharge density of 15% to 20% (estimated using a Marcy scale with an approximate 2.7 specific gravity) was achieved in closed circuit. Upon achieving steady state, the cyclone overflow was diverted to a settling pond in which effluent overflowed into a reservoir. The circuit was continually supplied with make-up water to maintain the level of the tank. Once the recirculating material was sufficiently deslimed, the cyclone underflow was diverted to the screw classifier before being discharged into new 208 litre (55-gallon) drums.

This semi-batch operation was repeated until all the feed material was processed through the feed preparation circuit. Frequent sub-samples of the feed and cyclone overflow were taken throughout the process to form representative composites for further characterisation and analysis.

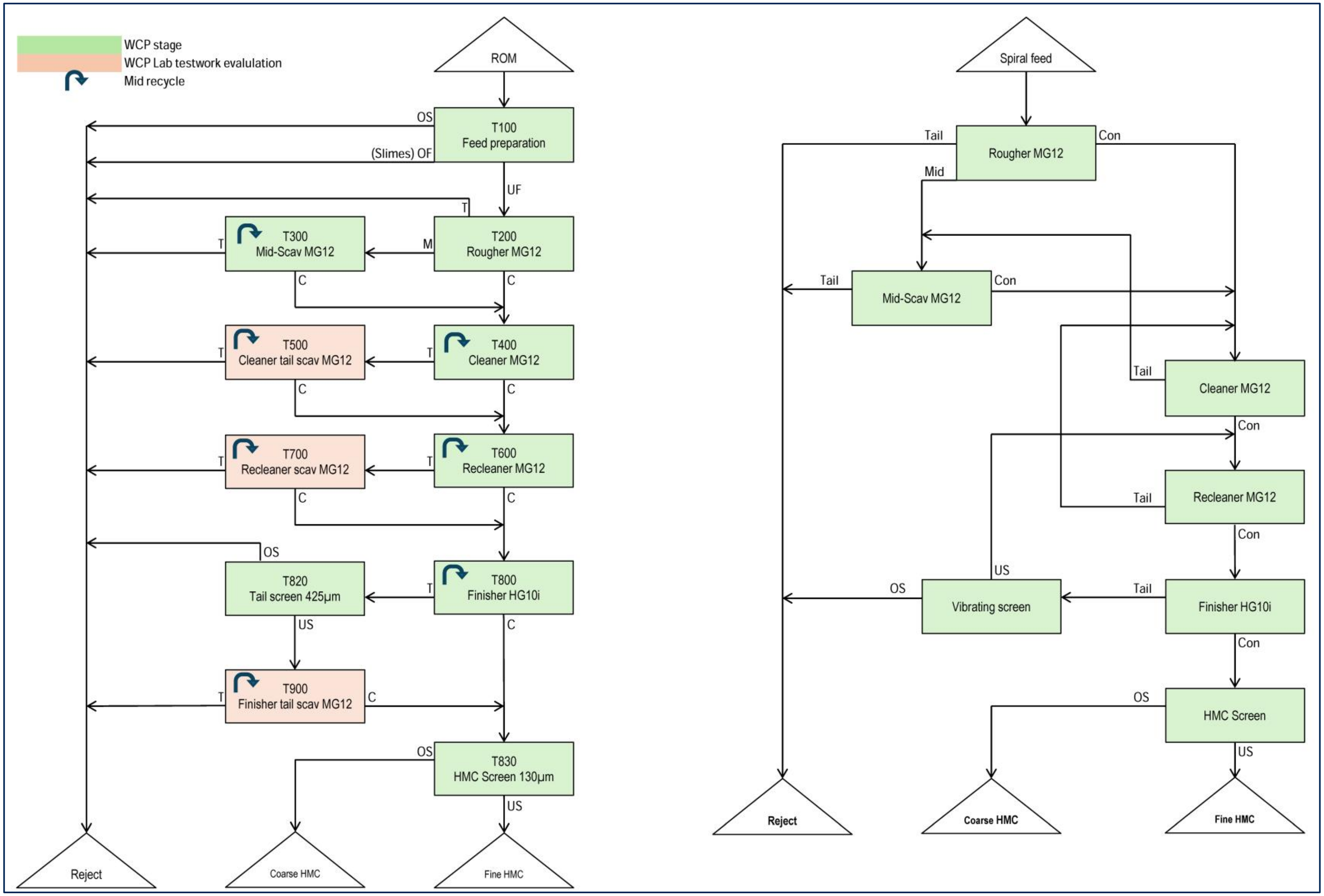
8.3.2 Wet Gravity Separation

The wet gravity processing up to the recleaner stage was completed at MT's Florida laboratory. The material received was processed through a continuous trommel/screen and spiral circuit. The trommel discharged any oversize material >2 mm. The undersize from the trommel was pumped to a distributor which fed into a single-stack spiral circuit.

The bulk products up to the recleaner stage were freighted to MT's metallurgical testing facility in Queensland, Australia, where subsequent wet gravity processing was completed. Damp material was conveyed into a spiral rig sump which was pumped into a single-stack spiral circuit.

The block flow diagram shown in Figure 8-2 was used for feed preparation and wet gravity processing.

Figure 8-2: 2023 Feed Preparation and Wet Gravity Processing Testwork Block Flow Diagram



Note: Figure prepared by MT, 2026.

This testwork incorporated a total of eight stages, three of which were laboratory evaluations to emulate how particular recycle streams would perform in a plant scenario. For each of the spiral stages, except the rougher, the middlings streams were recirculated with the feed to maximise recovery of heavy minerals.

Prior to bulk processing of the mineralization through each spiral stage, several lots of release tests were conducted in closed circuit. The results from release tests are used in MT's proprietary modelling software to provide stage grade/recovery models and incorporate them into overall mass balances.

Two mass loadings of 1.5 and 2.0 tonnes per hour (tph) solids per start were selected for release tests for each of the main spiral stages, with a pulp density target range of 30-40% weight/weight (w/w) solids. For the bulk processing, a 1.5-tph per start was selected as the operating loading to increase mineral retention time on the spiral and allow for better separation.

8.3.3 Rare Earth Mineral Flotation and Gravity Upgrade

The main objective of the flotation stage was to extract all available rare earth minerals from a fine heavy mineral concentrate stream, leaving a heavy mineral concentrate (flotation sinks) barren of monazite.

The following steps outline the procedure for flotation testwork for both sighter and bulk batch tests:

- pretreatment
- depressant addition
- pH modification
- collector addition
- water level adjustment
- product collection

Successive iterations of collector addition, conditioning, frothing and recovery were conducted until either no further mineral was floating, or non-selective minerals started to float. The number of iterations and collector quantities varied from test to test.

Post flotation, both concentrate and tailings were washed and attritioned to remove residual chemical reagents prior to wet shaking table testwork. Samples were dried, weighed, and sub-samples extracted for analysis.

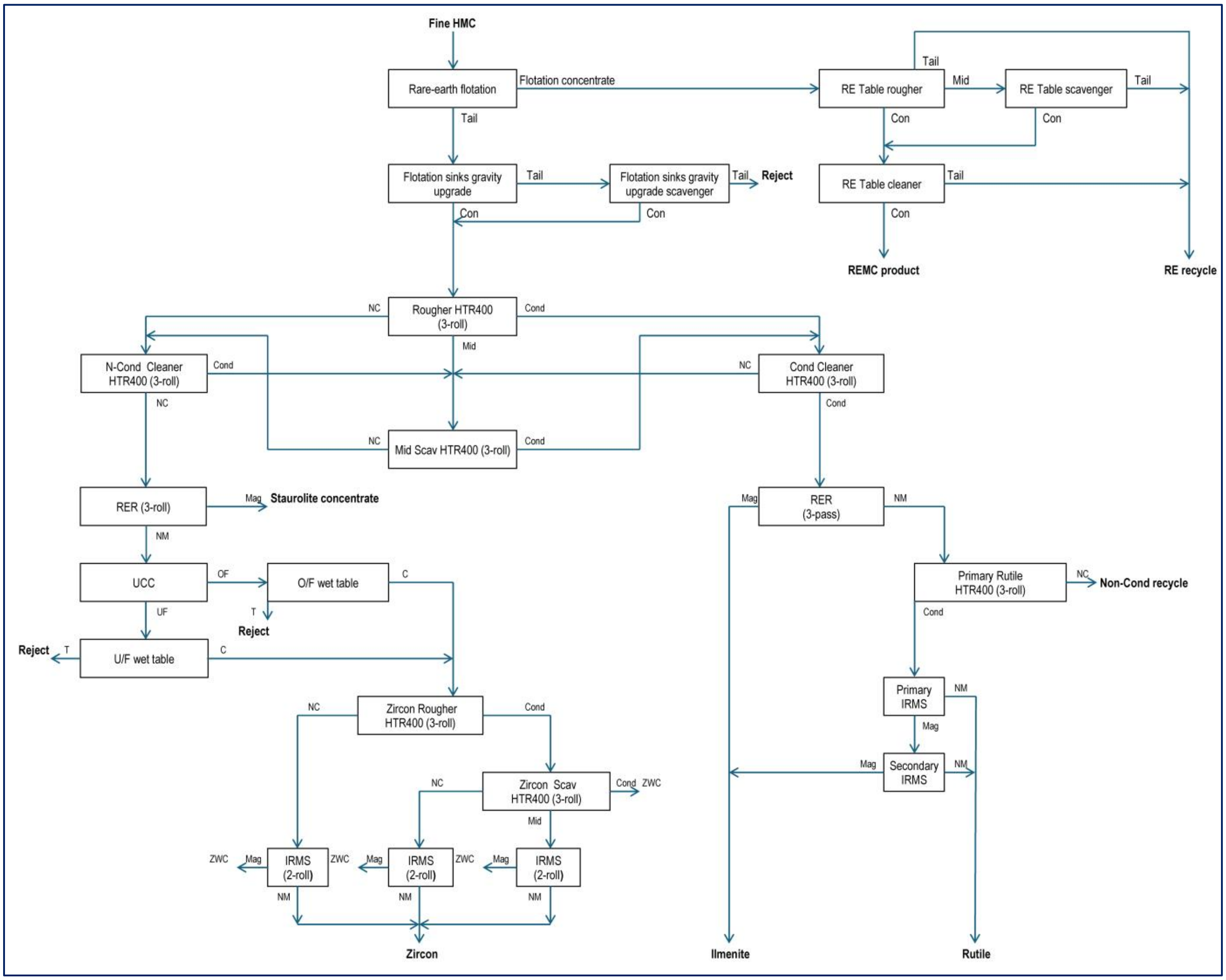
8.3.4 Dry Mineral Separation

The coarse heavy mineral concentrate and fine heavy mineral concentrate (post rare earth flotation) products were dried and processed separately through further stages of dry and wet mineral separation.

8.3.4.1 Fine Heavy Mineral Concentrate Mineral Separation Circuit

The fine heavy mineral concentrate mineral separation circuit is shown in the testwork block flow diagram in Figure 8-3.

Figure 8-3: 2023 Fine Mineral Separation Testwork Block Flow Diagram



Note: Figure prepared by MT, 2026.

8.3.4.2 Fine Primary Dry Circuit

A conventional primary high-tension roll separator circuit was used, involving rougher, non-conductor cleaner, conductor cleaner and scavenger stages.

A Carrara HT400 (400 mm diameter roll) was used for high-tension roll stages in the primary dry circuit, as well as all other circuits. The laboratory unit is a single roll unit, but fractions were re-passed to simulate a three-roll production unit.

8.3.4.3 Fine Non-Conductor Circuit

The non-conductors from the primary dry circuit were processed through a stage of dry magnetic separation to separate out magnetic silicates, such as staurolite.

Previous testwork showed a high degree of separation was achieved using a rare earth roll magnetic separator on the non-conductor fraction. A single roll rare earth roll magnetic separator unit was used with fractions re-passed to simulate a three-roll production unit.

The non-magnetic fraction from the rare earth roll magnetic separator was fed to the zircon wet circuit for the removal of quartz and aluminum silicates. An (up current classifier was tested for the initial stage of separation as it was hoped an underflow could be produced that would be sufficiently low in silicon dioxide (SiO_2) and aluminum oxide (Al_2O_3) to not require further gravity upgrading, thus reducing the size of the wet circuit.

The up current classifier underflow and overflow fractions were each processed separately through a wet shaking table circuit.

The dried zircon concentrate was processed through a two-stage (rougher-scavenger) high-tension roll separator circuit to reject residual conductive material, using similar settings to those used in the primary dry circuit.

8.3.4.4 Fine Conductor Circuit

The conductors from the primary dry circuit were processed through a dry conductor circuit to produce ilmenite/leucoxene and rutile products.

Previous scoping testwork on similar Camden feed material showed the rare earth roll magnetic separator was effective at fractionation of titanium minerals, so a single roll rare earth roll magnetic separator unit was used in the first stage of this circuit with fractions re-passed to simulate a three-roll production unit.

The non-magnetic fraction from the rare earth roll magnetic separator was processed through a single stage high-tension roll separator, using similar settings to those used in the primary dry circuit, to extract non-conductive impurities from rutile.

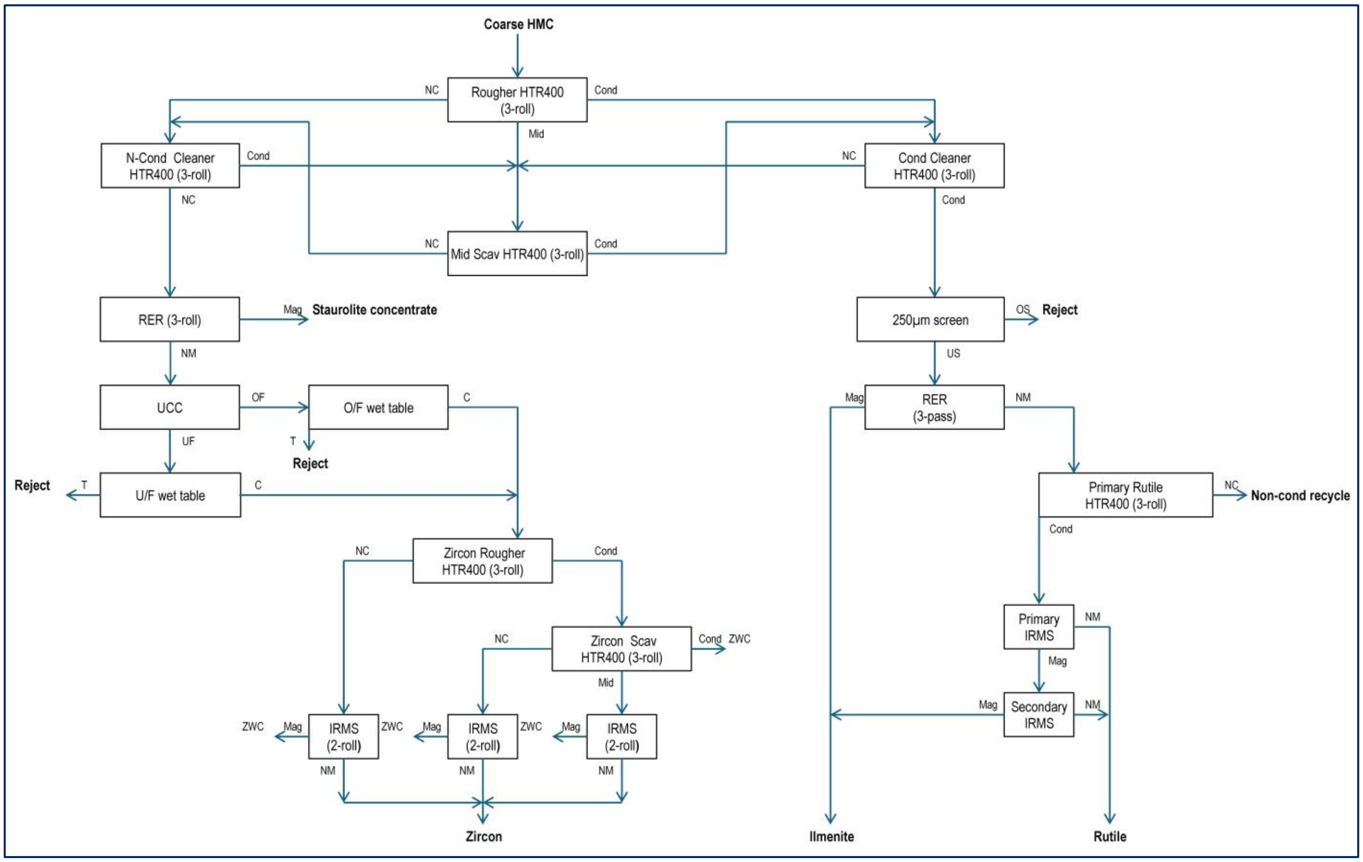
The combined high-tension roll separator conductors were processed through two stages of magnetic separation, using an induced roll magnetic separator, to remove any magnetic impurities from the rutile product.

The combined rare earth roll magnetic separator and induced roll magnetic separator magnetic streams formed the final ilmenite/leucoxene product.

8.3.5 Coarse Heavy Mineral Concentrate Mineral Separation Circuit

The coarse heavy mineral concentrate mineral separation circuit is shown in the testwork block flow diagram in Figure 8-4.

Figure 8-4: Coarse Mineral Separation Testwork Block Flow Diagram



Note: Figure prepared by MT, 2026.

The coarse heavy mineral concentrate had a total heavy minerals content of approximately 89%. At the time of the testwork, additional upgrading prior to the primary dry circuit was deemed unnecessary.

An identical testwork procedure to that used for the fine heavy mineral concentrate was used for the coarse heavy mineral concentrate, with the exception of an additional screen being used at the head of the conductor circuit to remove coarse (>0.25 mm) non-conductor particles (typically contained in a primary conductor produced from coarser feed) and prevent them from misreporting to conductor products. The operating conditions were adjusted as necessary through each circuit/stage to accommodate for the coarser feed and different mineralogy.

8.3.6 Product Grades

The final products from the 2023 testwork were:

> ilmenite – at a grade of 64.9% TiO_2

> rutile – at a grade of 91.2% TiO_2
> zircon – at a grade of 66.8% ZrO_2
> heavy rare earth concentrate, HREE-dominant by value (HREC) – at a grade of 59.1% total rare earth oxides (TREO).

The product grades generally align with 2021 scoping testwork results and were considered to be saleable products.

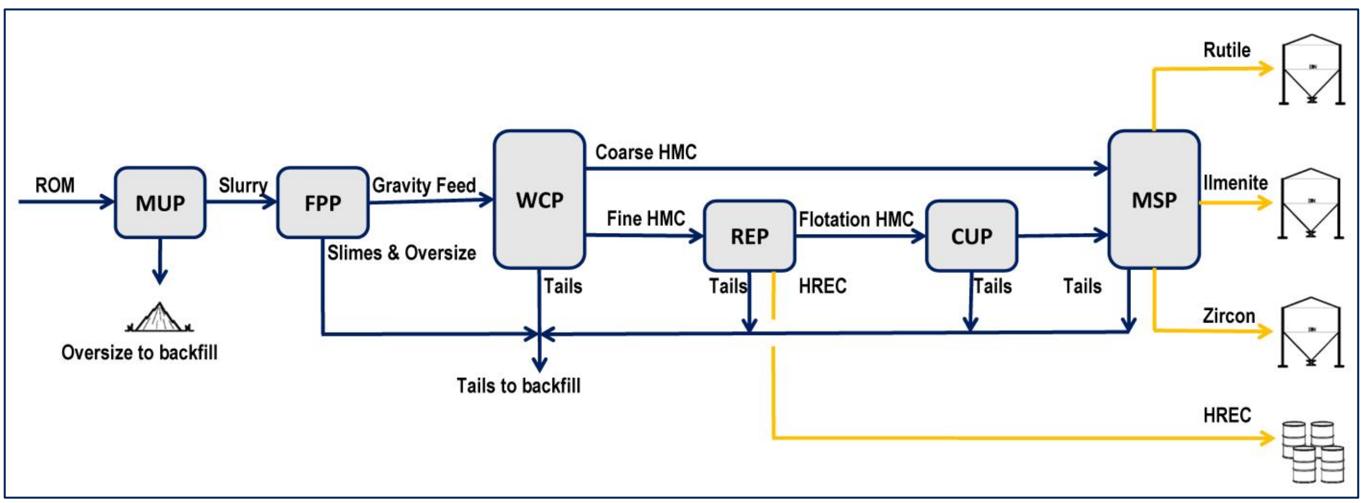
8.4 Preliminary Flowsheet Development

The testwork showed that high-quality ilmenite, rutile and zircon products could be achieved using conventional separation equipment through a typical wet concentrator plant and fine and coarse mineral separation plant flowsheet. A HREC product was created at a high monazite recovery using flotation and gravity separation processing.

Flowsheet development was conducted based on the main sample testwork. The variability testwork mirrored the flowsheet of the main sample where practical. Despite the variance in the flowsheet procedure, mineralogy and feed grades, the variability testwork showed that high-grade ilmenite, rutile and zircon products could be achieved using the process flowsheet developed during testing.

The process flowsheet proposed from testwork is shown in Figure 8-5.

Figure 8-5: Proposed Flowsheet Based on Metallurgical Testwork



Note: ROM: Run-of-Mine; feed preparation plant: Feed Preparation Plant; wet concentrator plant: Wet Concentration Plant; heavy mineral concentrate: Heavy Mineral Concentrate; REMP: Rare Earth Mineral Plant; REMC: Rare Earth Mineral Concentrate; concentrate upgrade plant: Concentrate Upgrade Plant; mineral separation plant: Mineral Separation Plant

This proposed process flowsheet would include the following conventional process steps:

> Mining unit plant:
  - Run-of-mine (ROM) material will be delivered for primary deagglomeration through scrubbing and removal of large oversize to allow long-distance pumping.

> Feed preparation plant:
  - The sand fraction containing the potentially valuable minerals (nominal -2.0+0.045 mm) will be separated from slimes (-45 micron) and oversize waste (+2.0 mm).

> Wet concentrator plant:
  - The potentially valuable minerals contained in the sand fraction would be recovered in a wet concentration plant using a conventional multi-stage gravity separation circuit. Intermediate size classification would be included to reject other oversize waste.
  - The recovered potentially valuable minerals would constitute the THM concentrate, which would be screened at a nominal 130 micron to prepare coarse and fine heavy mineral concentrate streams.
  - Gangue minerals would be collected with oversize and slimes from the feed preparation plant and then disposed as tailings backfilling the mining area.

> Rare earth mineral plant:
  - The fine heavy mineral concentrate would be subjected to mechanical attrition and conditioned with specific reagents in readiness for processing by froth flotation and additional gravity concentration.
  - Scrubbing stages would be included to remove residual reagents from the flotation circuit outputs.
  - Products would be a HREC and a (post rare earth flotation) fine heavy mineral concentrate.

> Concentrate upgrade plant:
  - The fine flotation heavy mineral concentrate would be processed by wet gravity separation to produce a zircon- and titanium-rich stream to feed the mineral separation plant.

> Mineral separation plant:
  - The coarse and (post rare earth flotation) fine HMCs would be fractionated by multiple dry electrostatic and magnetic separation stages to produce final ilmenite and rutile products from conductors.
  - The non-conductors would be processed by wet gravity then further dry electrostatic and magnetic separations to produce a final zircon product.

8.5 Metallurgical Recovery Forecasts

Circuit simulation models were generated for the wet concentrator plant, the rare earth plant (rare earth plant) and mineral separation plant flowsheets to evaluate recycle streams and resultant mass flows. The expected future performance of the processing plant was based on metallurgical testwork results and benchmarked against other deposits that have similar characteristics to the Titan deposit.

The simulated recoveries for in-size sample (+45-micron material) from ROM to products are: rare earth mineral recovery of 82.6%; ilmenite recovery of 79.7%; rutile recovery of 66.9%; zircon recovery of 77.6%.

8.6 Metallurgical Variability

The three variability samples used in the 2023 metallurgical testwork were composite samples representative of the different types and styles of mineralization within the Titan deposit. The variability bulk samples included coarse- and fine-grained mineralization as well as areas of differing mineral assemblage.

8.7 Deleterious Elements

Deleterious elements such as iron, magnesium, uranium, thorium, chromium, and vanadium are present at low levels and can negatively impact the marketability of heavy mineral sands products, especially uranium and thorium. High levels of these contaminants may reduce product quality, result in regulatory penalties, or require additional processing, which increases costs. Environmental considerations, particularly tailings management and the potential presence of radioactive or toxic elements, can add complexity and expenses due to stricter regulations, water management, and the need for site rehabilitation after mining operations.

9 Processing and Recovery Methods

Based on earlier flowsheet development testwork (see Section 8), MT worked closely with IperionX and their metallurgical consultant (McKeon Mining LLC) to develop a final process flowsheet and associated design criteria for the DFS processing plant design.

The proposed process and recovery methods outlined in the sections below were selected based on well-established and conventional approaches to processing mineral sands, including recovery of heavy mineral content using wet gravity separation equipment (such as spiral separators and up-current classifiers) followed by dry separation of titanium (ilmenite and rutile) and zircon minerals using electrostatic and magnetic separation equipment. With the increased focus on recovery of rare earth mineral content from mineral sand deposits, the use of flotation to extract these minerals (prior to dry mineral separation), and wet shaking tables to upgrade them, has become a more conventional approach and was selected for this flowsheet.

9.1 Process Plant Design

9.1.1 Design Decisions

At the commencement of the DFS, some key decisions were made by IperionX, which impacted on the DFS high-level process and plant design criteria, and which were considered in terms of flowsheet development. These decisions included:

- Design should be based on the rare earth plant being co-located with the mineral separation plant in the Benton Industrial Park area, rather than with the wet concentrator plant in the current mine permit area, which impacted plant design, particularly with respect to the transfer of products and tailings between the wet concentrator plant and rare earth plant.
- The concentrate upgrade plant (concentrate upgrade plant) should be incorporated into the backend of the wet concentrator plant circuit, rather than the backend of the rare earth plant circuit (as in the metallurgical testwork), and consist of a conventional up current classifier and overflow spirals circuit, reducing the amount of heavy mineral concentrate to be screened, dewatered and transported to the rare earth plant and reducing the complexity of the rare earth plant/mineral separation plant circuit.
- The design should be based on processing of a single wet concentrator plant heavy mineral concentrate product through the rare earth plant and mineral separation plant, rather than processing coarse heavy mineral concentrate through the mineral separation plant only and fine heavy mineral concentrate through the rare earth plant and mineral separation plant separately (as per the metallurgical testwork program).

Additional decisions were made by IperionX during the study regarding the proposed throughputs for the initial plant, and the subsequent plant expansion, with these decisions impacting flowsheet development:

> Generally, the initial plant throughput will be based on a wet concentrator plant rougher spirals feed of nominally 400 tph solids, with the expansion plant throughput being based on 800 tph solids to achieve a total nominal rate of 1,200 tph solids.

> However, the initial rare earth plant is to be designed to process heavy mineral concentrate from the wet concentrator plant at a rate equivalent to that produced from the full wet concentrator plant operating at 1,200 tph solids, with operating hours reduced during the initial plant operation, resulting in additional decoupling stockpiles and reclaim systems being required in the rare earth plant and mineral separation plant flowsheet/plant design.

> Design throughput to the initial mineral separation plant will be based on processing heavy mineral concentrate at a rate equivalent to that produced in the wet concentrator plant operating at a rougher spirals feed rate of nominally 400 tph solids and processing ROM feed material at a grade of 3.8% HM. The expansion mineral separation plant will have a design throughput based on processing heavy mineral concentrate at a rate equivalent to the difference between that produced in the wet concentrator plant operating at a rougher spirals feed rate of nominally 1,200 tph solids and processing ROM feed material at a grade of 3.4% HM, and the rate processed through the initial mineral separation plant.

> Two trade-off studies were also conducted on tailings dewatering and zircon product.

9.1.2 Tails Dewatering Trade-off Study

To meet the stability requirements for land restoration, the recommended moisture content for the combined slimes and sand tailings discharge was set at ≤16% (±2%) with a not to exceed moisture specified at 20% w/w. Evaluation of the available technology options concluded that the recommended configuration for the tailings system consists of the following equipment:

> Primary coarse tailings dewatering: dewatering cyclones

> Secondary coarse tailings dewatering: dewatering screens

> Primary slimes tailings dewatering: high density thickener

> Secondary slimes tailings dewatering: belt press

The dewatered coarse and slimes tailings will discharge directly onto a conveyor system for transport to the tailings deposition area. All dewatering equipment will be centrally located at the wet concentrator plant.

9.1.3 Zircon Trade-off Study

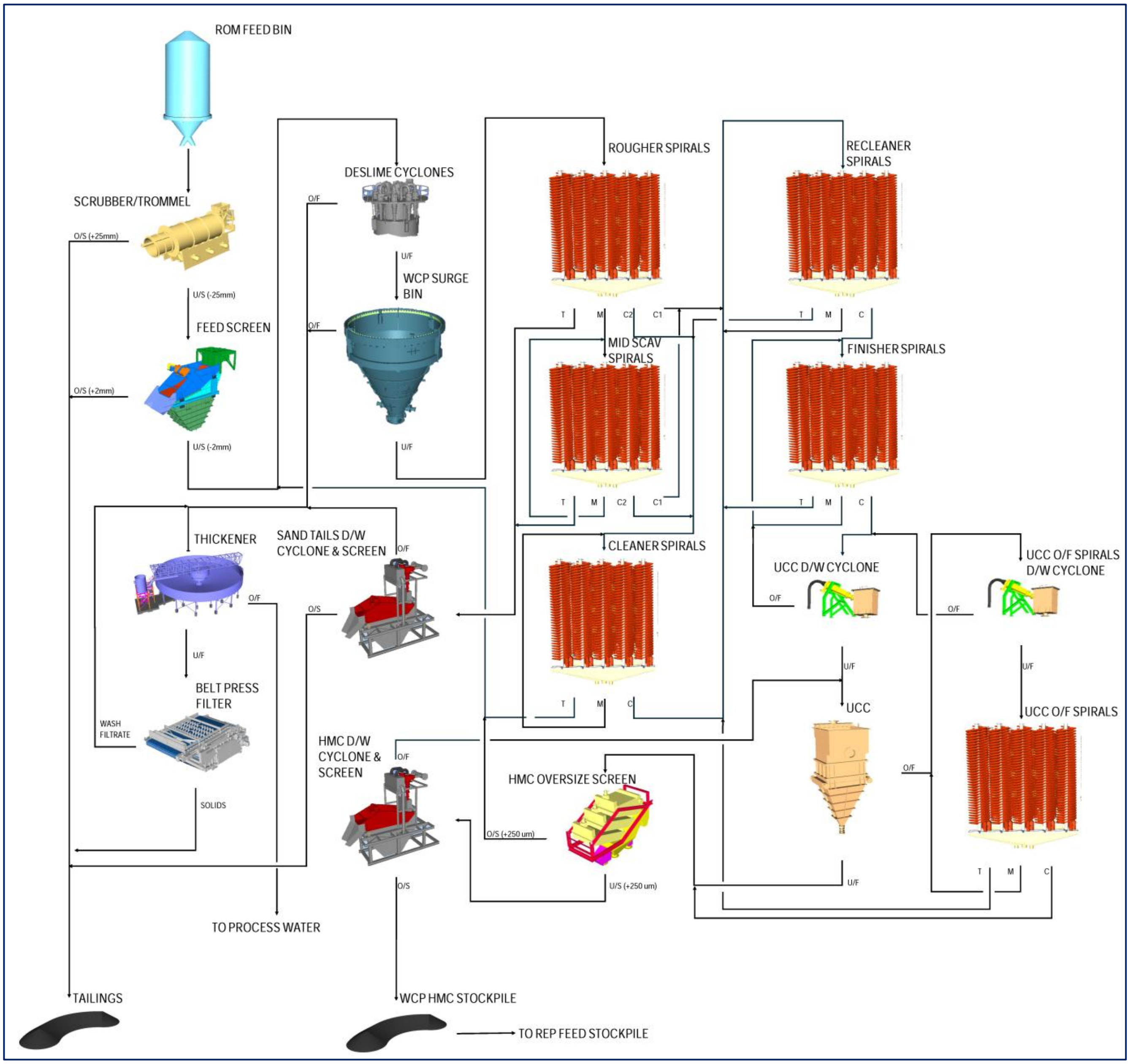
During the design process, a trade-off assessment of potential zircon product streams produced from the testwork was undertaken. The assessment focused on uranium and thorium concentrations in zircon products related to both processing considerations and regulatory compliance. While elevated uranium and thorium levels (approaching or exceeding 500 ppm) generally do not impede standard zircon processing or end-use applications, they carry significant regulatory implications. In North America, materials with combined uranium and thorium content above this threshold are classified as radioactive under transport regulations [49 CFR § 173.403], triggering stricter packaging, licensing, and handling requirements. As a result, even technically suitable zircon products may face marketability challenges to meet compliance thresholds. Several options were identified with varying levels of complexity, offering a balance of different costs, compliance, and marketability.

The outcome from this study was that the mineral separation plant primary dry circuit non-conductor stream would only be processed through a single stage of magnetic separation to produce a (non-magnetic) zircon concentrate product and a (magnetic) mineral separation plant rejects stream.

9.2 Process Flowsheet

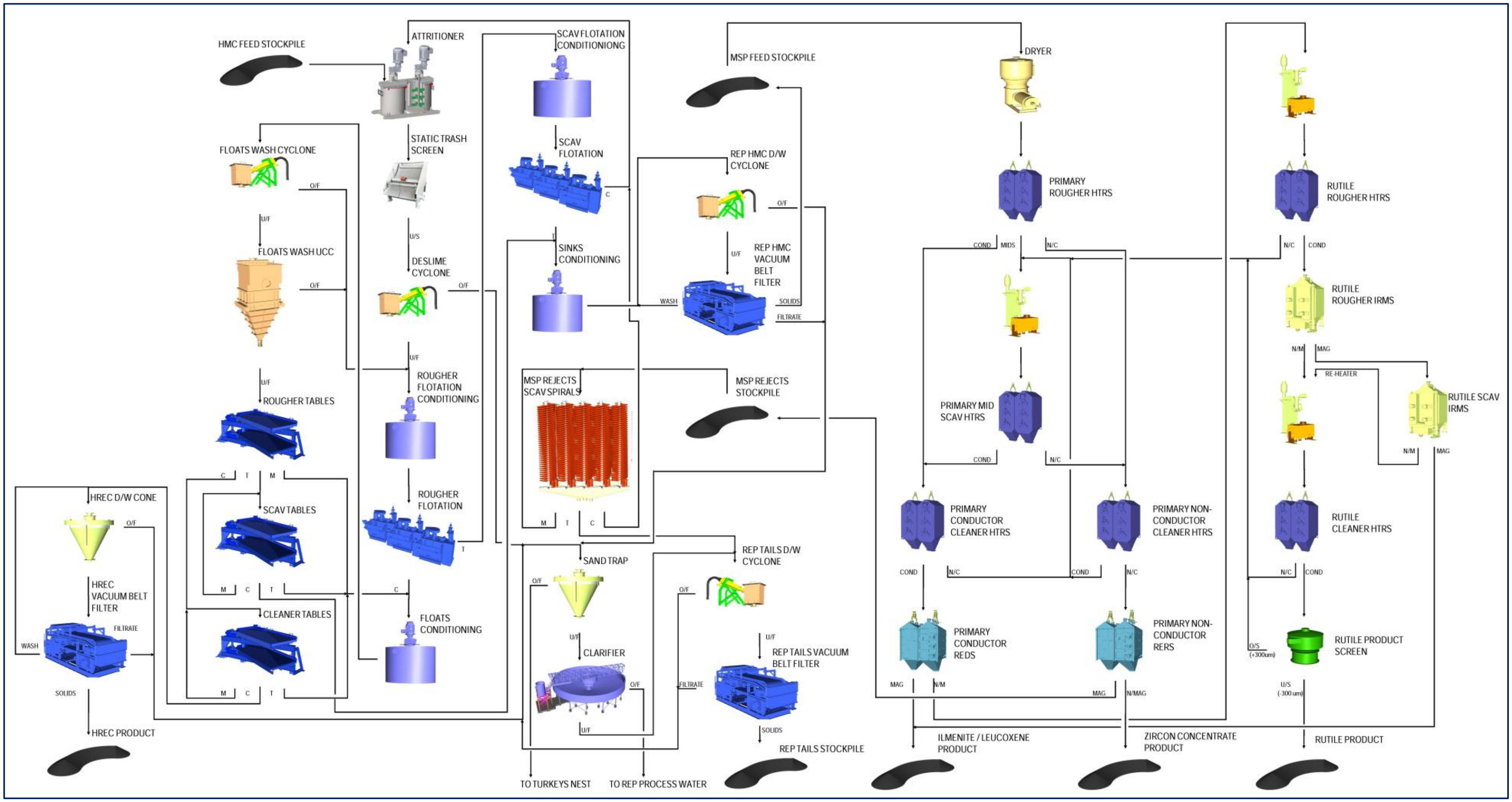
The DFS design flowsheet is depicted in the block flow diagrams shown in Figure 9-1 and Figure 9-2.

Figure 9-1: Block Flow Diagram
(feed preparation plant, tailings dewatering circuit , wet concentrator plant concentrate upgrade plant)



Note: Figure prepared by MT, 2026.

Figure 9-2: Block Flow Diagram (rare earth and mineral separation plants)



Note: Figure prepared by MT, 2026.

9.3 Design Criteria

Detailed process design criteria were developed as part of the DFS based on reference to testwork data and other available information and consultation with IperionX.

Key overall design criteria regarding the ROM feed include:

- ROM feed grade (in-size HM = heavy mineral content with particle size between 44-600 microns):
  - nominal (life of mine) 3.2%
  - high grade for initial mineral separation plant design 3.8%
  - high grade for expansion mineral separation plant design 3.4%
  - maximum grade 4.2% (with rate reduced to match heavy mineral concentrate production rate at 3.8% HM)
  - low grade 2.5%
- ROM feed (in-size HM) mineralogy:
  - 11.7% zircon
  - 9.8% rutile
  - 44.1% ilmenite
  - 1.6% rare earth minerals
- ROM feed oversize (>600 micron) content:
  - nominal 1.3%
  - maximum 2%
  - minimum 0.9%
- ROM feed slimes (<44 micron) content:
  - nominal 14.8%
  - maximum 26.9%
  - minimum 8.6%.

The DFS flowsheet was modelled to determine mass and water balances for design, as well as estimating grades and recoveries for (in-size) HM (through the feed preparation plant, wet concentrator plant, concentrate upgrade plant and tailings dewatering circuit), cerium dioxide (CeO_2) (through the feed preparation plant, wet concentrator plant, concentrate upgrade plant and rare earth plant) and titanium dioxide (TiO_2) and zirconium dioxide (ZrO_2) (through the feed preparation plant, wet concentrator plant, concentrate upgrade plant, rare earth plant and mineral separation plant).

The overall performance estimates were also made for the process plant being fed with ROM material containing nominally:

> 3.2% (in-size) heavy mineral (HM) (with 11.7% zircon, 9.8% rutile, 44.1% ilmenite and 1.6% rare earth elements)
> 1.3% oversize (>600 microns)
> 14.8% slimes (<44 microns)

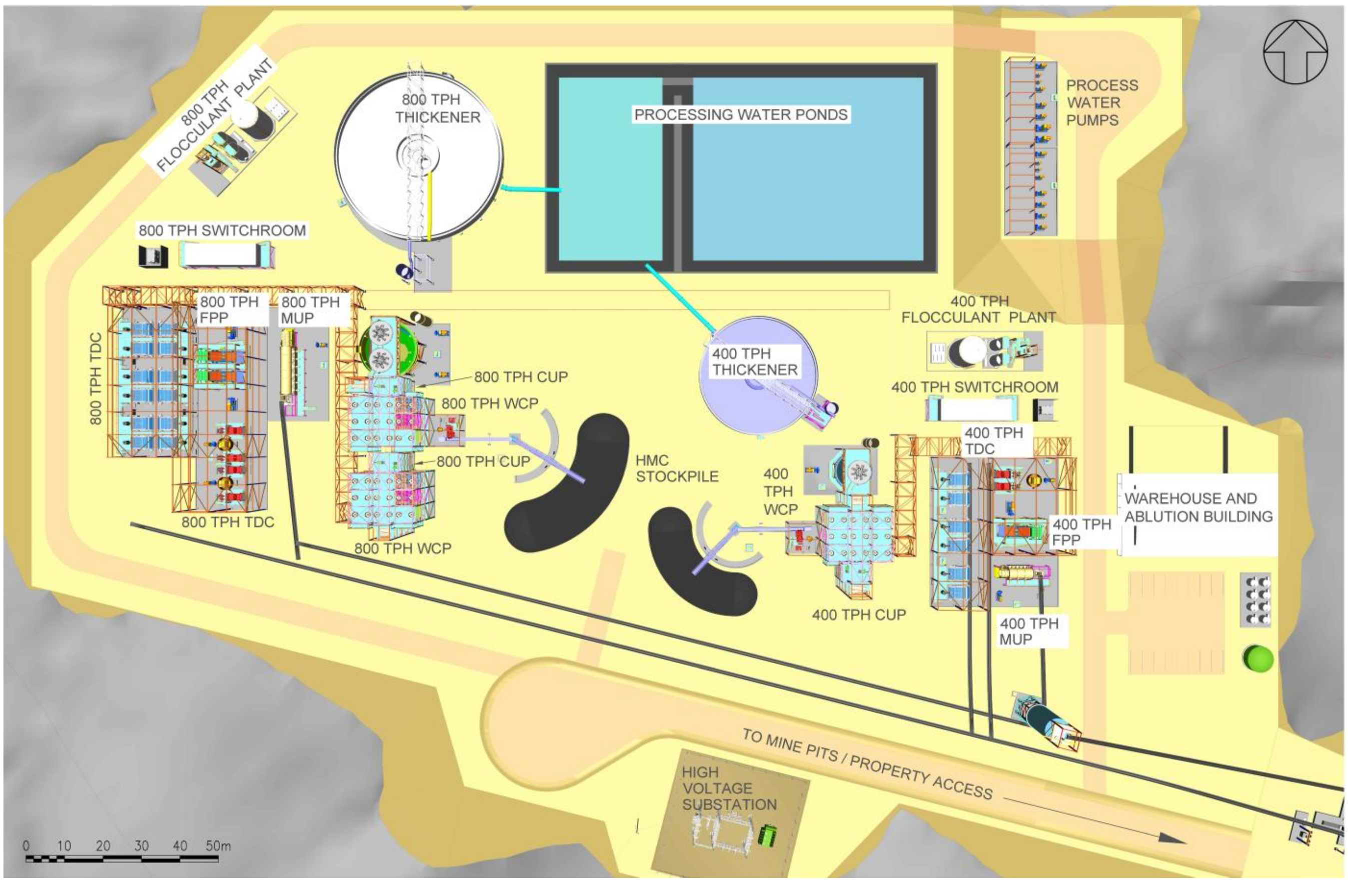
These overall performance estimates used the modelled grades and recoveries, as well as data estimated from metallurgical testwork for distribution of TiO_2 between ilmenite/leucoxene and rutile and ratio of CeO_2 to TREO, and are outlined below:

> Heavy mineral concentrate (HMC) (from wet concentrator plant (WCP) / concentrate upgrade plant (CUP))
  - approximately 3% mass of ROM feed
  - approximately 97% THM grade
  - approximately 90% HM (in-size) recovery
> HREC product
  - approximately 0.05% mass of ROM feed
  - approximately 25% CeO_2 (approximately 61.4% TREO) grade
  - approximately 91.4% CeO_2 recovery
> Rutile product
  - approximately 0.25% mass of ROM feed
  - approximately 91.1% TiO_2 (approximately 81.2% rutile) grade
  - approximately 64.3% rutile recovery
> Ilmenite/leucoxene product
  - approximately 1.2% mass of ROM feed
  - approximately 62.5% TiO_2 (approximately 95.8% ilmenite/leucoxene) grade
  - approximately 80.7% ilmenite/leucoxene recovery
> Zircon concentrate product
  - approximately 0.67% mass of ROM feed
  - approximately 34.4% ZrO_2 (approximately 51.1% zircon) grade
  - approximately 91.8% zircon recovery

9.4 Process Facilities

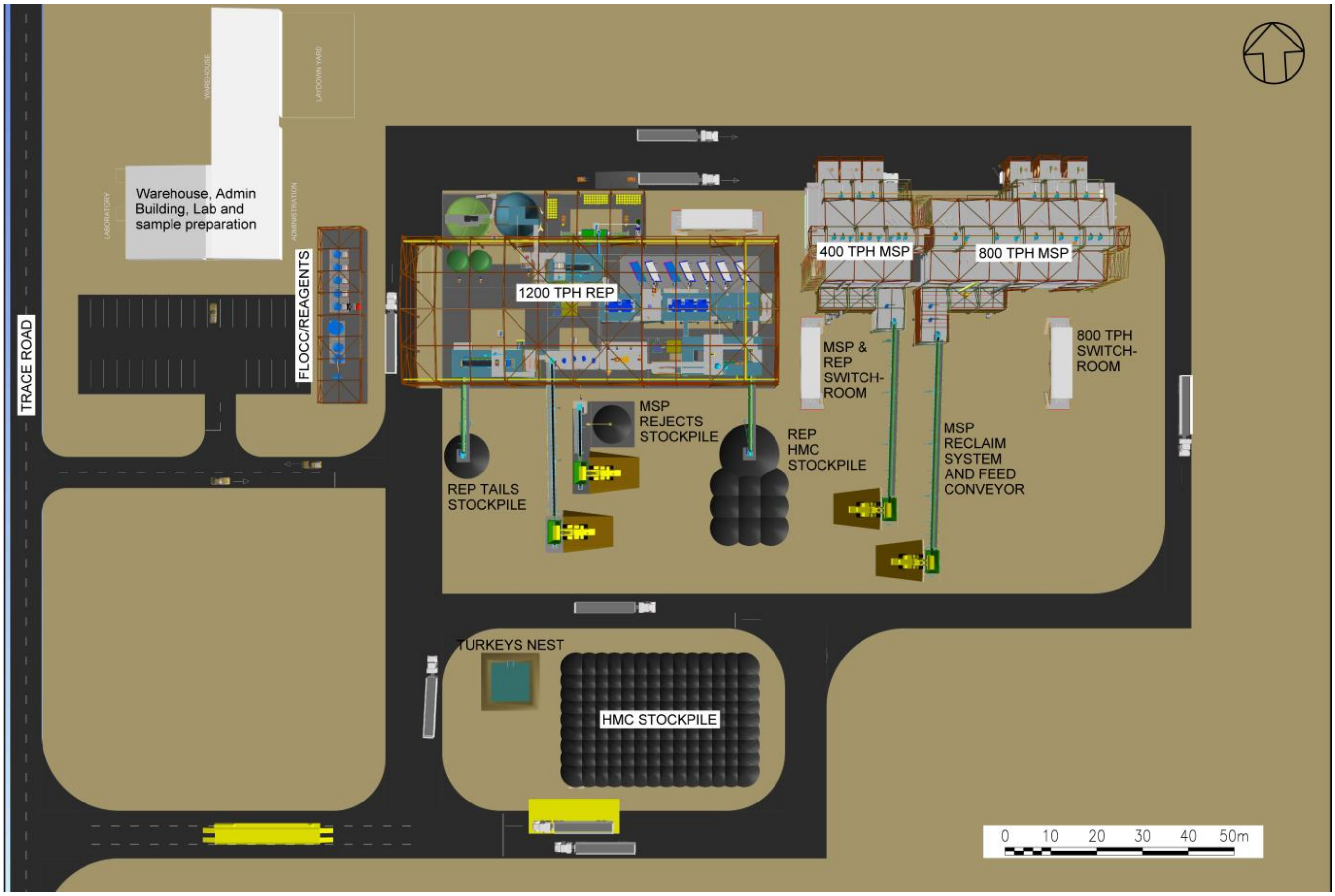
The process is divided across two sites, the wet concentrator plant site (Figure 9-3) and the mineral separation plant site (Figure 9-4).

Figure 9-3: Wet Concentrator Plant Site Layout 3D Model



Note: Figure prepared by MT, 2026.

Figure 9-4: Mineral Separation Plant Site Layout 3D Model



Note: Figure prepared by MT, 2026.

The process plant layout is broken down further within each site into specific areas as follows:

- Wet concentrator plant site:
  - upgrade plant (concentrate upgrade plant)
  - tails mining unit plant
  - feed preparation plant
  - wet concentrator plant
  - tailings dewatering circuit
- Mineral separation plant site:
  - rare earth plant
  - mineral separation plant.

Each site has been designed to first accommodate the 400 tph plant and then cater for the future expansion to 1,200 tph of rougher spiral head feed by adding the 800 tph plant. The method for expansion for each area was considered individually to provide the most flexibility during operations, whilst also considering economies of scale in construction, and minimizing the variation of required spare parts for each plant area.

The process plant was designed to support staged throughput development, commencing with a nominal 400 tonnes per hour (tph) rougher feed rate during Phase 1 and increasing to 1,200 tph during Phase 2 through the addition of parallel processing modules.

The upstream wet concentrator plant (wet concentrator plant) and associated feed preparation plant (feed preparation plant) were designed to operate continuously at the nominated throughput rates, producing a heavy mineral concentrate (heavy mineral concentrate) for downstream processing. The rare earth plant (rare earth plant) and mineral separation plant (mineral separation plant) are designed to process the full expanded heavy mineral concentrate throughput of up to 1,200 tph from commencement of operations. During Phase 1, the rare earth plant and mineral separation plant operate at reduced utilization, supported by stockpiling and reclaim systems that decouple upstream and downstream operations and enable stable plant operation during staged ramp-up.

The overall process flowsheet comprises conventional mineral sands processing circuits, supported by established equipment types and configurations. The principal process facilities include the feed preparation plant, wet concentrator plant, concentrate upgrade plant, rare earth plant, mineral separation plant, and tailings dewatering circuit.

The feed preparation plant incorporates scrubbing, screening, and desliming equipment, including trommels, vibrating screens, and hydrocyclones, to prepare the run-of-mine material for downstream separation and to remove oversize and slimes fractions.

The wet concentrator plant comprises multi-stage wet gravity separation circuits utilizing spiral concentrators arranged in rougher, scavenger, cleaner, and recleaner stages to produce a heavy mineral concentrate. Spiral circuits will be configured in modular banks, allowing duplication for the expansion from 400 tph to 1,200 tph throughput.

The concentrate upgrade plant includes classification, additional spiral separation, and dewatering equipment such as up-current classifiers, screens, and dewatering cyclones to upgrade and condition the heavy mineral concentrate prior to downstream processing.

The rare earth plant incorporates attritioning tanks, flotation cells, and gravity separation equipment, including wet shaking tables, to recover a heavy rare earth concentrate (HREC). The rare earth plant is designed for a nominal throughput capacity aligned with the full expanded heavy mineral concentrate production rate (equivalent to 1,200 tph wet concentrator plant feed basis), providing sufficient capacity to accommodate peak production rates and operational variability.

The mineral separation plant will use conventional dry processing equipment, including feed dryers, electrostatic separators, and magnetic separation circuits, to produce final ilmenite, rutile, and zircon products. The mineral separation plant is configured in staged processing lines corresponding to Phase 1 and Phase 2 throughput, with overall installed capacity aligned to the full 1,200 tph upstream plant throughput.

The tailings dewatering circuit includes thickeners, belt filter presses, dewatering cyclones, and screens to achieve a target tailings moisture content suitable for transport and in-pit backfilling.

Equipment selection across all process areas was based on proven mineral sands technologies, with capacities, duty points, and configurations aligned to the design throughput and supported by metallurgical testwork, process modelling, and industry operating experience. The use of modular equipment configurations enables staged expansion, reduces construction risk, and maintains consistency in equipment types across development phases.

Key equipment was sized and selected based on the defined process duty, including slurry handling rates, solids loading, and separation efficiency requirements, with capacities aligned to both nominal and peak throughput conditions for each process area.

9.5 Energy Requirements

Power and natural gas supply for the Project is discussed in Section 10.

At the initial 400 tph development, the wet concentrator plant has an average electrical demand of approximately 4.3 MVA, with a further 2.0 MVA required for the rare earth plant and mineral separation plant. At expanded throughput of 1,200 tph, total average demand increases to approximately 10.9 MVA for the wet concentrator plant and 3.5 MVA for the rare earth plant and mineral separation plant, reflecting the staged development approach.

9.6 Reagents and Consumables

Process water requirements have been defined to support steady-state operation, with freshwater demand of approximately 32 gallons per minute (gpm) for the wet concentrator plant and 92 gpm for the rare earth plant at 400 tonnes per hour (tph), increasing to approximately 97 gpm and 276 gpm respectively at 1,200 tph. Raw water make-up is primarily associated with the wet concentrator plant process water pond and scales proportionally with throughput.

Process reagent consumption has been established from metallurgical testwork and process modelling, with key consumables including fatty acid collectors, sodium silicate, sodium hydroxide, sulfuric acid, starch/dextrin, and flocculants. Reagent usage is generally proportional to heavy mineral concentrate feed rate, with total consumption increasing to approximately 90 kilograms per hour (kg/h) at full 1,200 tonne per hour (tph) operation.

9.7 Personnel

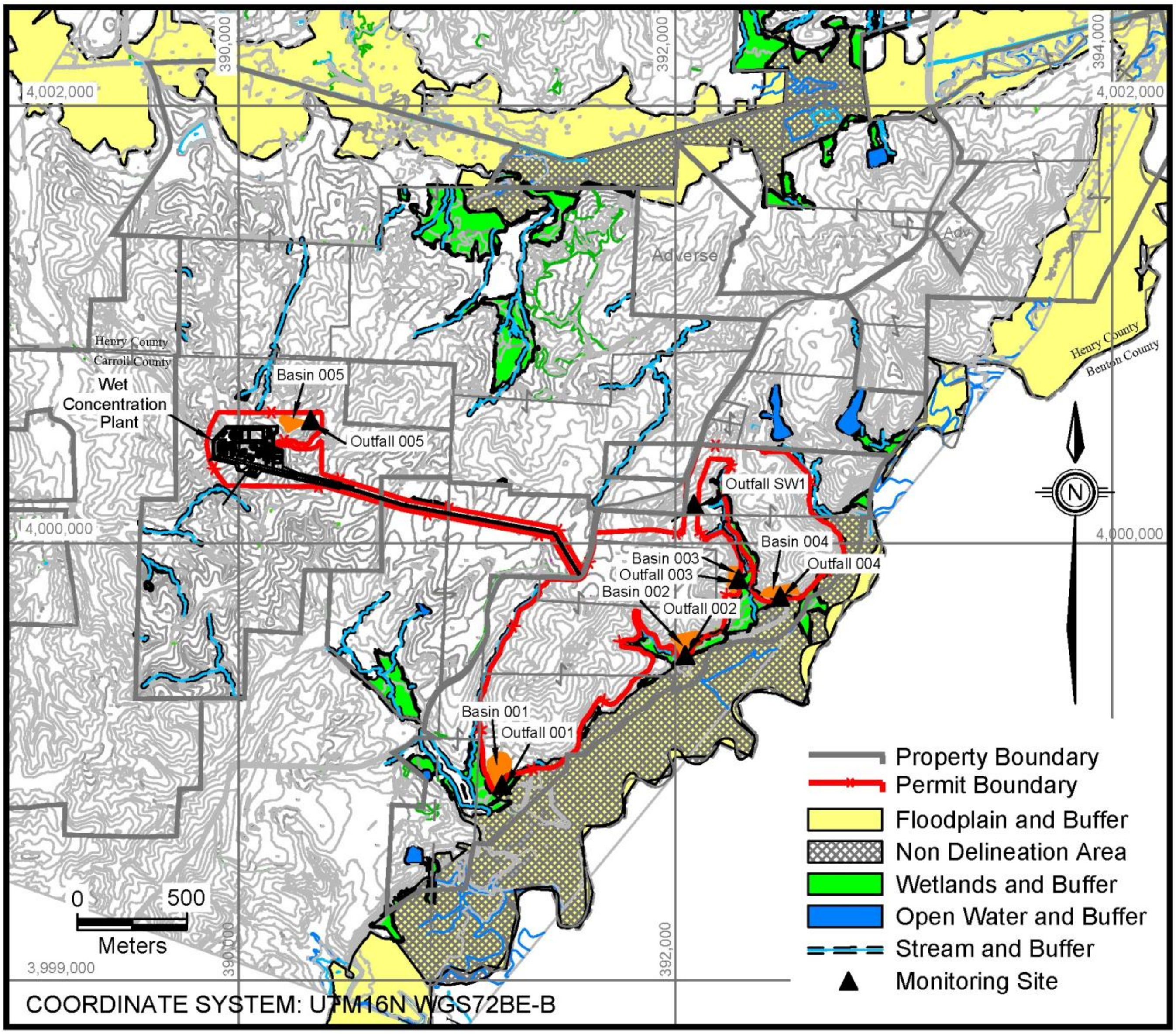
In Phase 1 (400 tph), the wet concentrator plant will operate on a four-crew rotating shift basis comprising supervisory, control room, operator, and mobile equipment roles, resulting in approximately 20 operations personnel supported by maintenance and technical staff, for a total wet concentrator plant workforce of approximately 32 personnel. The rare earth plant and mineral separation plant will operate at reduced utilization during this phase, with daytime and support-based staffing including operations, laboratory, maintenance, and logistics personnel, resulting in a combined rare earth plant/mineral separation plant workforce of approximately 18 personnel, with certain functions shared across plant areas.

In Phase 2 (1,200 tph), personnel requirements will increase to support full plant utilization. The wet concentrator plant workforce will increase to approximately 44 personnel, reflecting additional operators, maintenance coverage, and supervisory support across the expanded plant. The rare earth plant and mineral separation plant will transition to full operational staffing aligned with increased throughput and continuous or extended operation, with a combined workforce of approximately 40 personnel, including operations, maintenance, laboratory, and logistics functions.

10 Infrastructure

The finalized site plan includes property boundaries; offset boundaries for intended use as required by TDEC; floodplains, wetlands, and streams as delineated by HDR; concentrator facilities; tailings and waste disposal areas; and planned pit areas (Figure 10-1).

Figure 10-1: Titan Project Mine Site

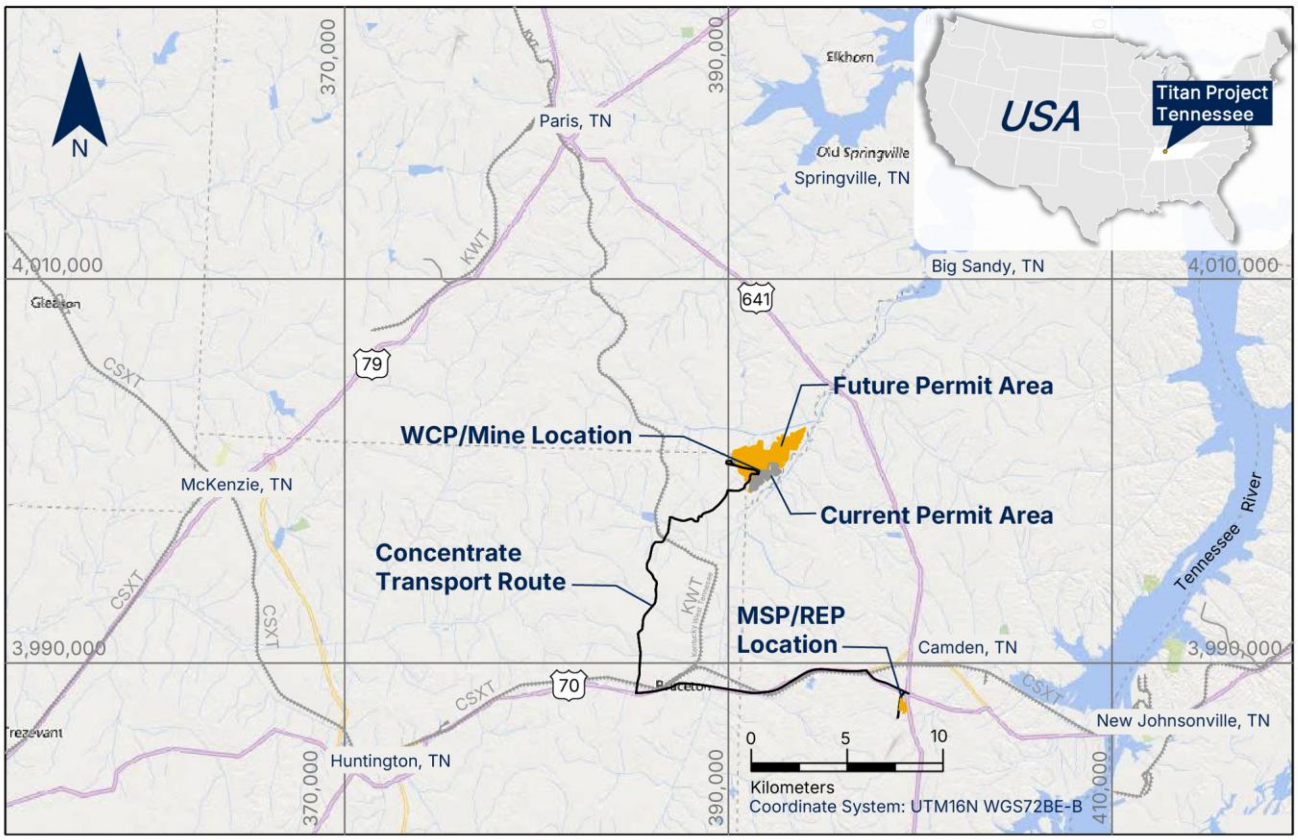


Note: Figure prepared by MM&A, 2026.

10.1 Roads and Logistics

The proposed mine and wet concentrator plant sites will be accessed using paved and maintained state and county roads. The mineral separation plant and rare earth plant sites will be accessed primarily from US Route 70 which is about 1.6 km (1.0 mile) from the planned sites. Direct access to the site will be using County Highway 891. The proposed mine and WCP sites are about 29 km (18 miles) apart by road from the planned mineral separation plant and rare earth plant sites (Figure 10-2).

Figure 10-2: Titan DFS Overall Site Layout



Note: Figure prepared by MM&A, 2026.

CSX operates a railyard approximately 11 km (7 miles) from the mineral separation plant/rare earth plant site. Transportation of material between the mineral separation plant/rare earth plant and the railyard will be conducted by over-the-road trucking. Similarly, the movement of product from the wet concentrator plant to the mineral separation plant/rare earth plant will be conducted through over-the-road trucking.

10.2 ROM and Tailings Transportation

Transportation of ROM and tailings materials between the mine pits and the processing plants will be conducted by conveyor belts.

10.3 Water Handling Systems

10.3.1 Dewatering System

Groundwater levels are not expected to cause significant slope stability issues as a result of the designed pit slope angles. Water entering the pits via seepage from the pit walls will make its way through the sandy material (overburden and Upper McNairy Formation) and down the faces of the lower, more clayey levels (Lower McNairy Formation). This water will then be collected in sumps on the pit floor and pumped out of the pit via large mobile diesel pumps. The maximum inflow to be expected in the pits will be approximately 2,400 gallons per minute (gpm). The pumps selected to dewater the pits have sufficient capacity to handle inflows to the pits. A spare pump will be purchased in the event the main pump is down for maintenance or if there are storm events that overload the main pump.

The main pit dewatering pump will move the collected water from the pit into a constructed combined settling/clarifying pond. This pond is designed to allow the solids to settle out of the pit water for use in the processing plant. The ponds will be constructed in the overburden material when possible or if they have to be constructed on reclaimed material, liners may be utilized as necessary to prevent unintentional leakage.

10.3.2 Plant Water Supply System

From the settling/clarifying pond, the water will be sent to the plant via a 1,000-gpm pump combined with six-inch piping. An additional 1,000-gpm pump will be installed inline to act as a booster pump to help push the water to the plant in the years where the distances from the plant to the pit grow longer.

The pits may not always be able to provide the required water for the wet concentrator plant. To supplement the water from the pits, a permitted withdrawal point will be required to allow the mine to pull water from a nearby location on Sandy Creek. It is assumed that this withdrawal point will have a 1,000-gpm pump installed to ensure it has enough capacity to meet demands. A 2,621-m (8,599 ft) long of water supply pipe will be needed to reach the plant. This includes the pipe running between the plant and the settling ponds and the pipe from the initial proposed withdrawal point. The estimated dewatering pipe length required will increase to approximately 3,353 m (11,000 ft) as mining progresses and moves further away from the plant site.

10.4 Civil Design

For both the wet concentrator plant and mineral separation plant sites, the civil design and plant layout accounts for the final 1,200-tph plant, incorporating the initial 400-tph plants and the 800-tph expansion plants into one layout.

10.5 Power Supply

The existing utilities available to the Project include electric power, natural gas, and water.

Electricity is supplied via 161-kV transmission lines near the Project area. The power supply assumes 100% renewable power supply from TVA. The grid connection to TVA will supply the mineral separation plant and rare earth plant site substation with redundant 12.47-kV distribution lines. The existing electrical distribution system to the wet concentrator plant will undergo a system upgrade to supply electricity to the wet concentrator plant substation with redundant 12.47-kV distribution lines. The associated cost for this upgrade has been incorporated in the estimated capital expenditure. This will offer a stable power supply to the plant sites, and on-site power generation will provide backup power. There will be a 12.47-kV switchgear that distributes power radially at each site substation to 12.47/0.480 kV stepdown transformers and in turn 480 V e-houses with 480V motor control centers (MCCs) in the various plant areas. The primary distribution voltage will be 12.47 kV, three phase, 60 Hz. The secondary distribution voltage will be 480 V, three phase, 60 Hz for all loads. Lighting and small power will be stepped down to 120/208 V, single phase, 60 Hz.

10.6 Natural Gas

Natural gas will be provided by West Tennessee Public Utility District to the site tie-in point through the non-process infrastructure to the mineral separation plant.

10.7 Water Supply

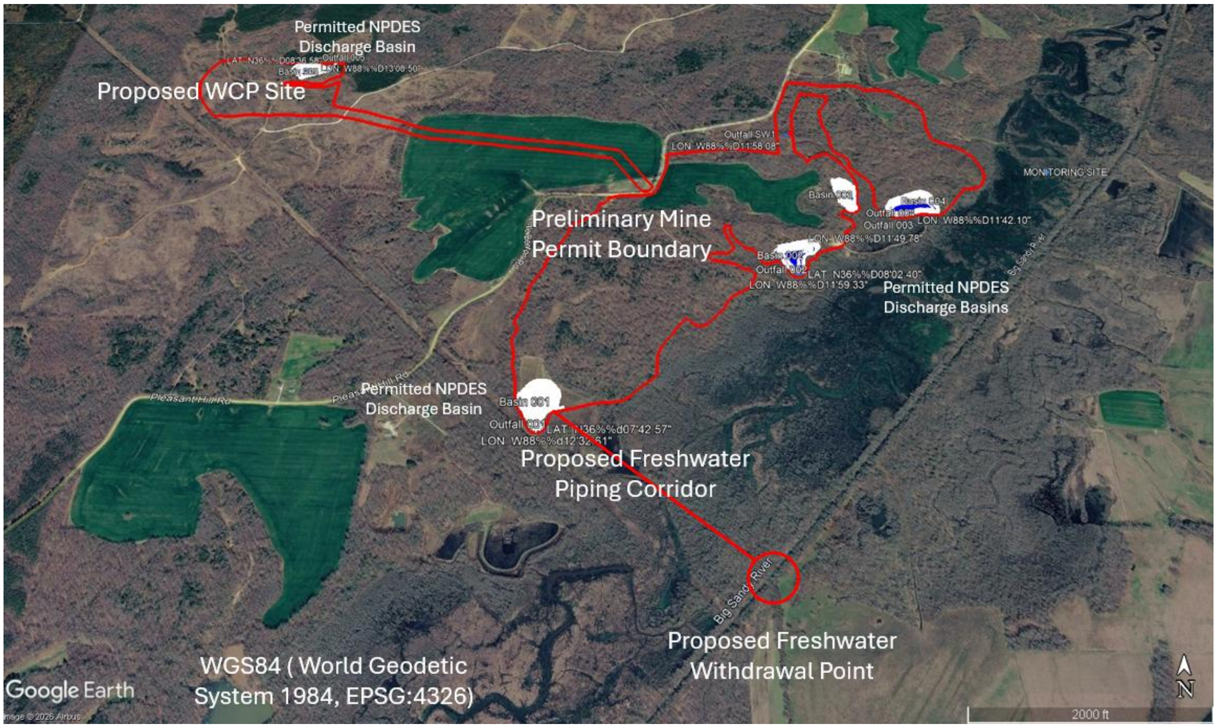
10.7.1 Raw Water Supply

No public water supplies exist in the Project area so the raw water will need to be sourced from in situ sources. The Project area sits between several floodplains associated with large marshy areas and rivers. This combined with the sandy soil that makes up the surrounding area, allows for the groundwater table to be close to the surface and creates an aquifer with sufficient quantity to support the operation for the bulk of the processing needs.

Raw water supply for the wet concentrator plant will primarily come from a permitted withdrawal point along Big Sand River with a secondary source being groundwater seeping into the pit from the working face and the side walls of the mine pits, with a lesser quantity from the tailings being placed during reclamation. Water will be collected into sumps in the bottom of the pits and then pumped with a portable diesel pump into collection ponds adjacent to the pits for settling and clarifying before being pumped to the wet concentrator plant for use in processing the ROM material, as necessary.

Figure 10-3 shows the location of the proposed water withdrawal point along Big Sandy River. The permit application will be for a max draw rate that exceeds the maximum expected amount of make-up water required. This will ensure that the operation of the processing facility will be able to operate at full capacity throughout the 14-year plan. At the mineral separation plant site, water will be supplied by the City of Camden.

Figure 10-3: Proposed Freshwater Withdrawal Location



Note: Figure prepared by MM&A, 2026.

The wet concentrator plant process plant distribution network will supply water to the non-process infrastructure facilities whereas at the mineral separation plant site water will be supplied by the City of Camden to the non-process infrastructure facilities.

10.7.2 Potable Water Supply

There is no permanent infrastructure within the Project area to supply potable water for the wet concentrator plant site. A potable water well will be drilled adjacent to the personnel facilities at the wet concentrator plant. Current pumping tests indicate that a single well should be able to supply all of the potable water needs of the site when used in conjunction with a storage tank. From the well, a 21,000-gallon storage tank will distribute the potable water to the necessary fixtures and supply points. At the mineral separation plant site, water will be supplied by the City of Camden.

10.8 Communications Systems

Communications at the project site will have to be facilitated by cellular and/or satellite provided data communication equipment, as permanent phone and/or data infrastructure is not available. Communication around the mine pits and processing plant will be accomplished through radio devices that are either vehicle-mounted or handheld.

10.9 Non-Process Infrastructure

Non-process infrastructure buildings will be located at the wet concentrator plant and mineral separation plant facilities for all operations and maintenance personnel either as vendor supplied modular buildings or engineered structures. Non-process infrastructure at the wet concentrator plant includes control room, warehouse and ablutions building. non-process infrastructure at the mineral separation plant includes control room, administration building, warehouse and laboratory and sample preparation building. Key elements are summarized in Table 10-1.

Table 10-1: Non-Process Infrastructure

Item	Note
Control room	Identical for WCP and mineral separation plant. Will include 2 operators' rooms and a breakroom. Sized at 7.6 x 4.6 m and will be 3.1 m high.
Warehouse	Identical for WCP and mineral separation plant. Will include 3 open offices space, 1 caged storage area, a space for 50 pallet racks, 2 roller doors, 1 restroom, a fenced outdoor laydown yard adjacent to the warehouse and outdoor veranda. WCP warehouse sized at 24.4 x 15.2 m; 6.1 m high with 10-degree slope. mineral separation plant warehouse sized at 21 x 17.7 m, 6.1 m high with 10-degree slope
Ablutions	WCP site. Will include 5 men's toilets 4 men's showers block with changing area, bench and lockers, 3 female toilets, 2 female showers block with changing area and lockers. Sized at 12.2 x 7.3 m; 2.7 m high with 5-degree slope.
Administration	mineral separation plant site. Will include includes 4 open office spaces, 1 janitor closet, 4 restrooms, 1 kitchen and dining room, 1 telecommunications room, 15 open offices, 1 reception, 1 conference room and an outdoor veranda. Sized at 30.5 x 15.2 m; 2.7 m high with 10-degree slope.
Laboratory and sample preparation	mineral separation plant site. Will include 3 open office spaces, 1 utility room, 1 sample reception and storage room, 1 chemical storage room, 1 chemistry laboratory, 1 laboratory storage room, 1 laundry room, 1 server room and 1 electrical room, 1 sample preparation room and 1 mechanical room. Sized at 21 x 17.7 m; 6.1 m high with 10-degree slope.
Weigh bridge	Designed for up to 109 t. Weighing Increments as per NIST Handbook 44 (typically 9 kg or 23 kg). 12-axle B-train configuration of
Weigh bridge platform	Concrete deck surface. Sized at 42 m twin; platform width of 3.5 m.
Mine access road	Mine access road connecting the wet concentrator plant and the mine will follow the typical cross-section design
Sewage	The wet concentrator plant is located outside of the town limits of Camden and does not have direct access to the municipal sewer network, Septic tank(s) will be required to be installed to service the non-process infrastructure facilities. From time to time, the septic tanks would be emptied by vacuum trucks as required. For the mineral separation plant, the sewers servicing the non-process infrastructure facilities will connect to the sewer network of the City of Camden

10.10 Tailings Backfill and Waste Disposal

All waste and tailings backfill can be placed in the mined-out pits beginning in Year 5.

Tailings material will be conveyed from the wet concentrator plant to the mining pits, where the contractor will compact the tailings in lifts. Tailings will be placed in relatively level lifts and compacted to at least 92 to 95 percent of the material's maximum dry density as determined by the standard Proctor compaction test (ASTM D698). Tailings will be placed such that outer slopes are minimum 2.5H:1V (21.7 degrees) slope angle. It is anticipated that the tailings material will have an approximate 10 to 12 percent swell factor.

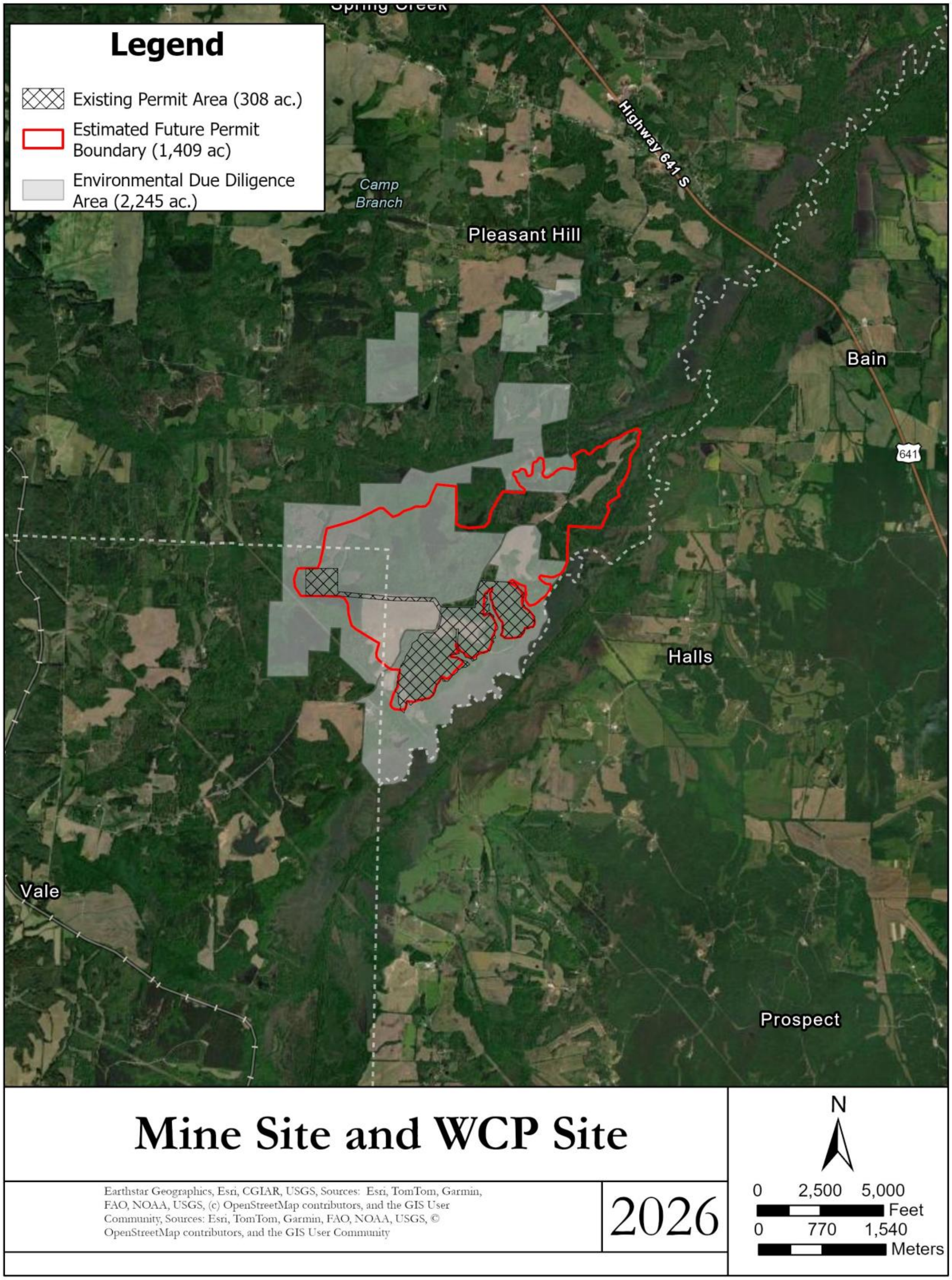
11 Environmental, Permitting and Social Considerations

11.1 Environmental and Permit Requirements

11.1.1 Mine and Wet Concentrator Plant Site

The proposed mine site and Wet Concentrator Plant location analyzed in this sub-section is the estimated future permit boundary depicted in Figure 11-1, is approximately 570 ha (1,409 acres), and consists of forested land, active silviculture and agricultural land, and a maintained utility right-of-way.

Figure 11-1: Mine and Wet Concentrator Plant Site Boundaries



Note: Prepared by HDR, 2026.

The proposed mine site includes the existing 125-ha (308-acre) permit area. An environmental due diligence study area was subject to desktop analyses and field investigations from 2021 to 2023.

IperionX secured the following permits and agency approvals for the existing permit area:

- mining permit (surface mining of titanium and mineral sands)
- NPDES permit (to discharge treated mine wastewater and stormwater)
- insignificant activity registration (air quality registration for sources of insignificant emissions)
- approved jurisdictional determination (from the USACE)
- hydrological determination (from the TDEC).

As mining planning progresses, these permits and agency approvals will require modification to incorporate the entirety of the future mine site. Environmental due diligence studies will also require appropriate re-reviews, updates, and field work as applicable. There is currently no work proposed in Federal Emergency Management Act (FEMA) floodplains.

The proposed mine site is located in unincorporated areas of Henry and Carroll Counties. These counties have no environmental ordinances governing erosion and sediment control or riparian buffer preservation. Floodplain development permitting would be obtained through a county floodplain administrator; however, the proposed mine site is not located within the 100-year floodplain and will not require floodplain permitting.

Table 11-1 provides a list of the key environmental permits that will be required for the proposed mine area.

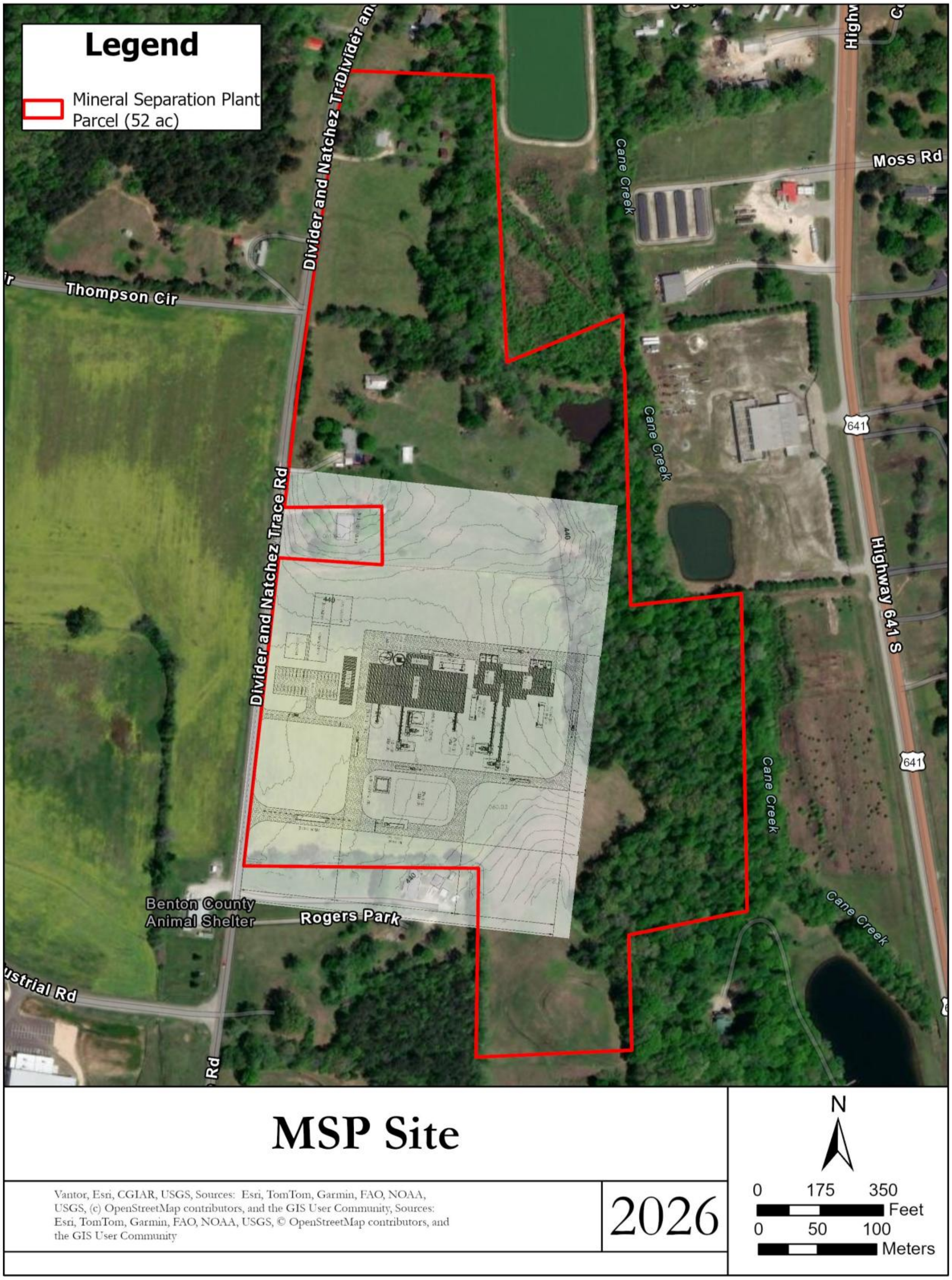
Table 11-1: Environmental Permits Required for the Proposed Mine Site

Reviewed and Issued By	Permit/Authorization	Existing Mine Permit Area		Estimated Future Mine Boundary (based on current mine plan)	
		Permit Status	Expiration Date	Future Actions	Estimated Timeline
Federal (United States)					
United States Army Corps of Engineers (USACE)	404 Jurisdictional Determination	Approved JD issued April 2023 (LRN-2022-00661)	April 2028	Submittal of JD required for USACE review/verification of stream and wetland locations; JD required for CWA 404/401 permitting.	3 to 8 months (From start of new/updated delineation to issuance of JD)
	404 Nationwide Permit or Individual Permit	N/A (Existing Mine Permit Area includes only uplands)		Individual Permit (IP) required for more than 0.5 acre of impacts to streams and wetlands per USACE Nashville Regulatory District Regional Conditions	12 to 18 months (From start of permit preparation to issuance of 404 IP)
	National Environmental Policy Act (Environmental Assessment)	N/A (no federal nexus)		NEPA EA (USACE lead federal agency) required for more than minimal impacts (IP) to streams and wetlands	12 to 18 months (Concurrent to 404 IP process)
	Stream and Wetland Mitigation	N/A		Required for more than minimal impacts to streams and wetlands; must be acquired/purchased prior to impacts to streams and wetlands occurring.	Concurrent with 404 IP process.
United States Fish and Wildlife Service (USFWS)	Consultation regarding Endangered Species	Occurs concurrently with USACE and/or NPDES Permit process		Required due to federal nexus with USACE (species-specific surveys likely required) and interagency consultation during NEPA review.	1-3 months for field work. Should specific-specific survey be required and survey windows are missed in said calendar, completion of surveys could take up to 1 year. Consultation concurrent with 404 IP/NPDES Permit processes.
Tennessee Historical Commission (THC)	Consultation regarding Architectural and Archaeological Resources	Occurs concurrently with USACE and NPDES Permit process		Required due to federal nexus with USACE (archaeological and architectural survey likely required) and interagency consultation during NEPA review.	1-3 months for field work. Consultation concurrent with 404 IP/NPDES Permit processes
State (Tennessee)					
TN Department of Environment and Conservation (TDEC) Mineral and Geologic Resources	TDEC Surface Mining Permit and Individual NPDES	Effective September 2023 (Mining Permit: OM-70711-01) (NPDES Permit: TN0070711)	August 2028	Current mine permit amendment required	Variable and depends on level of amendment complexity; there is no statutory review timeline for surface mine permit amendments.
TDEC Air Pollution Control	Insignificant Emission Notification	August 2023 (Emission Source Reference No. 09-0175-01)		N/A or until emission sources are modified	1 month for emission documentation; no review timeline.
	Air Quality Construction Permit (Minor or Major)	N/A as emission sources are insignificant emission activities		Unknown until emissions for Expected Future Permit Boundary have been estimated	Minor: 2-4 months (agency review) Major: 5-12 months (agency review)
	Air Quality Operating Permit (Title V or non-Title V)	N/A as emission sources are less than Title V thresholds		Unknown until emissions for Expected Future Permit Boundary have been estimated	Non-Title V: 2-4 months (agency review) Title V: 9-18 months (agency review)
TDEC Division of Water Resources	TDEC Hydrologic Determination (HD)	Issued January 2023 (TDEC No. 31454)	No expiration listed, but typically 3-5 years	Submittal of HD required for TDEC DWR review/concurrence of stream and wetland locations; HD concurrence required for CWA 404/401 permitting.	3 to 6 months (From start of new/updated delineation to issuance of HD)
	Clean Water Act Section 401 Water Quality Certification/Aquatic Resources Alteration Permit (ARAP)	N/A (Existing Mine Permit Area includes only uplands)		Individual ARAP required for more than minimal impacts to streams and wetlands.	3 to 6 months (From start of permit preparation to issuance of ARAP)
		N/A		ARAP required for long term water withdrawals; 7Q10 flow needs to be determined for applicability of permit coverage; otherwise will be covered under Individual ARAP.	3 to 6 months (From start of permit preparation to issuance of ARAP)
	Water Withdrawal Registration	N/A		Required for more than 10,000 gallons of surface or groundwater withdrawal.	1 month (for registration preparation; registration submittal only, permit review/issuance process).
TDEC Division of Radiological Health	Radioactive Material License	Preparing application		Update application and RPP for Estimated Future Permit Boundary	60-120+ days depending on level of complexity (agency review)
Local (unincorporated Henry and Carroll counties)					
No local environmental permitting is anticipated.					

11.1.2 Mineral Separation Plant Site

The Mineral Separation Plant (MSP) parcel, located in unincorporated Benton County, Tennessee, is approximately 21 Ha (52 acres) in extent. It is part of an industrial park; however significant development has yet to occur within the MSP parcel boundary. The MSP parcel boundary currently consists of active agricultural land and unmaintained forest. Land use in the vicinity of the area consists of industrial, agricultural, undeveloped forested land, and low-density residential land (Figure 11-2).

Figure 11-2: Mineral Separation Plant Boundary



Note: Prepared by HDR, 2026

A Phase I Environmental Assessment has been conducted for the MSP parcel, by the Breland Group, LLC dated February 12, 2024. Other than the 2024 study, no environmental due diligence studies have conducted for the MSP site. Given the lack of information of on-site conditions, all permitting should be considered potentially required and dependent on ground-truthed investigations. Site due diligence investigations that need to be completed for the MSP site to more accurately assess environmental permitting needs/risk are listed below with additional detail summarized in are summarized in Table 11-2:

- stream and wetland delineation
- cultural resources assessment
- threatened and endangered species assessment

Table 11-2: Titan Minerals IperionX Potential Environmental Permits/Authorizations for the MSP Site*

Reviewed and Issued By:	Permit /Authorization Name	Anticipated Actions	Estimated Timeline (If required)
Federal (United States)			
United States Army Corps of Engineers (USACE)	404 Jurisdictional Determination	Submittal of JD required for USACE review/verification of stream and wetland locations; JD required for CWA 404/401 permitting.	3 to 6 months (From start of delineation to issuance of JD)
	404 Nationwide Permit (NWP) or Individual Permit (IP)	Nationwide Permit required for impacts of up to 0.5 acres of WOTUS losses Individual Permit (IP) required for more than 0.5 acre of impacts to streams and wetlands per USACE Nashville Regulatory District Regional Conditions	NWP: 3 to 6 months (From start of permit preparation to issuance) IP: 12 to 18 months (From start of permit preparation to issuance)
United States Fish and Wildlife Service (USFWS)	Consultation regarding Endangered Species	Consultation occurs as part of the 404/NPDES Process	Occurs concurrently with USACE and NPDES Permit process
Tennessee Historical Commission	Consultation regarding Architectural and Archaeological Resources	Consultation occurs as part of the 404/NPDES Process	Occurs concurrently with USACE and NPDES Permit process
State (Tennessee)			
TDEC Division of Water Resources	NPDES Construction Stormwater Permit	An industrial facility must apply for a NPDES general permit to authorize stormwater runoff during construction (e.g., ES&C phase).	1-3 months from start of permit prep to Notice of Coverage issuance
TDEC Division of Water Resources	NPDES Multi-Sector General Permit for Industrial Activities	An industrial facility must apply for a NPDES general permit to authorize discharge of process wastewater at the site to the ground as well as stormwater runoff during operations of the facility.	1-3 months from start of permit prep to Notice of Coverage issuance

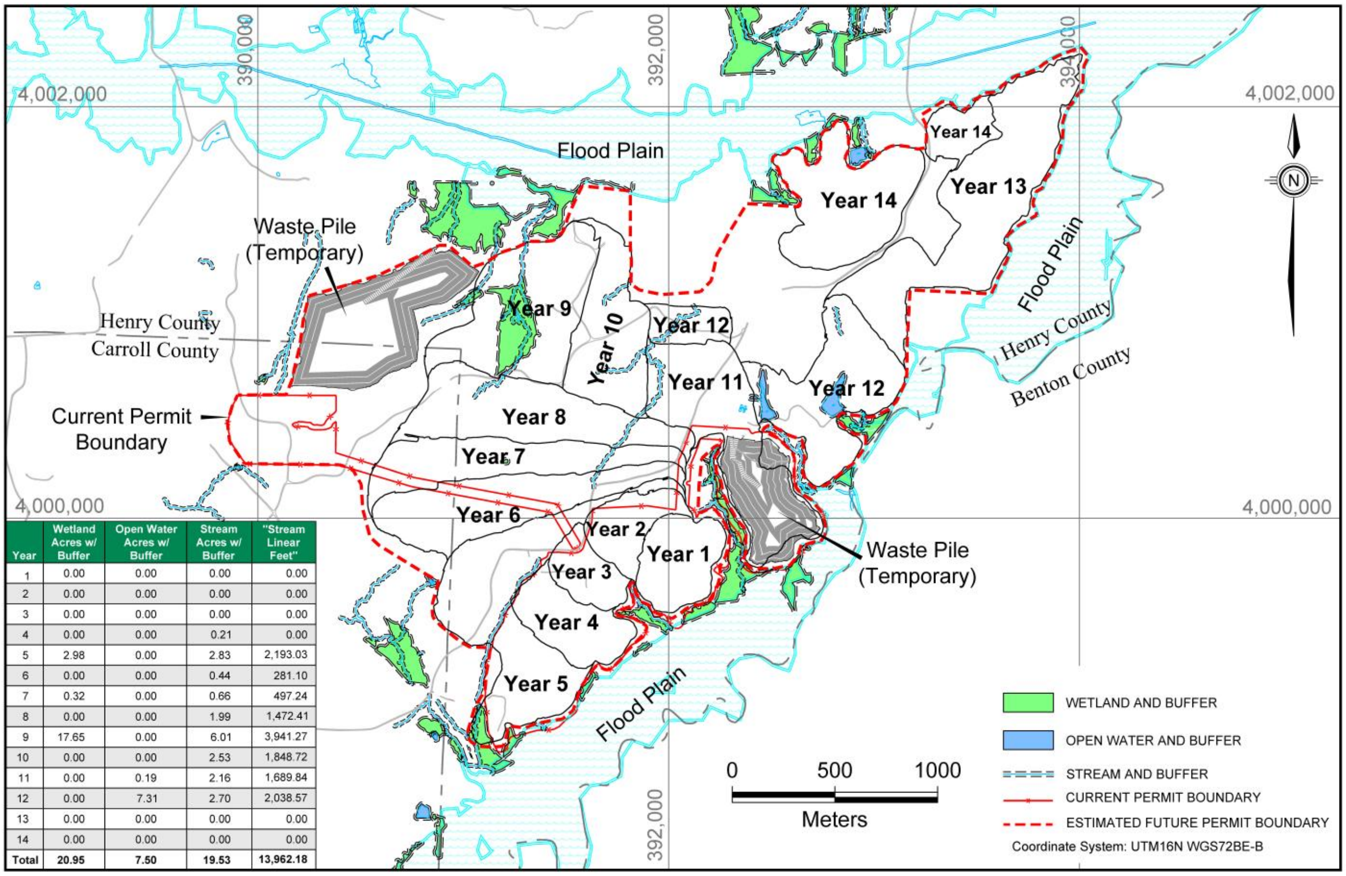
Reviewed and Issued By:	Permit /Authorization Name	Anticipated Actions	Estimated Timeline (If required)
TDEC Air Pollution Control	Insignificant Emission Documentation		1 month for emission documentation; No review timeline.
	Air Quality Construction Permit (Minor or major)		Minor: 2-4 months (agency review) Major: 5-12 months (agency review)
	Air Quality Operating Permit (Title V or non-Title V)		Non-Title V: 2-4 months (agency review) Title V: 9-18 months (agency review)
TDEC Division of Water Resources	TDEC Hydrologic Determination (HD)	Delineate site and apply for HD	3 to 6 months (From start of new/updated delineation to issuance of HD)
TDEC Division of Water Resources	Clean Water Act Section 401 Water Quality Certification/Aquatic Resources Alteration Permit (ARAP)		3 to 6 months (From start of permit preparation to issuance of ARAP)
TDEC Division of Water Resources	Underground Injection Control Permit		60 days to 6 months
Tennessee Division of Radiological Health	Radioactive Material License		60-120+ days depending on level of complexity (agency review)
Tennessee Division of Solid Waste Management	Treatment, Storage, and Disposal Facility Permit	Identify volume and composition of waste slimes and sand tailings OR contract with licensed disposal facility	6-21 months (From start of permit preparation to issuance of TSDF permit)
Local (unincorporated Benton County)			
No local environmental permitting will be necessary			

* Studies and permit applicability are dependent on, at a minimum, the recommended baseline studies being performed and final design of the MSP facility.

11.2 Waste and Tailings Disposal

The waste and tailings disposal plan is fully integrated with the overall mine plan. At the beginning of mining, waste and tailings material will be placed, as needed, in temporary waste piles on the ground surface located 1.) in the Year 11 mining area and 2.) in the area northeast of the wet concentrator plant (Figure 11-3).

Figure 11-3: Map of Mine Plan Sequence Indicating Locations for Temporary Waste Piles



Year	Wetland Acres w/ Buffer	Open Water Acres w/ Buffer	Stream Acres w/ Buffer	"Stream Linear Feet"
1	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.21	0.00
5	2.98	0.00	2.83	2,193.03
6	0.00	0.00	0.44	281.10
7	0.32	0.00	0.66	497.24
8	0.00	0.00	1.99	1,472.41
9	17.65	0.00	6.01	3,941.27
10	0.00	0.00	2.53	1,848.72
11	0.00	0.19	2.16	1,689.84
12	0.00	7.31	2.70	2,038.57
13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
Total	**20.95**	**7.50**	**19.53**	**13,962.18**

Note: Figure prepared by MM&A, 2026.

Temporary, out-of-pit waste storage areas are estimated to only be required up to approximately Year 5 of mining, after which all tailings and waste material will be backfilled into the pit as mining progresses.

Tailings material will be filtered at the wet concentrator plant to an optimum moisture content of approximately 16 to 18 percent. Material identified in the pit as waste will be trucked directly to the pit area that is being backfilled at the time. Ore material will be extracted, trucked out of the pit to a stockpile near the edge of the mine, and then placed on a two-way conveyor to be transported to the plant. Filtered tailings will be placed on the two-way conveyor at the plant and transported back to the edge of the pit, from which the tailings will be loaded into trucks and transported into the backfilling area of the pit. Backfilling with waste and tailings material will be done in lifts of approximately up to 1.22 m (4 ft) or larger. As needed, buildup of groundwater in the tailings backfill structure will be monitored and pumped down with wells in the tailings. Water seepage from the toe of the tailings face will be collected in the pit sump and pumped out to settling/pit discharge ponds where it will either be pumped to the wet concentrator plant, if needed, or discharged through permitted NPDES points.

11.3 Closure Considerations

Tennessee state regulations require mines to be properly closed and reclamation commenced immediately upon abandonment. In general, site reclamation includes removal of structures, backfilling and replacement of topsoil, regrading, and revegetation of disturbed areas in accordance with the approved post-mining land use for the permit. Reclamation of surface mines includes backfilling and grading operations typically associated with the final pit. Reclamation requirements were incorporated into the contract mining operating costs. Reclamation requirements were based on both the currently approved permit associated with the proposed Titan Mine operations, as well as those future planned disturbance areas. None of the reclamation liabilities are expected to require perpetual treatment.

The financial model for the Titan Project includes cost for mine reclamation and closure within the contract mining operating cost of US$5.23 per cubic meter.

11.4 Social Considerations

IperionX continues to maintain relationships with the Tennessee Valley Authority (TVA), TDEC, local and state government representatives, local educational systems, universities, technical institutes, business owners, local municipalities, and community members. IperionX will continue discovering and establishing relationships with new groups and stakeholders.

IperionX has undertaken preliminary engagement with local stakeholders in the Project area, including landowners, community representatives, and local or regional authorities, to support Project planning and to identify social, land access, and community considerations relevant to development.

At the Report date, no material agreements with local individuals or groups have been finalized. IperionX intends to continue engagement activities as the Project advances, consistent with applicable laws and regulations, and in a manner customary for heavy mineral sands projects development. Where required or considered appropriate, future discussions or agreements may address matters such as land access, community relations, employment opportunities, and local services. Any such agreements would be negotiated in accordance with applicable regulatory requirements and would be disclosed in future filings if determined to be material.

12 Capital Cost Estimate

The capital costs were developed in accordance with the requirements of a Class 3 estimate, consistent with the Association for the Advancement of Cost Engineering (AACE) Cost Estimating Classification System, as defined in AACE International Recommended Practice No. 17R-97. In keeping with the intended Class 3 estimate maturity, the estimate has been prepared to reach a target accuracy range of ±15%.

The estimate is based on an estimate base date of Q2 2026 and is expressed in United States dollars (US$). No allowance was made for escalation.

The capital cost estimate included the direct and indirect costs required to execute the defined project scope in accordance with the basis, assumptions, and design information available at the time of estimate preparation. Direct costs generally comprise labour, materials, equipment, and subcontracted services associated with the supply, installation, and construction of the project facilities. These costs were developed from the relevant material take-offs, scope definitions, vendor and contractor inputs, and estimating assumptions applicable to each discipline. The non-process infrastructure scope was incorporated into the Phase 1 – 400 tph scope of work and is reflected within that phase's cost estimate summary accordingly.

The estimate also included indirect costs necessary to support overall project execution. These generally comprise the temporary facilities, construction support, supervision, field management, and other project-related costs required to plan, manage, and deliver the work within the defined execution framework. Given the availability of local construction workers, there is no requirement for living out allowance.

Owner's costs included comprise the Owner's project team, environmental/permits, fees/taxes/duties/bonds, and the power distribution line upgrade for Phase 1 only. Project Insurance was also included within Owner's costs.

A contingency allowance of 10% was applied to the sum of direct costs, indirect costs, and Owner's costs.

Table 12-1 shows the Phase 1 (400 tph), Phase 2 (incremental 800 tph) and consolidated costs.

Table 12-1: Capital Cost Summary (Phase 1 – 400 tph and Phase 2 – Incremental 800 tph)

Item	Phase 1 400 tph (US$)	Phase 2 – Incremental 800 tph (US$)	Total Phase 1+ Phase 2 (US$)
Direct Costs			
1000 - Site Wide - Mining	$23,238,000	$347,000	$23,585,000
1000 - Site Wide - NPI	$18,317,000	$0	$18,317,000
1000 - Site Wide - Balance of Scope	$18,499,000	$3,191,000	$21,690,000
2000 - Feed Preparation Plant	$10,087,000	$15,587,000	$25,674,000
3000 - Wet Concentrator Plant	$44,144,000	$62,212,000	$106,356,000
4000 - Mineral Separation Plant	$25,058,000	$33,436,000	$58,494,000
5000 - Rare Earth Plant	$33,181,000	$1,241,000	$34,422,000
8000 - Mining Unit Plant	$1,305,000	$2,133,000	$3,438,000
Direct Costs Sub-total	**$173,829,000**	**$118,147,000**	**$291,976,000**
INDIRECT COSTS			
EPCM	$22,414,000	$14,664,000	$37,078,000
Temporary Facilities and Services	$2,240,000	$1,248,000	$3,488,000
Vendor's ME Installation Assistance	$250,000	$190,000	$440,000
Contractor's Pre-Commissioning Assistance	$186,000	$245,000	$431,000
Commissioning & Testing	$1,898,000	$1,620,000	$3,518,000
Spare Parts	$929,000	$1,196,000	$2,125,000
First Fills	$143,000	$223,000	$367,000
Indirect Costs Sub-total	**$28,061,000**	**$19,386,000**	**$47,447,000**
TOTAL No CONTINGENCY nor OWNER'S COSTS	**$201,890,000**	**$137,533,000**	**$339,423,000**
Owner's Costs	$5,598,000	$1,638,000	$7,236,000
Contingency	$20,638,000	$14,027,000	$34,666,000
TOTAL CAPEX 400tph and 800tph	**$228,126,000**	**$153,198,000**	**$381,324,000**

Note: Totals may not sum due to rounding.

13 Operating Cost Estimate

The estimates have an accuracy of ±15%. The estimate base date is Q2, 2026, and the estimate was prepared using US$.

Mine operating costs were based on prices from mine contractor services for moving ROM ore material from the pits to the wet concentrator plant and dewatered tailings and waste material back to the pits to the disposal areas and all associated work. Equipment consumables, repairs, maintenance, and labor costs were included in the contractor pricing to supply mine services including waste mobile conveyors, loaders for ore, loaders for waste, dozers for ore and interburden material, dozers for waste spreading and compaction, dozers for reclamation, and support equipment.

Process costs were broken out by phase. The power operating cost assumptions were 7.04 cents per kWh for Phase 1 and 7 cents per kWh for Phase 2. The plant labor cost was estimated to be US$6.5 million for Phase 1 and US$9.1 million for Phase 2. The operating spares and consumable costs were estimated to be US$1.0 million for Phase 1 and US$2.6 million for Phase 2. Maintenance costs were estimated at US$1.5 million per year for Phase 1 and US$3.2 million for Phase 2. Reagents and utilities costs were estimated to be US$1.5 million for Phase 1 and US$4.2 million for Phase 2. The yearly mobile equipment costs for the plant were estimated as $1.0M for Phase 1 and $1.2M for Phase 2. Laboratory sample, general analysis and maintenance operating expenses were priced at US$0.32 million for Phase 1 and US$0.97 million for Phase 2. The yearly general and administration costs were US$1.15 million for Phase 1 and US$1.22 million for Phase 2. The average yearly product transport costs were estimated to be approximately US$3.6 million for Phase 1 and US$8.5 million for Phase 2.

The product transport cost was priced based on contractor quotes. The average yearly product transport costs were estimated to be approximately US$3.6 million for Phase 1 and US$8.5 million for Phase 2.

The average yearly royalties were estimated to be approximately US$4.7 million for Phase 1 and US$8.1 million for Phase 2.

The operating costs are summarized in Table 13-1.

Table 13-1: Operating Cost Estimate Summary

Operating Costs	US$/year		US$/t ore	
	Phase 1 Average	Phase 2 Average	Phase 1 Average	Phase 2 Average
Mining	21,506,000	64,335,000	6.32	6.22
Process Plant	15,521,000	27,967,000	4.56	2.70
Product Transport	3,559,000	8,901,000	1.05	0.86
Royalties	4,748,000	8,052,000	1.39	0.78
Total Operating Costs	**45,333,000**	**109,255,000**	**13.31**	**10.57**

Note: Totals may not sum due to rounding.

14 Market and Pricing Assumptions

14.1 Introduction

The Titan Project is differentiated within the US critical minerals landscape by its ability to produce multiple saleable mineral products from a single mineral sands project. On the current DFS design basis, it is planned to produce ilmenite, rutile, and zircon concentrates and a HREC, providing exposure to titanium feedstocks, zirconium-bearing minerals and strategically important rare earth oxides from one domestic source. This product mix is commercially important because it serves multiple large and established end markets, while also aligning with the strategic objective of rebuilding secure US supply chains for critical minerals presently dominated by foreign producers, and in particular by China.

The Titan Project's strategic relevance is not limited to commodity diversification. It lies in the combination of: (i) a large US resource base; (ii) saleable mineral products with existing global end uses; and (iii) exposure to the parts of the critical minerals value chain where the US and its allies remain structurally import dependent. In market terms, Titan is not attempting to create demand for new products. Rather, it is positioned to introduce new US supply into established global markets that are already large, liquid enough to absorb Titan's forecast production, and increasingly influenced by security-of-supply considerations.

US Government policy is increasingly treating critical minerals as a matter of national security, industrial resilience, and strategic competitiveness. The USGS's critical minerals list identifies multiple mineral commodities relevant to the Titan Project's product suite and downstream value chains, including zirconium, hafnium and numerous individual REEs such as yttrium, dysprosium, terbium, neodymium and praseodymium. More broadly, recent White House and Department of Energy policy actions have emphasized the need to expand secure domestic mining, processing and downstream manufacturing capacity for critical minerals in order to reduce reliance on foreign adversaries and strengthen US defense, energy and advanced manufacturing supply chains.

14.2 Strategic Importance of the Titan Project to the United States

The strategic importance of the Titan Project is underpinned by a clear and sustained shift in US Government policy toward securing domestic and allied supply chains for critical minerals. The USGS, under direction from the Department of the Interior, has formally designated a range of minerals as "critical" to the economic and national security of the US, including rare earth elements, yttrium, zirconium and hafnium. These designations reflect both the essential role of these materials in advanced technologies and the high degree of supply risk arising from import dependence and geographic concentration of production. US policy frameworks consistently emphasize that critical minerals are not only industrial inputs, but foundational components of defense systems, energy infrastructure, semiconductors and advanced manufacturing.

Recent Federal policy actions have further elevated the urgency of developing domestic supply. In March 2025, the White House issued executive actions calling for “immediate measures to increase American mineral production,” explicitly linking domestic mineral development to national security and economic resilience objectives. Subsequent policy measures, including Section 232 investigations and actions on processed critical minerals, have highlighted that the United States remains 100% net import reliant for a number of critical minerals and substantially import reliant for many others, particularly in downstream processing and refined materials. These policy statements emphasize that vulnerability is not limited to mining but extends across the full value chain from extraction through to refined products and advanced materials.

Within this policy context, the Project is strategically differentiated as a permitted, near-term development opportunity capable of supplying multiple mineral products linked to US-designated critical minerals and strategic supply chains. In particular, the Project’s heavy rare earth and yttrium-rich concentrate provide potential exposure to dysprosium, terbium and yttrium, elements that are essential for high-performance permanent magnets, advanced ceramics, radar systems, semiconductors and other defense-critical applications, and for which the US currently has limited domestic supply. In parallel, zircon production from the Project provides upstream feedstock relevant to zirconium- and hafnium-related value chains, which are also identified as critical under US policy frameworks and are important for nuclear, aerospace and high-temperature materials applications.

The Project also aligns with broader US Government initiatives to develop end-to-end domestic and allied critical mineral supply chains. The US Department of Defense has committed significant funding to establish “mine-to-magnet” rare earth supply chains, while the Department of Energy has articulated a strategy to build secure and resilient domestic critical mineral supply systems. In this context, the Project has the potential to function as an upstream cornerstone project, supplying critical mineral concentrates into emerging US and allied processing and manufacturing capacity.

14.3 Products and Sales Assumptions

The proposed production schedule comprises two phases, and the concentrate production tonnages for each phase based on financial model are summarized in Table 14-1.

Table 14-1: Titan DFS Production Forecast

Product	Life of Mine Total (t)	Phase 1 (Years 1-4) (tpa)	Phase 2 (Years 5-14) (tpa)
Ilmenite	1,371,495	46,228	118,658
Rutile	285,651	9,772	24,656
Zircon concentrate	767,168	27,622	65,668
HREC	60,790	1,981	5,287

The Project is designed to produce four saleable mineral concentrate products from the processing of heavy mineral sands. The products and their estimated specifications used in the DFS are summarized in Table 14-2.

Table 14-2: Titan DFS Product Estimated Specifications

Titan DFS Product	Key Specification	DFS Design Value
Ilmenite	TiO_2 content	62.5%
Rutile	TiO_2 content	91.1%
Zircon concentrate	ZrO_2 content	34.4%
Heavy Rare Earth Concentrate	TREO content	61.4%

The HREC specification of 61.4% TREO is based on assay data incorporated into the DFS design basis. The estimated distribution of individual rare earth oxides within the TREO used for pricing assumptions is summarized in Table 14-3.

Table 14-3: Titan HREC Estimated TREO Distribution (%)

CeO_2	Dy_2O_3	Er_2O_3	Eu_2O_3	Gd_2O_3	Ho_2O_3	La_2O_3	Lu_2O_3	Nd_2O_3	Pr_6O_{11}	Sc_2O_3	Sm_2O_3	Tb_4O_7	Tm_2O_3	Y_2O_3	Yb_2O_3	TREO
25.15	0.90	0.39	0.16	1.49	0.16	11.72	0.04	11.30	3.08	0.004	2.05	0.20	0.05	4.39	0.32	61.40

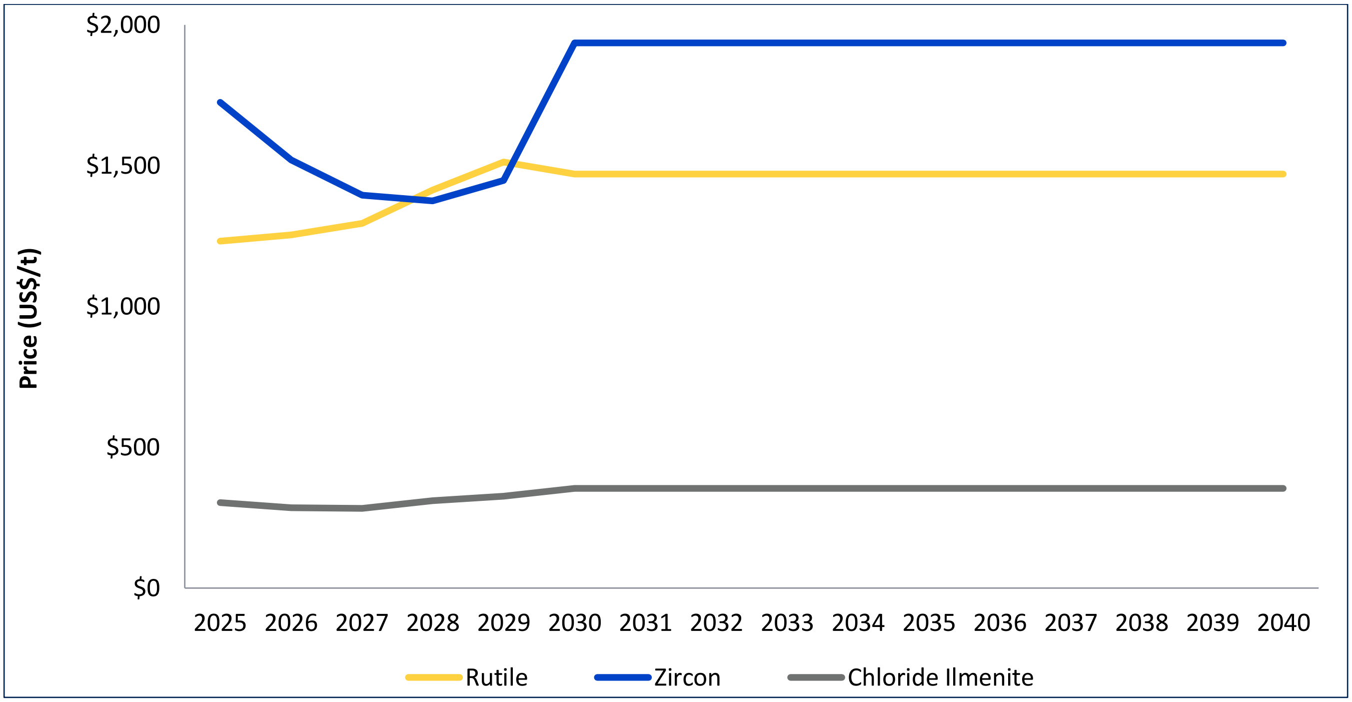
The specifications presented above represent the DFS design grades used in the production schedule and revenue modeling. Product grades may vary during operations and will be subject to offtake and sales agreement specifications.

14.4 Product Pricing Assumptions and Methodology

14.4.1 Mineral Sands Product Pricing

Ilmenite, rutile and zircon price forecasts are based on the TZMI Titanium Feedstock Price Forecast (Issue 3, 2025) base case scenario. From 2026 to 2029, annual base case forecast prices were applied, after adjusting for inflation in IperionX's analysis. From 2030 onward, TZMI long-term inducement prices, converted to real 2026 US dollars, were held flat through the remainder of the mine life. The mineral sands product pricing assumptions are illustrated in Figure 14-1.

Figure 14-1: Mineral Sands Products Pricing Forecast(US$/t, Real 2026)



Source: TZMI and IperionX analysis., 2026

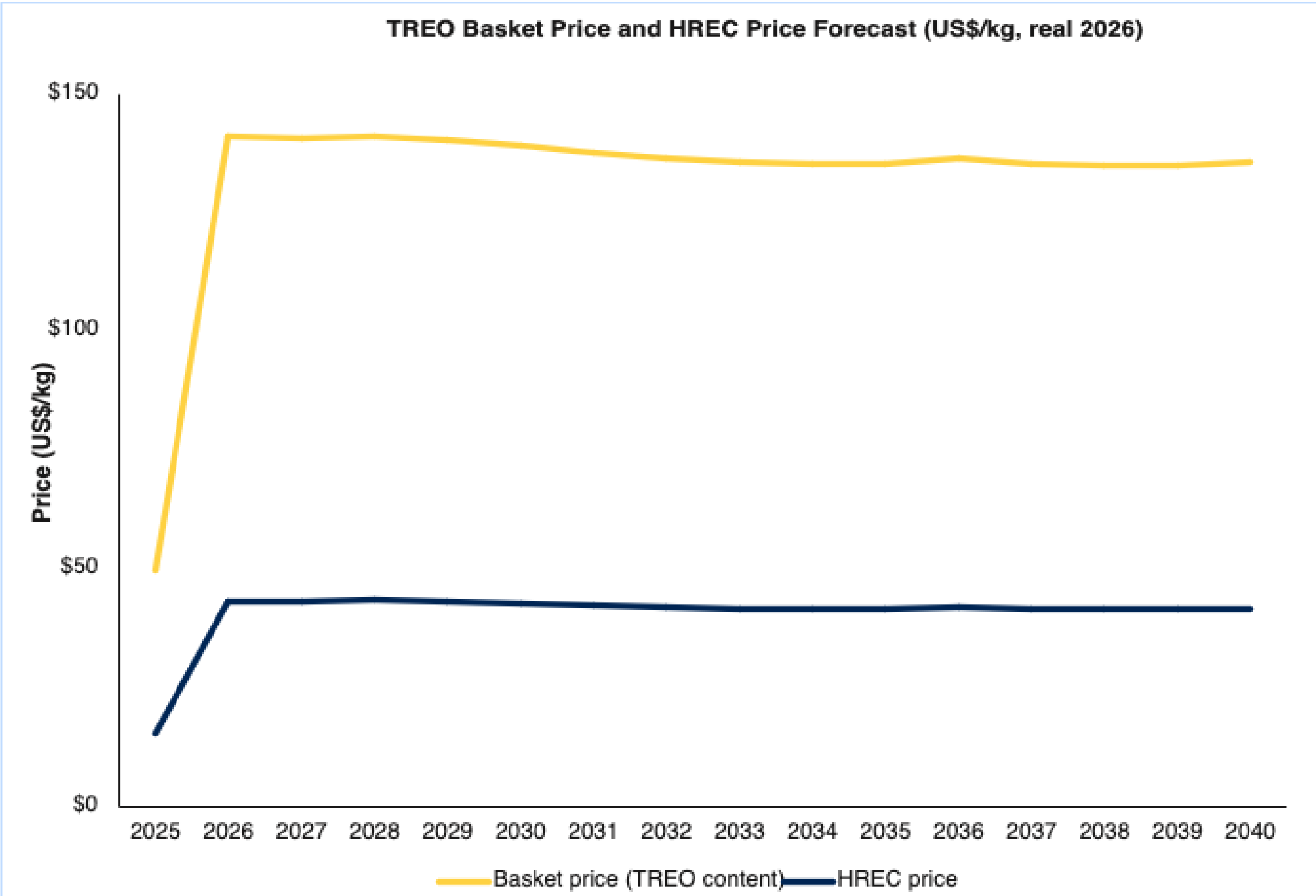
14.4.2 Heavy Rare Earth Concentrate Pricing

The IperionX Rare Earth Concentrate Calculations (April 2026) Report prepared by Argus Media provides forecast for 15 individual rare earth oxide prices and the resulting TREO basket value for the Project HREC, expressed in real 2026 US dollars over the 2020-2040 horizon. IperionX engaged Mine Value Partners (MVP), an independent mining consultancy with significant expertise in commodity markets, mineral development operations, and commercial analysis, to undertake an assessment of the payability of IperionX Heavy Rare Earth Concentrate. MVP's analysis concluded that the implied sustainable payability for a rare earth concentrate like Titan's is expected to sit between 46% and 65% of theoretical basket value, dependent on pricing assumptions. The range supports downstream capital recovery while allowing upstream rents to be allocated in line with long-run economic theory for commodities and represents a return to economically sustainable value sharing where both upstream and downstream participants can invest with confidence and continuity. For financial modelling purposes, a 50% payability assumption is considered a reasonable assumption that is not anomalous or aggressive, and one that is well supported by projected netback economics and other Western precedents. The basket price below was generated by applying a 50% payability factor to the TREO basket value to derive the IPX HREC price. The DFS LOM average price of HREC is US$41,759 per tonne based on the financial model.

Based on the Argus 2026 forecast prices, heavy rare earth elements (notably yttrium, dysprosium, and terbium) account for the majority of the TREO basket value. Despite representing approximately 13% of TREO content by mass, these heavy rare earth elements contribute over 70% of basket value across the forecast period, making the Titan HREC heavy-rare-earth-dominant by value.

The TREO basket price and HREC price forecast are illustrated in Figure 14-2.

Figure 14-2: TREO Basket Price and HREC Price Forecast (US$/kg, Real 2026)



Source: Argus Media, IperionX Rare Earth Concentrate Calculation, Issue 1, April 2026. IPX HREC price reflects the payability assumption, supported by Mine Value Partners' April 2026 analysis ("Expected Payability for Rare Earth Concentrates from IperionX's Titan Project").

14.4.3 Historical and Forecast Prices

Historical commodity prices for the five-year period preceding the DFS (2021-2025) and the corresponding forecast averages are presented in Table 14-4.

Table 14-4: Historic and Forecast Prices (US$/t, real 2026 terms)

Product	Historic 2021-2025 (annual avg. US$/t)	Forecast 2028-2042 (annual avg. US$/t)
Rutile	1,335	1,471
Chloride ilmenite	318	353
Zircon*	1,818	1,907*

Source: TZMI and Argus Media. Historic prices converted to real 2026 US dollars. Forecast averages derived from TZMI (Issue 3, 2025) base case. *Zircon prices were used to calculate zircon concentrate prices.

Historical individual rare earth oxide prices used as context for the HREC pricing assumptions are summarized in Table 14-5.

Table 14-5: Historic and Forecast REO Prices (US$/kg, real 2026 terms)

Rare Earth Oxide	Historic 2021-2025 (annual avg, US$/kg)	Forecast 2028-2042 (annual avg. US$/kg)
La_2O_3	$1.0	$0.70
CeO_2	$1.3	$2.24
Pr_6O_{11}	$93.7	$158.64
Nd_2O_3	$97.3	$151.98
Sm_2O_3	$2.6	$7.65
Eu_2O_3	$30.1	$17.32
Gd_2O_3	$46.4	$692.41
Tb_4O_7	$1,429	$3,462
Dy_2O_3	$355	$952.07
Ho_2O_3	$123	$73.99
Er_2O_3	$45.9	$66.14
Yb_2O_3	$15.5	$20.53
Lu_2O_3	$871	$1,074
Y_2O_3	$8.2	$778.96

Source: Historic REO prices from Argus Media (2021-2025 annual averages, real 2026 US dollars); Forecasted prices from Argus Media, IperionX Rare Earth Concentrate Calculations (April 2026), 2028-2042 simple average with 2041-2042 held flat at 2040 values.

14.5 Contracts

Project development is expected to require material contracts related to contract mining, wet concentrator plant and mineral separation plant equipment and services, transportation and logistics, utilities, and product handling; no material contracts required for Project development have been executed. Mining is planned to be performed under a contract mining arrangement, and the wet concentrator plant and mineral separation plant are planned to be owned and operated by IperionX, with equipment, reagents, and specialist services to be procured under standard commercial contracts at a later stage.

Transportation of concentrates and final products, as well as power, water supply, tailings handling, and other site services, are expected to be provided by third parties, but no binding transportation, offtake, or utility agreements are currently in place.

The economic analysis in Section 15 assumes that required contracts will be secured prior to construction and operations on commercially reasonable terms consistent with industry practice.

15 Economic Analysis

15.1 Cash Flow Model

A discounted cash flow model was developed to evaluate the economic viability of the Project. This financial assessment is based on a 14-year mine life and two-phase approach to construction and production. Phase 1 is based on a feed to the rougher circuit of 400 tph and a duration of 4 years and Phase 2 is based on a feed to the rougher circuit of 1,200 tph and a duration of 10 years.

The plant is assumed to operate at a recovery rate of approximately 90% from the ore feed, with a plant availability factor of 95% annually.

All costs and revenues are presented in real terms and denominated in US dollars, with no escalation for inflation).

Project revenue was calculated based on a long-term product pricing projection by year that has been provided by TZMI (ilmenite, rutile, zircon), Argus Media (HREC) and Mine Value Partners (MVP) through the life of the Project. Based on this pricing and the projected lifetime production of approximately 2.5 Mt of concentrate production, total gross revenue for the life of the project is estimated at US$4.08 billion. This assumes an increase in production in Phase 2 commencing in Year 5 of operations

15.2 Taxes and Royalties

The Titan Project will be subject to standard US federal and Tennessee state corporate taxation regimes. The financial model incorporates a federal corporate income tax rate of 21% and a state corporate tax rate of 6.5%, applied to taxable income as defined under applicable US tax laws.

In addition to standard tax provisions, the model includes applicable tax incentives and credits relevant to the project’s critical minerals operation such as depletion tax credits for the applicable mineral. In addition, under the One Big Beautiful Bill Act (OBBBA) the Project is eligible for the 100% first year depreciation deduction.

An allowance for depletion has been made to the taxable income based on 22% for heavy mineral sands (ilmenite, rutile, zircon) and 14% for heavy rare earths. The depletion allowance is limited to a maximum of 50% of the taxable income before depletion.

For the optioned and leased land, IperionX will pay the landowner the greater of 1) US$75 per acre of the property per year, or 2) the production royalty, generally 5% of net revenues from products mined and removed from the property.

15.3 Results

The economic analysis demonstrates a robust financial profile based on a 2-phase construction and operation approach producing an average of approximately 86,000 tpa in Phase 1 and 214,000 tpa during Phase 2 over a 14-year mine life.

Using variable product pricing based on external market studies the project generates US$1.93 billion free cash flow and the post-tax financial model, developed on an unlevered basis, yields a strong net present value at an 8% discount rate (NPV8) of US$813 million and Internal rate of return (IRR) of 39.4%, with a payback period of 3.63 years.

The model reflects conservative assumptions on pricing, operating costs, and ramp-up, and indicates that the Project is economically attractive under current market conditions

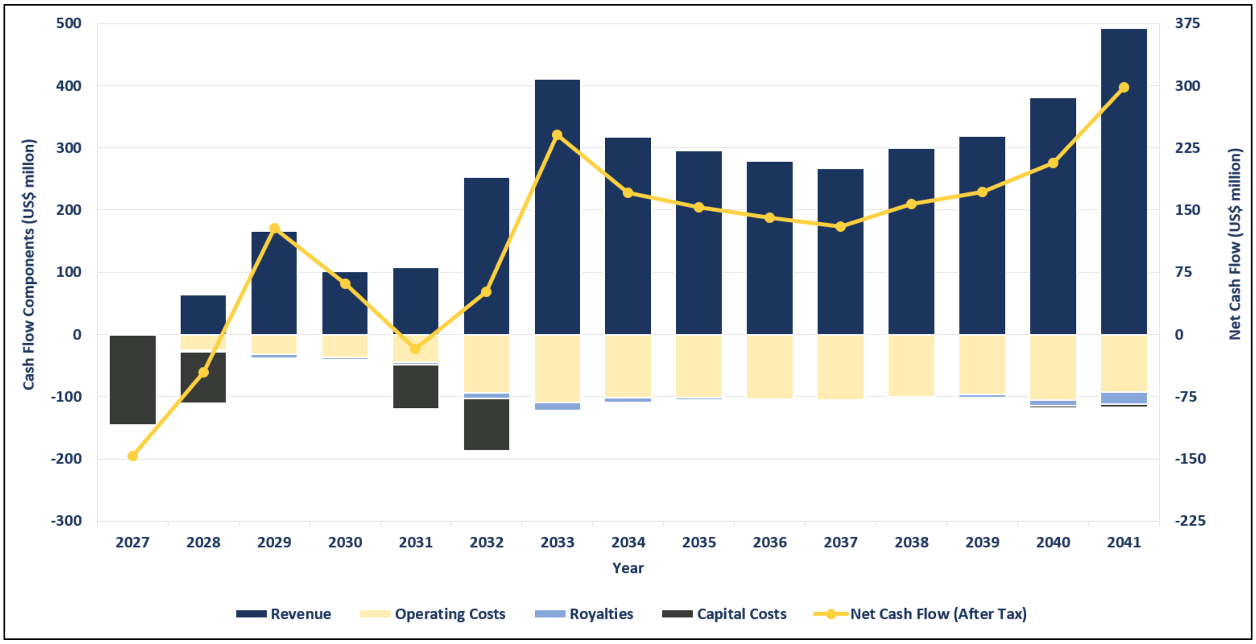
The key economic outcomes are outlined in Table 15-1.

Table 15-1: DFS Financial Results

DFS Financial Results	UoM	Value
Total EBITDA	US$ million	2,804
Pre-Tax NPV8	US$ million	1,016
Pre-Tax IRR	%	42.6
Pre-Tax Payback Period	Year	3.49
After-Tax NPV8	US$ million	813
After-Tax IRR	%	39.4
After-Tax Payback Period	Year	3.63
NPV/Initial Capital	US$	3.56
NPV/Total Capital	US$	2.13

Total cash generated by the Project at the end of project life is US$1.93 billion and the after-tax payback period equates to 3.63 years. The real cash flow forecasts provided on an annualized basis in Figure 15-1.

Figure 15-1: Titan Project After Tax Real Cash Flows



Note: Figure prepared by Primero, 2026.

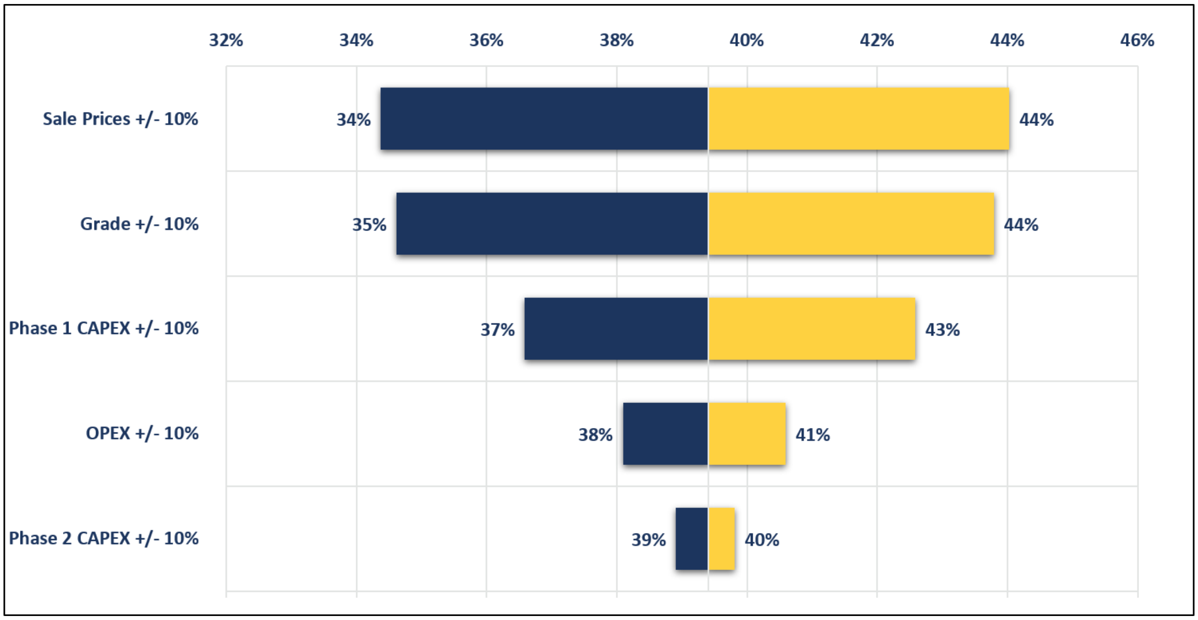
15.4 Sensitivity Analysis

A sensitivity analysis was performed to assess Project sensitivity to: capital cost estimates, operating cost estimates, grade, and product pricing.

In terms of IRR (Figure 15-2), the Project is most sensitive, in order from most to least sensitive, to:

- product pricing
- grade
- Phase 1 capital costs
- operating costs
- Phase 2 capital costs.

Figure 15-2: Titan Project Sensitivity Analysis – After Tax IRR

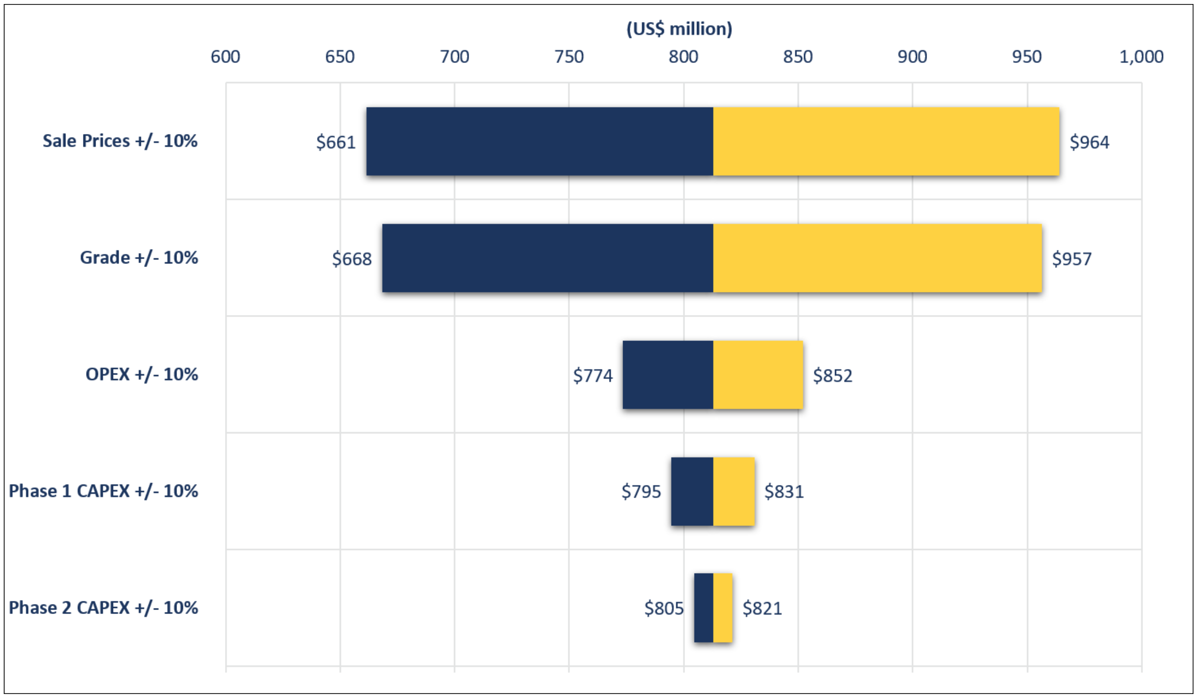


Note: Figure prepared by Primero, 2026.

In terms of the NPV (Figure 15-3), the Project is most sensitive, in order from most to least sensitive, to:

- product pricing
- grade
- operating cost estimates
- Phase 1 capital costs
- Phase 2 capital costs

Figure 15-3: Titan Project Sensitivity Analysis – After Tax NPV8



Note: Figure prepared by Primero, 2026.

16 Risks and Opportunities

16.1 Risks

Noteable project risks identified by the Competent Persons that could potentially impact the Titan mining and processing operations include:

1. Commodity pricing drops unexpectedly, due to overseas competition and flooding of the market.
2. Discharged water does not meet permit requirements for discharge from site, which may result in permit violations and public protests or environmental incidents.
3. Underperformance of the mining contractor may lead to lower-than-expected production levels.
4. Permits and/or mitigation measures related to mining through streams and wetlands are unsuccessful and prohibit full extraction of reserves within mine plan.
5. TVA is unable to provide the necessary electrical power to service the mine and plant operations prior to Phase 2 of the project.
6. Desliming circuit may allow slimes through to the wet concentrator plant which will result throughput reduction or restriction.
7. Periods of high slimes may slow plant throughput, due to thickener constraint on load handling capability.
8. Inability to maintain mineral separation plant building temperature and humidity impacting plant performance and recovery.

A nominal 10% contingency allowance was used for the direct and indirect costs of the design and supply estimate. Contingency allowance was not added to the budget estimate items. This was considered contractor's contingency which would be applicable to a fixed price design and supply contract. This contingency allowance sits outside of the Owner's contingency risk.

It is recommended the Owner's contingency account for the following additional key risks that are not accounted for in the design and supply cost estimate:

1. Cost escalation resulting from time and economic events.
2. Movement in foreign exchange rates.
3. Escalation and uncertainty in logistics costs due to timing being a long way out from contract execution.
4. Escalation resulting from changing suppliers from low-cost country vendors.
5. Escalation resulting from restriction in trade or changes to import tariffs.

6. Process performance not being achieved due to equipment supplied from low-cost countries not performing as intended.
7. Unable to obtain enforceable process and throughput performance guarantees from vendors.
8. Unable to use low-cost equipment and manufacturing supply chain due to sanctions on supply of equipment into international projects associated with rare earths.
9. Tailings dewatering equipment proves to be ineffective as planned and additional CAPEX/OPEX is necessary to achieve required moisture contents.

16.2 Opportunities

16.2.1 Project Area

Opportunities include:

> Potential to add to the property holdings and increase the exploration potential for the mineral tenure to host prospective McNairy Formation units.

> If the mineralization currently classified as Inferred, can be upgraded with additional drilling and mining study support.

> Review of the mining area vs floodplain buffer allocations to determine if a portion of the buffer area can be included in the mine plan.

> Varying the COG, thereby increasing annual ROM ore tonnage.

> Increasing the Revenue Factor, thereby expanding the optimized pit shell and increasing annual ROM ore tonnage.

> Outside the Project area, the “Camden area” mineral tenure drill results suggest the potential to support Mineral Resource estimation. The area is favourable because erosion has removed the Upper McNairy Formation unit, exposing Lower McNairy Formation sands.

16.2.2 Processing

The following opportunities have been identified for further exploration in subsequent project phases:

> Increase extent of modularisation, particularly around the belt filter press once preferred vendor has been selected.

> Further optimize the extent of piping pre-assembly and balance the use of pipe racks to minimize site construction costs.

> Complete a transport study to investigate inland transport options to reduce risk and costs of freight to site.

17 Conclusions

Under the assumptions presented in this Report, the Project has a mine plan that is technically feasible and economically viable. The positive net present value of the Project supports the Ore Reserve estimates.

18 Competent Person Statements

This DFS Supporting Technical Information Report has been prepared to support the Company's Australian Securities Exchange (ASX) announcement of the Definitive Feasibility Study for the Titan Project. Information relating to Exploration Results, Mineral Resources and Ore Reserves has been prepared and reported in accordance with the JORC Code 2012. The technical information in this summary is based on work completed by the relevant Competent Persons and supporting technical specialists identified in this Report.

18.1 Competent Persons Statements

The information in this Report that relates to Exploration Results is based on, and fairly represents, information compiled and/or reviewed by Mr. Adam Karst, P.G., a Competent Person who is a Registered Member of the Society of Mining, Metallurgy and Exploration (SME) which is a Recognised Professional Organisation (RPO). Mr. Karst is an employee of Karst Geo Solutions, LLC. Mr. Karst has sufficient experience which is relevant to the style and type of mineralisation 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.

The information in this Report that relates to the Mineral Processing and Metallurgical Testing, Processing and Recovery Methods are based on, and fairly represents, information compiled and/or reviewed by Mr. Etienne Raffaillac, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr. Raffaillac is an employee of Mineral Technologies Pty Ltd. Mr. Raffaillac has sufficient experience which is relevant to the style and type of mineralisation 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. Raffaillac consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this Report that relates to Mineral Resource Estimate is based on, and fairly represents, information compiled and/or reviewed by Mr. John Eckman, a Competent Person who is a Certified Professional Geologist, American Institute of Professional Geologists (#CPG-11383) and a registered member of the Society for Mining, Metallurgy & Exploration (SME #4197942), both of which are Recognised Professional Organisations (RPO). Mr. Eckman is an employee of Marshall Miller & Associates. Mr. Eckman has sufficient experience which is relevant to the style and type of mineralisation 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. Eckman consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The information in this Report that relates to Ore Reserve Estimate is based on, and fairly represents, information compiled and/or reviewed by Mr. Justin Douthat, a Competent Person who is a Registered Member of the Society of Mining, Metallurgy & Exploration (SME #4028345), which is a Recognised Professional Organisation (RPO). Mr. Douthat is an employee of Marshall Miller & Associates. Mr. Douthat has sufficient experience which is relevant to the style and type of mineralisation 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. Douthat consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The information in this Report that relates to Cost Estimates and Economic Analysis is based on, and fairly represents, information compiled or reviewed by Mr. Alexandre Roy, a Competent Person who is a Registered Member of Ordres des Ingenieurs du Quebec, which is a Recognised Professional Organisation (RPO). Mr. Roy is an employee of Primero Group Americas Inc. Mr. Roy has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves" (the 2012 JORC Code). Mr. Roy consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

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19.2 Abbreviations, Acronyms and Units of Measure

Acronym	Definition
AACE	Advancement of Cost Engineering
Adamas	Adamas Intelligence
ARAP	Aquatic Resource Alteration Permit
Argus	Argus Media

Acronym	Definition
ASTM	ASTM International
AUD	Australian Dollar
CAPEX	Capital cost
CeO_2	Cerium (IV) oxide
cm	centimeters
COG	Cut-Off Grade
CSX	CSX Transportation
CUP	Concentrate Upgrade Plant
CWA	Clean Water Act
DFS	Definitive Feasibility Study
DRH	Division of Radiological Health
EPA	US Environmental Protection Agency
EPCM	Engineering, Procurement, Construction, and Management
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FPP	Feed Preparation Plant
g/cm^3	grams per cubic centimeter
Geoprobe	Geoprobe 5140LS roto-sonic drill rig
GeoSpark	GeoSpark Consulting Inc.
gpm	Gallons per minute
G-Squared L.L.C.	G-Squared
Ha	Hectare
HDR	HDR Engineering, Inc.
HLS	Heavy Liquid Separation
HM%	Heavy mineral percent
HMC	Heavy Mineral Concentrate
HMS	Heavy mineral sands
HREC	Heavy rare earth concentrate, HREE-dominant by value
HREE	Heavy rare earth elements
IperionX	IperionX Limited
IRR	Internal Rate of Return
Irtec	Innovative Reclamation Technologies & Engineering Co., Inc.
IXCM	IperionX Critical Minerals, LLC
kg	Kilograms
KGS	Karst Geo Solutions, LLC
km	Kilometers
km^2	Square kilometers
K-MINE	K-MINE Group
kV	Kilovolt
lbs	Pounds
LOM	Life of mine
m/day	Meters per day
m^2/day	Square meters per day
MCCs	Motor control centers
MM&A	Marshall Miller & Associates, Inc.
MRE	Mineral resource estimate
MSHA	US Department of Labor Mine Safety and Health Administration
MSP	Mineral Separation Plant

Acronym	Definition
MT	Mineral Technologies Pty Ltd
Mt	Million metric tonnes
Mtpa	Million tonnes per annum
MUP	Mining Unit Plant
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
NPI	Non-process infrastructure
NPV	Net Present Value
NPV8	Net Present Value at 8% discount rate
OBBBA	One Big Beautiful Bill Act
OPEX	Operating cost
Pace	Pace Analytical Services LLC
Primero	Primero Group Americas Inc.
QAQC	Quality assurance and quality control
QEMSCAN	Quantitative evaluation of materials by scanning electron microscopy
RC	Reverse Circulation
RCRA	Resource Conservation and Recovery Act
REDS	Rare earth drum separator
REE	Rare earth elements
REE*	the combined rare earth %, Monazite % and Xenotime %
REP	Rare Earth Plant
ROM	Run of mine
ROW	Right-of-way
S&ME	S&ME, Inc.
SEC	US Securities and Exchange Commission
SGS Lakefield	SGS - Canada - Lakefield
SI	International System of Units metric System
SiO_2	Silicon dioxide
%Slimes	Percent slime
t/m^3	Tonnes per cubic meter
Tb_4O_7	Terbium oxide
TDEC	Tennessee Department of Environment and Conservation
TDEC-DWR	TDEC Division of Water Resources
THC	Tennessee Historical Commission
the Project	the Titan Product
the Study	Definitive Feasibility Study
THM	Total Heavy Minerals
THM%	Percent of total heavy minerals
$TiCl_4$	Titanium Tetrachloride
TiO_2	Titanium Dioxide
tonnes	Metric tonnes
tpa	Tonnes per annum
tph	Tonnes per hour
TREO	Total Rare Earth Oxides
TVA	Tennessee Valley Authority
TZMI	TZ Minerals International Pty Ltd
US	United States
US$	United States Dollars

Acronym	Definition
US$/t	US Dollar per tonne
USACE	US Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	US Geological Survey
WCP	Wet Concentrator Plant
WET	Whole Effluent Toxicity
WoTUS	Waters of the US
XRF	X-ray fusion
ZrO_2	Zirconium Dioxide

19.3 Glossary of Terms

Term	Definition
block model	A 3-dimensional grid of cells used to represent spatial, geological, or economic data, primarily in mining for modeling ore bodies.
Competent Person	A 'Competent Person' is a minerals industry professional who is a Member or Fellow of The Australasian Institute of Mining and Metallurgy, or of the Australian Institute of Geoscientists, or of a 'Recognised Professional Organisation' (RPO), as included in a list available on the JORC and ASX websites. These organisations have enforceable disciplinary processes including the powers to suspend or expel a member. A Competent Person must have a minimum of five years relevant experience in the style of mineralisation or type of deposit under consideration and in the activity which that person is undertaking. If the Competent Person is preparing documentation on Exploration Results, the relevant experience must be in exploration. If the Competent Person is estimating, or supervising the estimation of Mineral Resources, the relevant experience must be in the estimation, assessment and evaluation of Mineral Resources. If the Competent Person is estimating, or supervising the estimation of Ore Reserves, the relevant experience must be in the estimation, assessment, evaluation and economic extraction of Ore Reserves.
concentrate	The concentrate is the valuable product from mineral processing, as opposed to the tailing, which contains the waste minerals.
cut-off grade	The grade (*i.e.,* the concentration of metal or mineral in rock) that determines the destination of the material during mining.
data verification	The process of confirming that data has been generated with proper procedures, has been accurately transcribed from the original source and is suitable to be used for Mineral Resource estimation.
Feasibility Study	A Feasibility Study is a comprehensive technical and economic study of the selected development option for a mineral project that includes appropriately detailed assessments of applicable Modifying Factors together with any other relevant operational factors and detailed financial analysis that are necessary to demonstrate at the time of reporting that extraction is reasonably justified (economically mineable). The results of the study may reasonably serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. The confidence level of the study will be higher than that of a Pre-Feasibility Study. Terms such as "Bankable Feasibility Study" and "Definitive Feasibility Study" are noted as being equivalent to a Feasibility Study as defined here.
encumbrance	An interest or partial right in real property which diminished the value of ownership but does not prevent the transfer of ownership. Mortgages, taxes and judgements are encumbrances known as liens. Restrictions, easements, and reservations are also encumbrances, although not liens.
gangue minerals	The commercially worthless, unwanted rock or mineral materials associated with valuable ore deposits.

Term	Definition
heavy liquid separation	Heavy liquid separation is an analytical laboratory-based float-sink test to separate minerals based on their density by means of a high-density liquid to aid in prediction of mineral grades from future gravity-based processing circuitry.
heavy minerals	Heavy minerals are defined as minerals having a higher density than quartz, the most common rock-forming soil mineral with a density of 2.65 g/cm3.
Indicated Mineral Resource	An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to assume geological and grade (or quality) continuity between points of observation where data and samples are gathered. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Ore Reserve.
induced roll magnetic separator	A mineral processing device that uses electromagnetically generated high intensity magnetic fields to continuously separate small paramagnetic particles (ranging from less than 2 micron to 45 micron) from non-magnetic materials.
Inferred Mineral Resource	An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration
Measured Mineral Resource	A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to confirm geological and grade (or quality) continuity between points of observation where data and samples are gathered. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Ore Reserve or under certain circumstances to a Probable Ore Reserve.
Ore Reserve	An 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported.
Mineral Resource	A 'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific

Term	Definition
	geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.
mineral sands	Concentrations of heavy minerals in an alluvial (old beach or river system) environment.
mineral separation plant	Using screening, magnetic, electrostatic and gravity separation circuits to separate valuable minerals from non-valuable minerals, and to make different ilmenite, rutile, leucoxene and zircon product grades for specific customer requirements.
Modifying Factors	'Modifying Factors' are considerations used to convert Mineral Resources to Ore Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.
open pit	A mine that is entirely on the surface. Also referred to as open-cut or open-cast mine.
Probable Ore Reserve	A 'Probable Ore Reserve' is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Ore Reserve is lower than that applying to a Proved Ore Reserve.
Proved Ore Reserve	A 'Proved Ore Reserve' is the economically mineable part of a Measured Mineral Resource. A Proved Ore Reserve implies a high degree of confidence in the Modifying Factors.
rare earth roll magnetic separator	A dry, permanent magnetic separator used to remove or concentrate weak paramagnetic particles (ranging from 15mm to 75mm) from non-magnetic materials, particularly in mineral processing, ceramics, and recycling industries.
reclamation	The restoration of a site after mining or exploration activity is completed.
royalty	An amount of money paid at regular intervals by the lessee or operator of an exploration or mining property to the owner of the ground. Generally based on a specific amount per tonne or a percentage of the total production or profits. Also, the fee paid for the right to use a patented process.
run-of-mine material	Raw, unprocessed ore immediately after extraction from a mine.
specific gravity	The weight of a substance compared with the weight of an equal volume of pure water at 4°C.
total heavy minerals	Total volume of heavy minerals within a deposit.
up current classifier	A mineral processing device that separates particles based on size and density using an upward flow of water to create a teeter-bed (fluidized bed).
variogram	A graphical tool in geostatistics utilized to measure how data points differ as the distances between the points increase. The method plots the average squared difference between pairs of data points against their separation distance and serves as a base for mapping spatial continuity and modeling spatial correlation for techniques like kriging.
wet concentration plant	Utilizing sizing and gravity differentiation between heavy minerals, valuable heavy minerals, clay and quartz to produce a high-grade (between 85 and 98 per cent) heavy mineral concentrate, retaining valuable minerals and minimizing gangue within the concentrate.

APPENDIX 2: JORC TABLE 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.	> A roto-sonic drill rig utilized a 3-meter (10-foot) core barrel to obtain direct 1.5-meter (5-foot) samples of the unconsolidated geological formations hosting the mineralization in the study area. All holes were drilled vertically, essentially perpendicular to the formations. Drilled samples of 3-meter length sections were extracted in equal length plastic sleeves. Geologists then divided the core into two 1.5-meter sections that were paper logged for lithologic characteristics. Samples were collected for laboratory analysis. > Field analysis included panning sonic drill hole samples to estimate heavy mineral percentages using samples collected down the center of each 1.5-meter section. > The sonic cores produced approximately 2Kg samples for laboratory heavy liquid separation and mineralogical testing. > Mud-rotary drill holes with split spoon and Shelby tube sampling were utilized for bulk density samples in 2025. > All exploration sampling was conducted using drill methods. No geological mapping, geochemical sampling, or geophysical surveys were completed.
Drilling techniques	> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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 was vertical. > Drill rigs used include a Geoprobe 5140LS roto-sonic drill rig (Geoprobe) a Terrasonic 150c rig (Terrasonic), and a Wallis RC rig. The Geoprobe core barrel was 3 meters long, and 10 centimeters in diameter with a 15-centimeter diameter outer casing. The Terrasonic core barrel was 3 meters long and had a 10-centimeter diameter core barrel. > Soil test borings for this exploration were advanced using mud rotary drilling techniques (in general accordance with ASTM D5783). Soil samples were obtained at approximately 2.5-foot (0.76 m) intervals in the upper 10 feet (3 m) and at 5-foot (1.5 m) intervals thereafter, in general accordance with ASTM D1586. In addition to split-barrel sampling, relatively undisturbed Shelby tube samples were obtained from selected boring locations and depths, in general accordance with ASTM D1587-00.
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 was measured, and the recovery was calculated as length of recovered core divided by length drilled (typically 3 meters). > Recoveries were generally >95%. Areas of higher elevation in the western portion of the deposit had lower recoveries due to difficult sample capture associated with dry conditions and free-flowing sand.

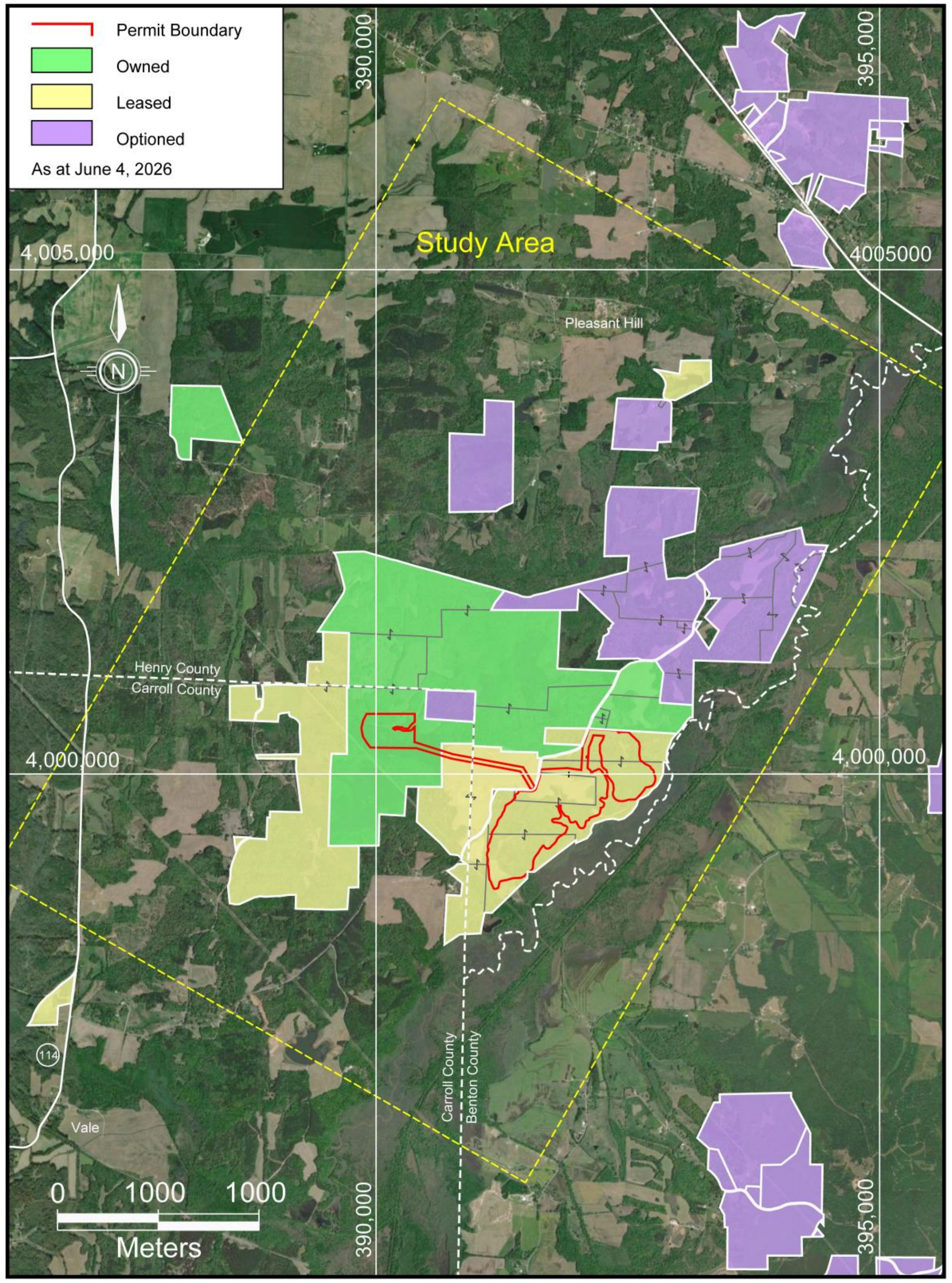
Criteria	JORC Code Explanation	Commentary
Logging	> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. > Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. > The total length and percentage of the relevant intersections logged.	> Drilled core samples were geologically logged for lithological and mineralogical parameters to determine the main geological unit, and mineralized zone for 1.5-meter intervals. All samples were logged. > Field core logging was qualitative including grain-size, roundedness, sorting, color, and formation, was recorded onto a paper log ticket before entering into the GeoSpark database. Quantitative logging by a field geologist involved an estimation of percent total heavy minerals (% THM) from panned sand samples of each interval. Logged core samples were also photographed. > A chip tray was maintained for each drill hole to keep a representative sample for each interval. > A total of 140 roto-sonic holes were drilled with 5,644 meters logged. The average length logged is 40.3 meters per drill hole. Drill holes commonly drilled through the McNairy Formation into the underlying Coon Creek Formation. Twelve drill holes did not reach the Coon Creek Formation.
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.	> Drilled samples of 3-meter length sections were extracted then divided into two 1.5-meter sections. An even split was collected with a trowel along the entire length of the sample interval for the laboratory sample. The sonic drilling method was used to collect representative unconsolidated mineral sands samples through the sand deposit. > Sampling was with a Geoprobe drill core rig. This method alternates advancement of a core barrel and a removeable casing (casing is used when needed to maintain sample integrity). At times water was used during drilling to create a head on the formation by lubricating the hole. This assisted in allowing core to be brought to the surface. > The sample sizes running the length of the core interval (about 2 kilograms) are appropriate to sample the grain size of the material being sampled, sand and clay. The sample volume weights were appropriate for the analytical method(s) being used. Samples included oversized, heavy mineral sands and slimes. The remaining sample was further split into a replicate/archival sample. > Quality duplicates were taken 3% of the time (241 duplicates samples) during sampling for control measures. > Density results were provided by S&ME in *Laboratory Determination of Density of Soil Specimens* forms, which include ASTM International (ASTM) test D7263. Samples were collected by mud rotary drilling with split spoon and Shelby tube samples.

Geology	No. of Samples	Dry Unit Wt. (t/m³)	Drill Hole Numbers
Overburden	2	1.72	MB-04, MB-10,
Upper McNairy Formation unit	7	1.57	MB-04, MB-12, MB-13, MB-16, MB-21, MB-25, MB-34
Lower McNairy Formation unit	10	1.57	MB-04, MB-12 (2), MB-16 (2), MB-21, MB-24, MB-25, MB-34, MB-36
Coon Creek Formation	4	1.54	MB-04, MB-10, MB-13, MB-25

Criteria	JORC Code Explanation	Commentary
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	> Drill samples were sent to the SGS facility in Lakefield, ON, Canada and Bureau Veritas in Perth, Australia. SGS Lakefield is accredited as an ISO 17025 facility for selected analytical techniques. Bureau Veritas holds ISO 17025 accreditations for selected analytical techniques. SGS did heavy liquid separation and QEMSCAN testing. After removal of slimes (sizing 44-micron [325 mesh]) and oversize (595 micron [30 mesh]) the content of heavy minerals (HM) grain is defined by minerals heavier than 2.95 specific gravity and a grain size between 44 micron and 595 micron. Scanning electron microscopy (QEMSCAN) analytical methods were used for titanium, rare earth, and zirconium minerals assays. > S&ME collected drill hole samples for bulk density testing and performed laboratory ASTM tests for material and ore bulk density. > Mineral processing and metallurgical testwork was completed by, or under the supervision of, Mineral Technologies' Laboratories located in Florida, US and in Queensland, Australia. The laboratories are ISO 9001, 45001 and 14001 accredited. > Assays were conducted mainly by SGS Lakefield, but also Bureau Veritas in Perth, Australia in the early drilling phase, using X-ray fluorescence (XRF), laser ablation/inductively-couple plasma mass spectrometry (ICP–MS) and Bureau Veritas holds ISO 17025 accreditations for selected analytical techniques. > Quality check samples (157 blanks) were taken 2% of the time and duplicates (241) were taken 3% of the time for control measures.

Criteria	JORC Code Explanation	Commentary
Verification of sampling and assaying	> The verification of significant intersections by either independent or alternative company personnel. > 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.	> The assay data were independently visually validated and cross-checked against the geology. Core photographs with logging tickets were used for geological verification. The significant intersections of the core are often observed visually from material color changes. > From a review of the log records and 177 core photos, the CP found logging records to be consistent in format and content. > Twinned holes have not been used. Analysis of twin drill hole data for other similar deposits indicates that they are of limited value due to the inherent variability over small distances for this style of mineralization. It is the assessment of the Competent Person [at drilling phase] that the absence of the 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 there is any bias between the two drilling methods. > Sample data intervals collected in the field were assigned a laboratory tag book number. Samples are stored in plastic sample bags and zip tied shut. The data and tag number are recorded in the samples tab of the GeoSpark database. Data is transferred weekly to the company network and verified against the field logbook. The data are checked and verified by the geologist. Lab data are added as they become available and verified against the field geologist visual THM grade and slime estimates. Any questionable data that cannot be rectified is removed from the database. Remaining core samples (1/4 core) are bagged, labelled, and stored in barrels on the property. > Screening procedures at SGS changed from a dry screening method to a wet screening method to increase sieve analysis accuracy (May 1, 2022). Slime values for the initial 140 dry process samples were corrected by IperionX using a linear regression equation to a wet screen value. As a result of the QEMSCAN sample re-test, SGS cited an underestimation of tourmaline and monazite rare earth element (REE*) minerals for the 2025 results, reportedly due to software processing. For this reason, SGS revised QEMSCAN results for all the 2025 composites to correct the tourmaline and monazite results. The corrected adjustment was confirmed with resample results.
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.	> Drill collars were surveyed using a Trimble hand-held global positioning system instrument. Drill hole collars had an accuracy of approximately 10 meters. The elevation accuracy of the Trimble Juno 3B is 1-3 meters postprocessed (2-5 meters real-time). > No down hole surveys were performed. Drill holes are drilled vertically and are relatively shallow, so minor drill hole deviation is expected to be insignificant and immaterial to the geologic characterization of the Project. > The coordinate system and datum used for mapping and Mineral Resource processes is UTM Zone 16N, NAD83. > Aerial topography for the Study area was supplied by G-Squared L.L.C. [June 9th,2023] with a vertical compliance of +/- 0.5 foot and supplemented with USGS Lidar (2017) survey with a vertical compliance of +/- 15 cm.
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.	> Drill hole spacing is generally 150 meters x 300 meters. Some areas have difficult access and drill spacing in those areas is wider spaced, approximately up to 300 meters x 600 meters. > Drill hole spacing is deemed adequate to establish geological and grade continuity of the resource. > Confidence classification was determined based on drill hole density reflecting geological confidence; firstly, from the QEMSCAN sampled hole locations and secondly, from all drill holes with THM analysis and geostatistical variogram models. > Samples collected from drill hole samples in the field were not composited. > Samples for QEMSCAN mineralogical assemblage analysis were composited. Composite samples of the Upper and Lower McNairy geologic units were analyzed separately. > Mineral Resource tonnes are appropriate for measured, indicated, and inferred categories, and all of the Ore Reserve tonnes are in the proved and probable categories in accordance with the 2012 JORC Code.
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 mineralization is generally flat lying enabling vertical drilling to be appropriate. No biased was introduced by the drilling orientation. > Drill holes are aligned with the deposit orientation. Drill hole alignment is generally rows of holes spaced with 150 meters x 300 meters with the 300-meter spaced rows aligned in the strike direction approximately north 30-degree east. The 150-meter spaced holes align in the dip direction. The drill hole orientation and vertical drill holes are not considered by the CP to have a biased on sampling the deposit. > A variogram was used to confirm a major direction of continuity for the sample data. The result produced an azimuth orientation of 33.75 degrees (N33.75E), with zero-degree plunge in the strike orientation. This orientation aligns with the drill holes.
Sample security	The measures taken to ensure sample security.	> Geological information was collected on sequentially numbered tags provided by the laboratory. The number tags were inserted with the associated sample into a sample bag. All sample information with tag number was entered into the Project database (GeoSpark) on a nightly basis. > Sample bags were sealed with a zip tie at the drill site, placed in rice bags, and remained in custody of the field geologist from time of collection until delivery to the Project's temporary storage location on private land. A red security tag was used to secure the top of each rice bag, and these tags were verified by the laboratory to confirm all sample bags were intact when received by the laboratory.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	> Accuracy monitoring was addressed by submission of in-house heavy mineral sand standards developed specifically for the Project. Quality Assurance and Quality Control procedures were observed by Karst Geo Solutions, LLC.

Section 2 Reporting of Exploration Results

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.	> The project is in the United States of America (USA) within the state of Tennessee (TN). Mineral tenements are granted by these Federal (USA) and state (TN) governments. > Land tenure status includes Owned, Leased and Optioned property tracts. **Parcel Status of the Study Area**  Note: Figure prepared by MM&A, 2026.

Criteria	JORC Code explanation	Commentary
		Property Land List

Land Status	km²	Acreage*	Owner	Parcel # (s)	County	Ownership Interest	Grant Date	Expiry Date
Owned	6.03	1,490	IperionX Critical Minerals LLC	168.014.03 167.006.00 171.009.00 171.009.01 171 005.03 171.009.03 171.009.04 005 002.00 044 016.01 171 002.00 171 003.00	Carroll Henry	Surface, Mineral, Water	-	N/A
Leased	0.024	6	Holcomb, W	171 009.02	Henry	Surface, Mineral, Water	21-May-26	30-Oct-49
Leased	0.37	91	Borchert	171 013.00	Henry	Surface, Mineral, Water	29-Aug-24	30-Oct-49
Leased	0.34	84	Pettyjohn	171 008.00	Henry	Surface, Mineral, Water	31-Jan-25	31-Jan-50
Leased	0.98	242	Whistling Wings, LLC	171 011.00 175 013.01 023 002.0	Carroll Henry	Surface, Mineral, Water	24-Oct-23	24-Oct-43
Leased	1.02	252	Wilson	171 010.01 005 003.00 171 010.00	Carroll Henry	Surface, Mineral, Water	17-Jul-25	30-Nov-49
Leased	3.03	748	Dolan	006.030.00 026.009.00 025.017.00 171.001.00 022.020.00	Carroll Henry	Surface, Mineral, Water	31-Mar-26	31-Mar-51
Leased	0.14	34	Holcomb, RE	168.005.02	Henry	Surface, Mineral, Water	10-Apr-26	02-Jan-51
Optioned	0.59	146	Farmer	168.011.00	Henry	Surface, Mineral, Water	15-Jan-21	15-Jan-27
Optioned	2.80	693	Sanders, Timothy	134.014.01 150.008.05 151.008.03 152.009.00 152.011.00 152.013.03 152.020.01 168.018.01 168.019.04 168.013.00 005.002.01	Carroll Henry	Surface, Mineral, Water	30-Nov-20	15-Jan-27
Optioned	0.26	65	Holcomb, Richard JD	168.005.00 168.005.01	Henry	Surface, Mineral, Water	15-Jan-21	15-Jan-32
Optioned	0.59	147	Palmer, Kyle	064.022.00 063.005.01	Benton	Surface, Mineral, Water	1-June-21	1-June-27
Optioned	2.42	599	Palmer, Mark & Jackie	063.005.00 063.006.00 061.010.00 064.020.00 064.021.00	Benton	Surface, Mineral, Water	30-May-21	30-May-27

(Continued below)

Criteria	JORC Code explanation	Commentary

Land Status	km²	Acreage*	Owner	Parcel # (s)	County	Ownership Interest	Grant Date	Expiry Date
Optioned	1.72	424	Patterson/Medema	171.005.00 168.017.00 171.005.01 048.017.00 171.005.02 171.005.04 169.017.01	Benton Henry	Surface, Mineral, Water	30-May-21	30-May-27
Optioned	0.42	103	Hudson/Plant	060.001.00	Benton	Surface, Mineral, Water	4-Mar-21	4-Mar-32
Optioned	2.52	622	Noles, Kenneth & Mary	129.027.00 129.027.01 135.005.01 129.028.00	Henry	Surface, Mineral, Water	21-Apr-21	21-Apr-32
Optioned	9.12	2,254	McDonald. Michael	162.009.001 162.018.00 163.009.00 162.009.00	McNairy	Surface, Mineral, Water	30-Oct-21	30-Oct-32
Optioned	2.01	497	Todd, Gary	165.019.00 010.001.00	Carroll Henders on	Surface, Mineral, Water	15-Sep-21	15-Sep-32
Optioned	0.55	136	Wright, Anita	050.020.00 050.036.01	Benton	Surface, Mineral, Water	15-Jun-21	15-Jun-32
Optioned	4.72	1,166	Olive, Bobby, Tiffany	166.011.00 010.014.00 010.013.00 011.037.03 010.014.01	Carroll Henders on	Surface, Mineral, Water	30-Aug-21	30-Aug-32
Optioned	0.63	155	Sanders, Weldon & Betty	151.008.00 151.009.00 151.009.04 151.009.03	Henry	Surface, Mineral, Water	15-Jan-21	15-Jan-27
Optioned	0.55	137	Markham, Donnal	064.010.00 064.007.00	Benton	Surface, Mineral, Water	15-Nov-21	15-Nov-32

> IperionX prepared the list of parcel titles and information for the properties. MM&A has not verified leases, deeds, surveys, or other property control instruments pertinent to the subject project and study.

> There are no known legal or environmental encumbrances that would impede development of the subject Ore Reserves

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	> Acknowledgment and appraisal of exploration by other parties.	> HDR Engineering, Inc. complete eleven roto-sonic drill holes for the purpose of a hydrogeological study for the IperionX project. The HDR drill holes do not contribute to the mineral exploration. > S&ME, Inc. completed 44 mud-rotary drill holes with split spoon and Shelby tube sampling (1,692 meters) for geotechnical evaluations in 2025. Bulk density testing of the McNairy Formation members were collected from these drill holes. S&ME completed another 18 drill holes (160 meters) for Wet Concentrator Plant geotechnical assessment. These 18 drill holes were not evaluated for the Mineral Resource.
Geology	> Deposit type, geological setting and style of mineralisation.	> A heavy mineral sands deposit is created through physical and mechanical concentration of detrital minerals liberated through weathering. The heavy minerals sands of the Study are hosted in the McNairy Formation, with the higher HM grades mainly in the lower portion of the McNairy Formation lower member. > The Project is situated in the northeastern extent of the East Gulf Plain, adjacent to the Mississippi Embayment, a large southward-plunging syncline within the Atlantic Coastal Plain, Physiographic Province. The embayment is filled with sediments and sedimentary rocks of Cretaceous to Quaternary age. > Surface geology represents a pro-grading deltaic environment during a regressive marine sequence, evidenced by the coarsening upward graded sequence of the deposit. The McNairy Formation thickness varies from 5 meters (eastward) to 67 meters (westward) within the Study area. Local units have a very shallow dip to the west.

Criteria	JORC Code explanation	Commentary
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 metres) 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 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.	> Exploration drilling and samples assay results are tabulated into a project database by GeoSpark, in service to IperionX. The database includes information by hole including header data, lithologic data, samples data analysis and mineral composition analysis. > Header information for each hole includes collar elevation, easting and northing surveyed with a Trimble Juno 3B in UTM Zone 16N, NAD83 coordinates. > Holes were drilled vertically. A downhole survey to record dip and azimuth was not deemed necessary. The drill holes are relatively short in depth and core was recovered to the bottom of each hole. > Holes were drilled through the McNairy Formation into the underlying Coon Creek Formation. Depths of horizons of relevant geologic units were recorded by the field geologist for entry into the database. The average hole depth is 40.3 meters.

Row #	Hole	Length_m	UTM_East	UTM_North	UTM_Elevation	Azimuth
1	20-SBO-023	24	391210	3999038	121.9	0
2	20-SBO-024	18	391232	3998771	117.4	0
3	20-SDW-020	43	391615	3999819	157.9	0
4	20-SDW-021	40	392004	3999846	143.0	0
5	20-SDW-022	46	391395	4000069	152.3	0
6	20-SLS-011	30	394351	3992416	162.5	0
7	20-SLS-012	15	394419	3993184	145.7	0
8	20-SRS-010	21	395096	3991751	165.0	0
9	20-STS-016	43	393111	4001534	144.3	0
10	20-STS-017	21	392723	4001748	119.3	0
11	20-STV-008	37	391936	4001011	135.6	0
12	20-STV-009	49	391476	4000645	146.1	0
13	20-STV-013	40	391174	4000687	129.2	0
14	20-STV-018	49	391505	4001077	133.7	0
15	20-STV-019	46	390621	4000460	158.9	0
16	20-SWW-001	40	392459	4000084	139.9	0
17	20-SWW-002	27	392099	4000108	137.9	0
18	20-SWW-003	37	391745	3999482	137.7	0
19	20-SWW-004	12	392019	3999433	116.3	0
20	20-SWW-005	15	391590	3999689	158.0	0
21	20-SWW-006	37	391339	3999770	138.5	0
22	20-SWW-007	27	390782	3998991	124.1	0
23	20-SWW-014	49	391659	4000035	147.9	0
24	20-SWW-015	18	391048	3998628	118.8	0
25	21-SBF-032	24	392714	4002418	119.8	0
26	21-SBF-033	30	393094	4002820	130.4	0
27	21-SBF-045	27	392516	4002426	121.5	0
28	21-SBF-046	27	392395	4002676	121.3	0
29	21-SBF-047	18	393002	4002503	119.0	0
30	21-SBO-070	55	391316	3999361	151.7	0
31	21-SBO-071	43	391453	3999228	139.9	0
32	21-SBO-072	27	391737	3999317	125.0	0
33	21-SCB-212	46	389746	4001755	124.1	0
34	21-SCB-213	43	389997	4001694	121.1	0

(Continued below)

Criteria	JORC Code explanation	Commentary

Row #	Hole	Length_m	UTM_East	UTM_North	UTM_Elevation	Azimuth
35	21-SCB-214	37	390162	4001946	117.5	0
36	21-SCB-215	46	390281	4001401	126.4	0
37	21-SCB-216	55	390426	4001560	136.2	0
38	21-SCB-217	30	390507	4001923	115.9	0
39	21-SCB-218	30	390760	4001940	116.0	0
40	21-SDF-089	46	392156	4000592	146.7	0
41	21-SDF-096	52	391774	4000195	154.9	0
42	21-SDF-097	49	391218	4000284	145.9	0
43	21-SDF-098	55	391129	4000406	147.7	0
44	21-SDF-099	40	391010	4000543	132.9	0
45	21-SDF-100	40	392101	4000708	136.8	0
46	21-SDF-101	47	391641	4000332	149.9	0
47	21-SDF-102	49	391556	4000420	151.8	0
48	21-SDF-103	46	391449	4000531	143.3	0
49	21-SDF-104	46	391339	4000619	139.6	0
50	21-SDW-038	34	390851	3999290	132.5	0
51	21-SDW-039	30	391047	3999131	127.5	0
52	21-SDW-040	30	391084	3999355	133.4	0
53	21-SDW-041	30	390739	3999445	130.0	0
54	21-SDW-042	30	390815	3999655	133.3	0
55	21-SDW-054	46	391775	3999763	144.6	0
56	21-SDW-055	58	391337	4000197	158.8	0
57	21-SDW-056	49	391534	3999972	152.0	0
58	21-SDW-057	55	391216	3999878	150.4	0
59	21-SDW-058	58	391115	3999987	153.6	0
60	21-SDW-059	58	391012	4000094	152.5	0
61	21-SDW-060	61	390906	4000202	152.8	0
62	21-SDW-061	52	390792	4000293	144.0	0
63	21-SDW-062	49	390693	3999987	142.3	0
64	21-SDW-063	49	390800	3999882	140.2	0
65	21-SDW-064	52	390900	3999774	144.5	0
66	21-SDW-065	52	391019	3999659	146.6	0
67	21-SDW-066	52	391117	3999571	143.0	0
68	21-SGH-034	37	392484	4000825	138.2	0
69	21-SGH-035	21	392863	4000537	122.3	0
70	21-SGH-036	30	392752	4000442	133.0	0
71	21-SGH-037	27	392447	4000466	133.8	0
72	21-SGH-073	46	392656	4000704	148.1	0
73	21-SGH-074	43	392695	4000981	140.1	0
74	21-SGH-084	40	392642	4000625	144.5	0
75	21-SGH-085	34	392712	4000487	136.1	0
76	21-SGH-086	43	392562	4000707	140.4	0
77	21-SGH-087	43	392412	4000849	145.1	0
78	21-SGH-088	46	392350	4000929	145.4	0
79	21-SGP-160	43	392711	4001167	143.6	0
80	21-SGP-161	40	-	-	-	0
81	21-SGP-162	40	-	-	-	0
82	21-SGP-163	43	-	-	-	0

(Continued below)

Criteria	JORC Code explanation	Commentary

Row #	Hole	Length_m	UTM_East	UTM_North	UTM_Elevation	Azimuth
83	21-SGP-164	43	393091	4001312	143.9	0
84	21-SGP-165	43	-	-	-	0
85	21-SGT-232	37	377447	3964479	140.1	0
86	21-SGT-233	40	377877	3964454	136.0	0
87	21-SGT-234	58	377432	3965631	134.5	0
88	21-SGT-235	52	377615	3965501	140.2	0
89	21-SGT-236	46	377865	3965579	135.6	0
90	21-SGT-237	49	377964	3965831	134.6	0
91	21-SGT-238	30	377717	3965949	134.2	0
92	21-SHU-121	9	398152	3998273	129.7	0
93	21-SHU-122	12	398247	3998451	133.9	0
94	21-SHU-123	12	398353	3998600	136.9	0
95	21-SHU-124	12	398245	3998822	144.4	0
96	21-SHU-125	9	398329	3998823	141.0	0
97	21-SHU-126	9	398489	3998721	138.9	0
98	21-SHU-127	24	398626	3999058	166.3	0
99	21-SKP-184	12	394520	3994701	139.2	0
100	21-SKP-185	12	394523	3994389	133.0	0
101	21-SKP-186	15	394447	3994380	140.4	0
102	21-SKP-210	18	394403	3994541	144.6	0
103	21-SKP-211	15	394287	3994436	143.0	0
104	21-SMN-166	40	390890	4011132	114.4	0
105	21-SMN-167	58	391693	4010977	138.3	0
106	21-SMN-168	58	391949	4010989	141.9	0
107	21-SMN-169	61	392161	4011063	148.8	0
108	21-SMN-190	46	392212	4010909	130.8	0
109	21-SMN-191	58	392345	4010933	145.3	0
110	21-SMN-192	61	392603	4010931	153.2	0
111	21-SMP-128	30	393927	3996737	144.9	0
112	21-SMP-129	34	393414	3996773	148.9	0
113	21-SMP-141	27	393467	3996612	146.8	0
114	21-SMP-142	34	393699	3996699	149.3	0
115	21-SMP-143	30	394216	3996323	152.5	0
116	21-SMP-144	34	394052	3996477	150.1	0
117	21-SMP-145	30	393840	3996499	147.6	0
118	21-SMP-146	12	393646	3996329	130.1	0
119	21-SMP-147	30	393578	3996210	133.5	0
120	21-SMP-148	27	393828	3996506	147.8	0
121	21-SMP-149	37	393572	3996056	151.9	0
122	21-SMP-150	37	394009	3995865	153.1	0
123	21-SMP-151	37	394003	3995768	159.0	0
124	21-SMP-152	34	394166	3995711	154.3	0
125	21-SMP-153	24	393723	3995535	148.6	0
126	21-SMP-154	27	393821	3995677	157.8	0
127	21-SMP-155	37	393582	3995863	158.3	0
128	21-SMP-156	34	393473	3995843	158.8	0
129	21-SMP-157	15	396759	3997736	130.0	0
130	21-SMP-158	15	396749	3997850	132.9	0

(Continued below)

Criteria	JORC Code explanation	Commentary

Row #	Hole	Length_m	UTM_East	UTM_North	UTM_Elevation	Azimuth
131	21-SMP-159	15	396863	3998149	130.7	0
132	21-SMP-170	12	396908	3997840	124.9	0
133	21-SMP-171	12	396903	3997716	123.7	0
134	21-SMP-172	34	394352	3995511	164.8	0
135	21-SMP-173	34	394302	3995573	153.0	0
136	21-SMP-174	34	394264	3995581	156.5	0
137	21-SMP-175	30	393483	3996107	147.4	0
138	21-SMP-176	21	393611	3996236	135.9	0
139	21-SMP-177	30	393776	3996153	143.8	0
140	21-SMP-178	34	393732	3996051	152.9	0
141	21-SMP-179	21	393770	3996412	140.4	0
142	21-SMP-180	34	393888	3996558	151.8	0
143	21-SMP-181	30	394173	3996449	149.4	0
144	21-SMP-182	34	393829	3996638	148.3	0
145	21-SMP-183	30	393636	3996668	146.5	0
146	21-SMP-193	27	393426	3996508	140.5	0
147	21-SMP-194	23	393361	3996547	139.1	0
148	21-SMP-195	30	393505	3996704	147.9	0
149	21-SMP-196	21	395319	3995012	149.8	0
150	21-SMP-197	18	395200	3994930	153.0	0
151	21-SMP-198	21	395086	3994890	149.8	0
152	21-SMP-199	18	395141	3994659	146.7	0
153	21-SMP-200	15	395122	3994568	143.2	0
154	21-SMP-201	9	395243	3994403	133.8	0
155	21-SMP-202	15	395069	3994723	146.4	0
156	21-SMP-203	12	395103	3994787	146.8	0
157	21-SMP-204	21	395328	3994938	151.3	0
158	21-SMP-205	30	393575	3995779	153.8	0
159	21-SMP-206	24	393743	3996522	142.0	0
160	21-SMP-207	12	393544	3996375	129.0	0
161	21-SMP-208	37	393959	3996560	152.1	0
162	21-SMP-209	30	393660	3996209	141.2	0
163	21-SMP-219	34	394286	3996299	153.5	0
164	21-SMP-220	27	393718	3995840	152.4	0
165	21-SMP-221	27	393971	3996050	146.1	0
166	21-SMP-222	24	394137	3995934	146.6	0
167	21-SMP-223	27	394398	3995791	152.0	0
168	21-SMP-224	27	393329	3996088	144.8	0
169	21-SMP-225	24	393478	3995699	143.4	0
170	21-SMP-226	18	393508	3995642	139.9	0
171	21-SMP-227	24	393793	3995479	147.4	0
172	21-SMP-228	15	396776	3998513	150.4	0
173	21-SMP-229	12	396775	3998370	147.8	0
174	21-SMP-230	11	396798	3998185	136.8	0
175	21-SMP-231	9	396796	3998113	139.9	0
176	21-SMP-239	24	395278	3994974	158.2	0
177	21-SMP-240	15	395147	3994477	144.5	0
178	21-SMS-030	34	393559	4006404	146.2	0

(Continued below)

Criteria	JORC Code explanation	Commentary

Row #	Hole	Length_m	UTM_East	UTM_North	UTM_Elevation	Azimuth
179	21-SRH-031	37	392976	4003719	130.6	0
180	21-SRH-110	27	393133	4003975	126.2	0
181	21-SRH-111	34	392969	4003929	131.2	0
182	21-SRH-112	49	392572	4003466	141.0	0
183	21-SRH-113	46	392706	4003429	144.1	0
184	21-SRS-105	21	391322	3985369	160.5	0
185	21-SRS-106	21	391377	3985332	162.4	0
186	21-SRS-107	26	391086	3985445	166.1	0
187	21-SRS-108	24	391037	3985319	165.5	0
188	21-SRS-109	34	390905	3985469	167.6	0
189	21-SRS-120	37	391586	3985462	174.8	0
190	21-SRS-187	40	386265	3993037	127.5	0
191	21-SRS-188	27	386515	3992669	-	0
192	21-SRS-189	55	386515	3992669	125.8	0
193	21-SSP-076	46	392052	4000341	146.6	0
194	21-SSP-080	18	392711	4000153	116.8	0
195	21-SSP-081	15	392660	4000269	117.4	0
196	21-SSP-082	40	392466	4000257	141.0	0
197	21-SSP-083	34	392311	4000410	139.8	0
198	21-STS-027	21	394280	4008014	129.6	0
199	21-STS-028	18	395094	4006271	130.0	0
200	21-STS-029	34	394236	4005497	139.3	0
201	21-STS-043	43	392965	4001547	141.5	0
202	21-STS-044	34	392853	4001631	131.4	0
203	21-STS-050	52	391092	4002766	138.0	0
204	21-STS-051	52	390935	4002710	139.2	0
205	21-STS-241	40	394113	4008076	144.8	0
206	21-STS-242	40	394026	4008127	144.4	0
207	21-STS-243	40	393897	4008200	143.7	0
208	21-STS-244	46	393734	4008305	147.3	0
209	21-STS-245	34	394394	4008223	140.5	0
210	21-STS-252	30	394146	4006510	139.8	0
211	21-STS-253	40	394350	4006672	146.8	0
212	21-STS-254	27	394054	4006175	133.2	0
213	21-STS-255	15	394339	4005978	124.2	0
214	21-STS-256	24	394193	4006074	133.8	0
215	21-STS-257	27	394407	4006371	137.7	0
216	21-STS-258	24	394572	4006293	132.0	0
217	21-STS-259	15	394657	4006245	127.2	0
218	21-STS-260	30	394279	4006412	142.2	0
219	21-STS-261	12	394841	4006052	118.9	0
220	21-STS-262	12	394506	4005866	118.2	0
221	21-STS-263	15	394592	4005721	122.5	0
222	21-STS-264	12	394702	4005632	123.1	0
223	21-STS-265	21	394931	4006701	135.5	0
224	21-STS-266	24	395034	4006567	138.2	0
225	21-STS-267	15	395165	4006468	129.5	0
226	21-STV-052	61	390138	4000177	166.9	0
227	21-STV-053	49	391565	4000828	142.5	0

(Continued below)

Criteria	JORC Code explanation	Commentary

Row #	Hole	Length_m	UTM_East	UTM_North	UTM_Elevation	Azimuth
228	21-STV-077	37	392211	4000907	133.1	0
229	21-STV-078	40	391448	4000950	132.9	0
230	21-STV-079	34	391329	4001082	116.8	0
231	21-STV-090	49	391609	4001191	141.3	0
232	21-STV-091	43	391580	4000161	148.0	0
233	21-STV-092	40	391642	4000939	137.5	0
234	21-STV-093	40	391671	4000756	134.2	0
235	21-STV-094	52	390890	4000639	146.0	0
236	21-STV-095	24	392007	4000958	125.2	0
237	21-SWS-246	27	393518	4007181	133.0	0
238	21-SWS-247	34	393618	4007105	141.4	0
239	21-SWS-248	43	393717	4007037	143.4	0
240	21-SWS-249	37	393775	4006758	145.8	0
241	21-SWS-250	43	393861	4006673	149.8	0
242	21-SWS-251	40	393997	4006597	146.6	0
243	21-SWS-268	40	393438	4006501	141.2	0
244	21-SWS-269	40	393318	4006594	142.8	0
245	21-SWW-048	24	392034	3999543	125.5	0
246	21-SWW-049	40	391867	3999690	137.6	0
247	21-SWW-067	49	391451	3999660	152.4	0
248	21-SWW-068	24	392233	3999716	125.3	0
249	21-SWW-069	49	391934	4000024	148.8	0
250	21-SWW-075	17	392314	4000077	123.6	0
251	21-WDW-130	61	391614	3999820	157.2	0
252	21-WDW-131	46	391762	3999778	147.4	0
253	21-WDW-132	40	391999	3999846	143.0	0
254	21-WDW-133	52	391544	3999964	151.4	0
255	21-WDW-134	53	391406	4000071	153.6	0
256	21-WDW-135	64	391336	4000232	156.1	0
257	21-WSP-139	18	392717	4000158	118.5	0
258	21-WSP-140	18	392664	4000292	118.6	0
259	21-WTV-114	40	392862	4003347	137.7	0
260	21-WTV-115	69	389915	4001320	148.9	0
261	21-WTV-116	79	389948	4000513	163.1	0
262	21-WTV-117	78	390139	4000196	166.7	0
263	21-WTV-118	69	390620	4000460	158.9	0
264	21-WTV-119	70	390456	4000292	157.6	0
265	21-WWW-136	21	392318	4000078	123.6	0
266	21-WWW-137	52	391919	4000023	148.7	0
267	21-WWW-138	47	391649	4000021	148.6	0
268	22-SGLPR-302	12	393964	4002160	118.3	0
269	22-SGLPR-303	18	393826	4002007	125.7	0
270	22-SGLPR-304	21	393759	4001851	128.1	0
271	22-SGLPR-307	21	393544	4001847	123.9	0
272	22-SGLPR-308	12	393719	4002133	116.9	0
273	22-SGLPR-309	15	393704	4001990	121.6	0
274	22-SGLPR-312	46	393040	4001489	143.9	0
275	22-SGLPR-319	37	393056	4000748	142.0	0
276	22-SGLPR-320	40	392962	4000843	142.4	0
277	22-SGP-305	30	393628	4001723	133.9	0
278	22-SGP-306	40	393561	4001560	144.5	0

(Continued below)

Criteria	JORC Code explanation	Commentary

Row #	Hole	Length_m	UTM_East	UTM_North	UTM_Elevation	Azimuth
279	22-SGP-310	40	393451	4001447	145.5	0
280	22-SGP-311	37	393406	4001563	141.0	0
281	22-SGP-317	49	392999	4001161	148.2	0
282	22-SGP-318	40	393113	4001038	141.9	0
283	22-SGP-321	46	392924	4001196	146.8	0
284	22-SGP-322	23	392903	4001200	146.8	0
285	22-SGP-323	27	393457	4001252	131.4	0
286	22-SMM-313	30	343846	3875401	147.4	0
287	22-SMM-314	14	344166	3875067	129.0	0
288	22-SMM-315	12	-	-	-	0
289	22-SMM-316	27	345068	3875333	144.5	0
290	22-SMN-270	70	392267	4011284	153.3	0
291	22-SMN-271A	61	392135	4011498	143.4	0
292	22-SMN-271B	61	392135	4011498	143.4	0
293	22-SMN-272	49	391930	4011569	126.8	0
294	22-SMN-273	52	391809	4011581	130.2	0
295	22-SMN-274	61	392028	4011513	136.7	0
296	22-SMN-275	40	391120	4011151	118.6	0
297	22-SMN-276	52	391303	4011038	128.2	0
298	22-SMN-277	53	391452	4011034	130.8	0
299	22-SMN-278	52	391584	4011035	134.4	0
300	22-SMN-279	61	393438	4010802	156.4	0
301	22-SMN-280	55	392591	4010395	144.8	0
302	22-SMN-281	58	392703	4010321	145.7	0
303	22-SMN-282	61	392829	4010310	146.4	0
304	22-SMN-283	55	392980	4010216	144.6	0
305	22-SMN-284	46	392307	4010423	132.8	0
306	22-SMN-285	61	393350	4010837	158.2	0
307	22-SMN-286	61	393253	4010830	158.9	0
308	22-SMN-287	64	393148	4010842	159.1	0
309	22-SMN-288	61	393046	4010886	154.2	0
310	22-SMN-289	55	392915	4010898	147.6	0
311	22-SMN-290	27	392715	4010948	152.7	0
312	22-SMN-291	43	392219	4010417	132.7	0
313	22-SMN-292	37	391985	4010396	124.7	0
314	22-STV-324	76	390088	3999884	162.5	0
315	22-STV-325	79	389777	3999639	165.7	0
316	22-STV-326	67	389922	3999601	153.0	0
317	22-STV-327	82	389678	3999695	168.0	0
318	22-STV-328	79	389560	3999767	161.5	0
319	22-STV-329	46	390228	3999821	147.3	0
320	22-STV-330	61	390363	4000063	149.2	0
321	22-STV-331	70	390250	4000132	157.6	0
322	22-STV-332	67	389952	4000262	146.1	0
323	22-STW-293	18	395608	3999910	144.1	0
324	22-STW-294	24	395664	3999824	146.9	0
325	22-STW-295	21	395787	3999727	147.1	0
326	22-STW-296	9	396124	4000168	122.0	0

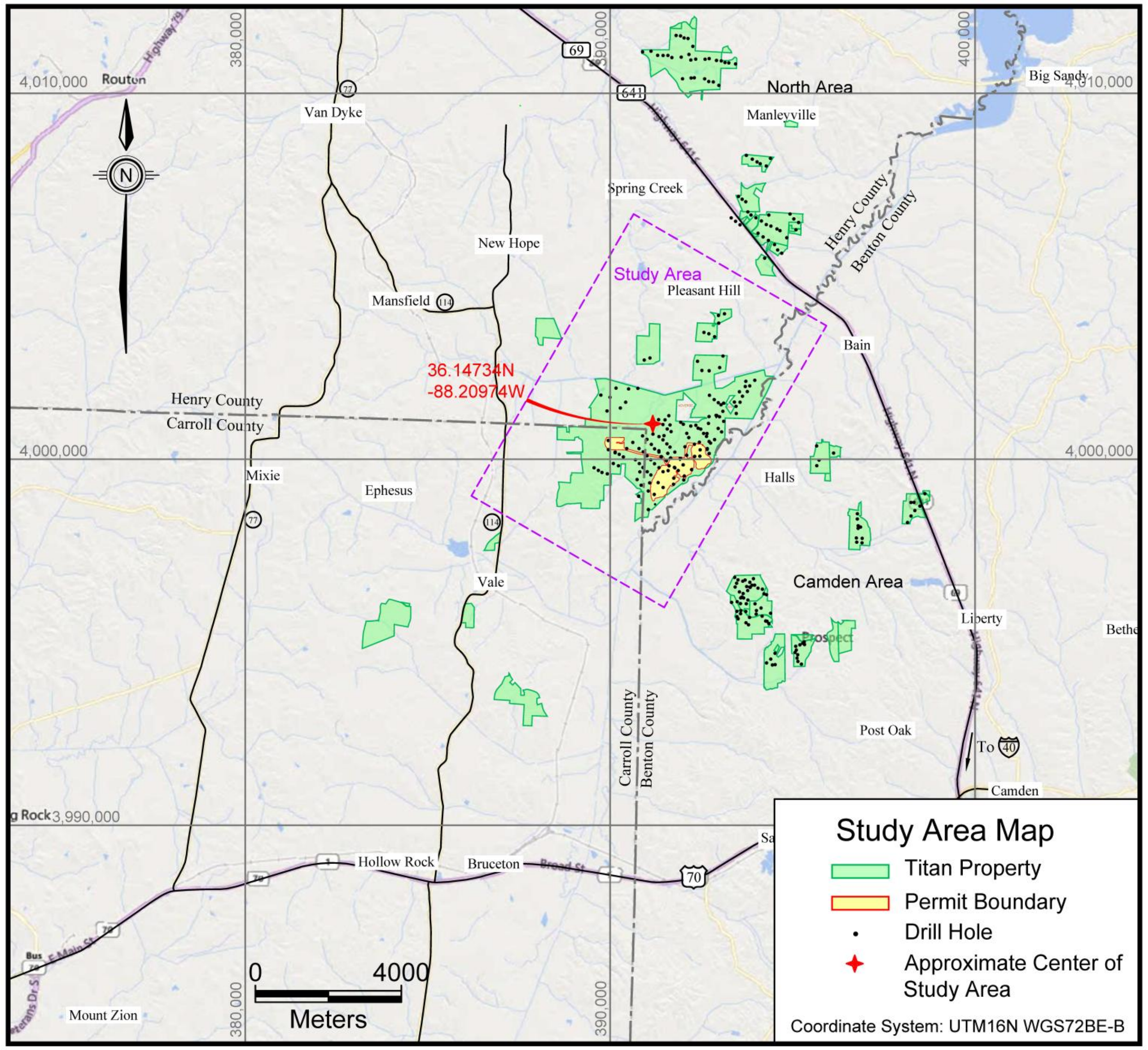
(Continued below)

Criteria	JORC Code explanation	Commentary
		(table below)
Data aggregation methods	> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. 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.	> Samples from core drilling were collected in 1.524-meter (5-foot) intervals for size fraction analysis, heavy-liquid separation and chemical analysis. Sand samples were dry screened to separate slimes and oversize material at 44 µm (325 mesh) and 595 µm (30 mesh) respectively. > Composites based on geological domains were submitted for quantitative evaluation of materials by QEMSCAN analysis for mineralogical assemblage data. Composite samples of the Upper and Lower McNairy Formation geologic units were analyzed separately. > When compositing QEMSCAN samples, the THM% composite average is calculated for the sample interval from a weighted average of the sample THM%, to the cumulative composite THM% value. Therefore, a QEMSCAN composite is comprised of greater measured quantities (percent) of individual samples with higher assay THM% than those from lower assay THM percents. > No other data aggregations methods are used.
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 (e.g. 'down hole length, true width not known').	> Exploration holes are shallow (averaging 40 meters in thickness) and drilled vertically through the mineralized zones. Measured lengths of mineralization represent the vertical thickness while the very shallow dip of the deposit has little effect on true measured thickness. > Mineralization is generally thick zones of stacked HM laminations; however, some more massive bands of mineralization are present where individual laminations are not present.

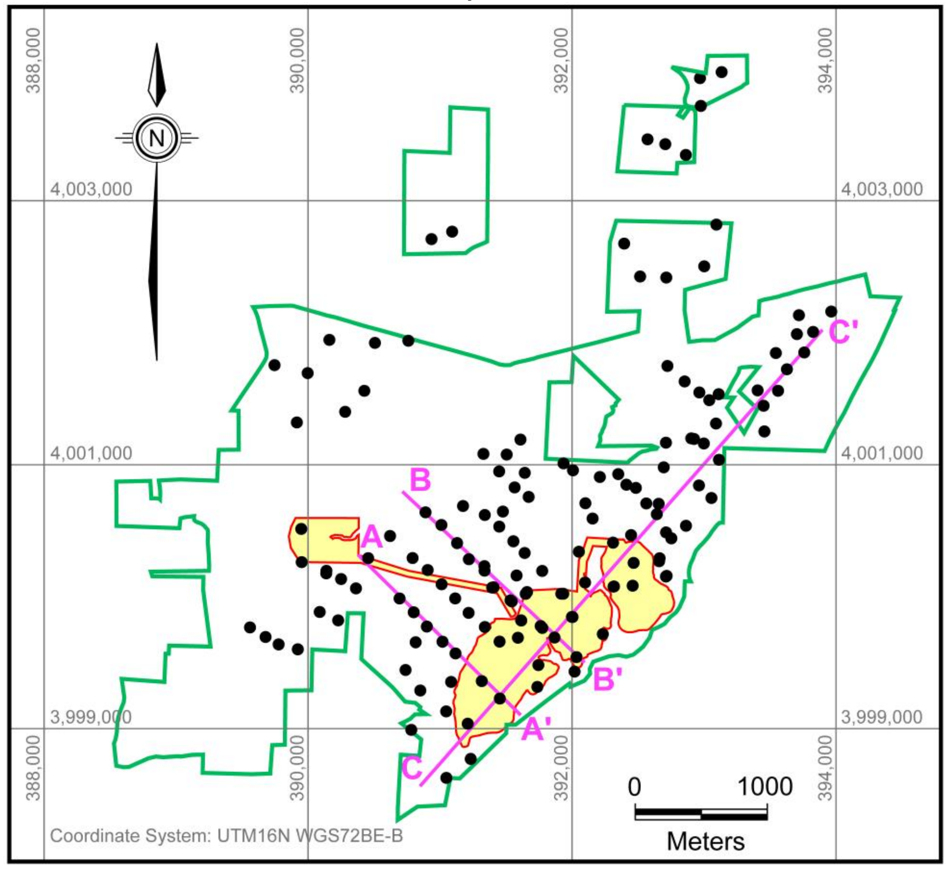
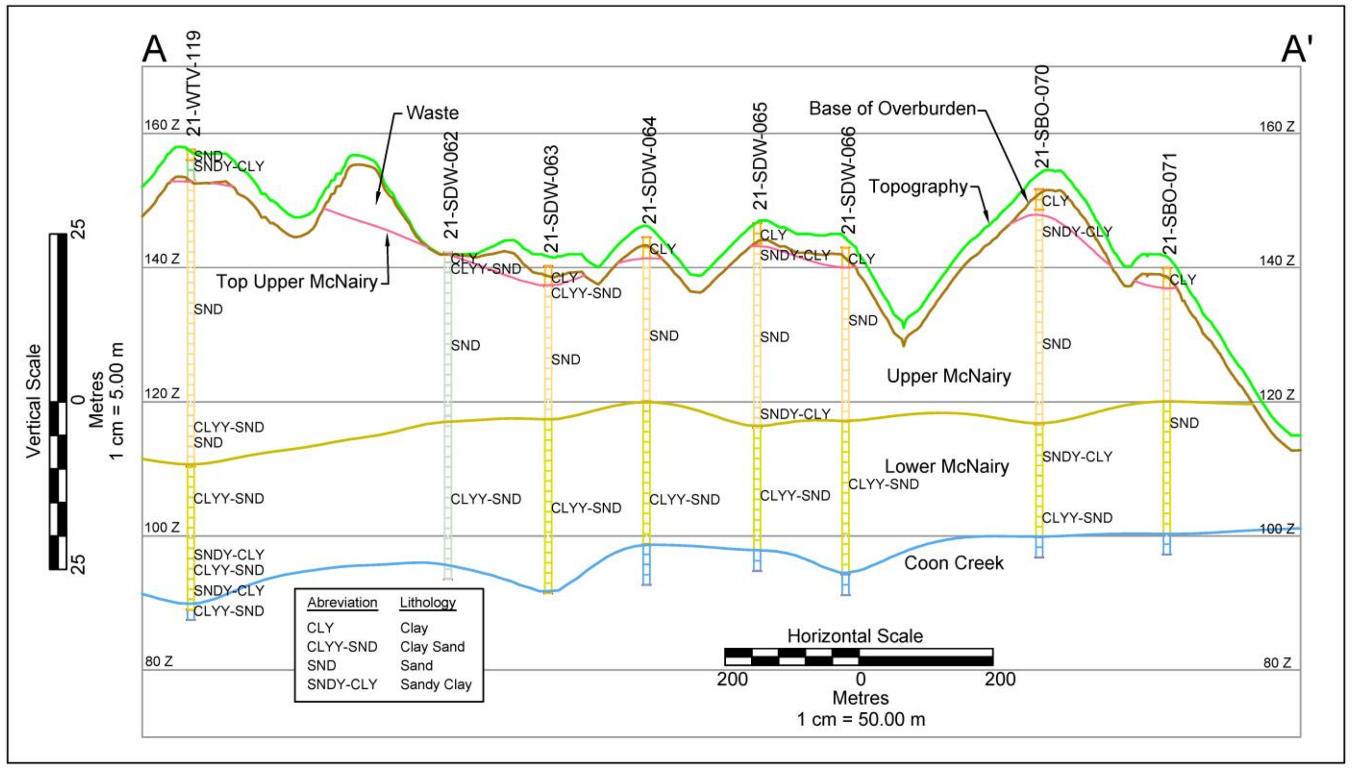
Row #	Hole	Length_m	UTM_East	UTM_North	UTM_Elevation	Azimuth
327	22-STW-297	9	395816	4000091	129.1	0
328	22-STW-298	9	395661	4000364	123.4	0
329	22-STW-299	9	395810	4000270	125.1	0
330	22-STW-300	9	395726	3999978	130.5	0
331	22-STW-301	18	395638	4000026	139.4	0

Criteria	JORC Code explanation	Commentary
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.	> Titan Property map overview with project drill holes of the Study Area, North Area parcels, and Camden Area parcels.

Study Area



Note: Figure prepared by MM&A, 2026.

Criteria	JORC Code explanation	Commentary
		> Study area with controlled property boundary, exploration drill holes locations and cross section placement. **Study Area**  Note: Figure prepared by MM&A, 2026.
		> Geologic cross section A-A' showing the McNairy Formation with overburden above and Coon Creek Formation below. **Model Cross Section A**  Note: Figure prepared by MM&A, 2026.

Criteria	JORC Code explanation	Commentary
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.	> The McNairy Formation thickness ranges from 5 meters to more the 67 meters at the project area. The average thickness of the Upper and Lower McNairy Formation members is approximately 18 meters and 19 meters, respectively. > Histograms with basic statistics of the Lower McNairy percent-THM and assemblage minerals assay data are included in the Reference document titles, Review of IperionX Benton Area Total Heavy Mineral and Mineral Assemblage Data to Compare 2023 and 2025 Composite Sample Values, Titan Project, Camden, TN.
Other substantive exploration data	> Other exploration data, if meaningful and material, should be reported including (but not 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.	> No geological mapping, geochemical sampling, or geophysical surveys were completed in the Project area. > Reportedly from a Hyperion 2021 ASX release, IperionX collected and tested 200 bulk density of the mineralized ore zone. Test results showed a density range of 1.38 t/m^3 to 1.82 t/m^3. This information has not been confirmed by MM&A since IperionX could not produce the data.
Further work	> The nature and scale of planned further work (e.g. 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.	> Further potential work is to increase the property holdings and increase the exploration potential for the mineral tenure to host prospective McNairy Formation units, and may include additional exploration, geotechnical testing, sample analyses.

Section 3 Estimation and Reporting of Mineral Resources

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

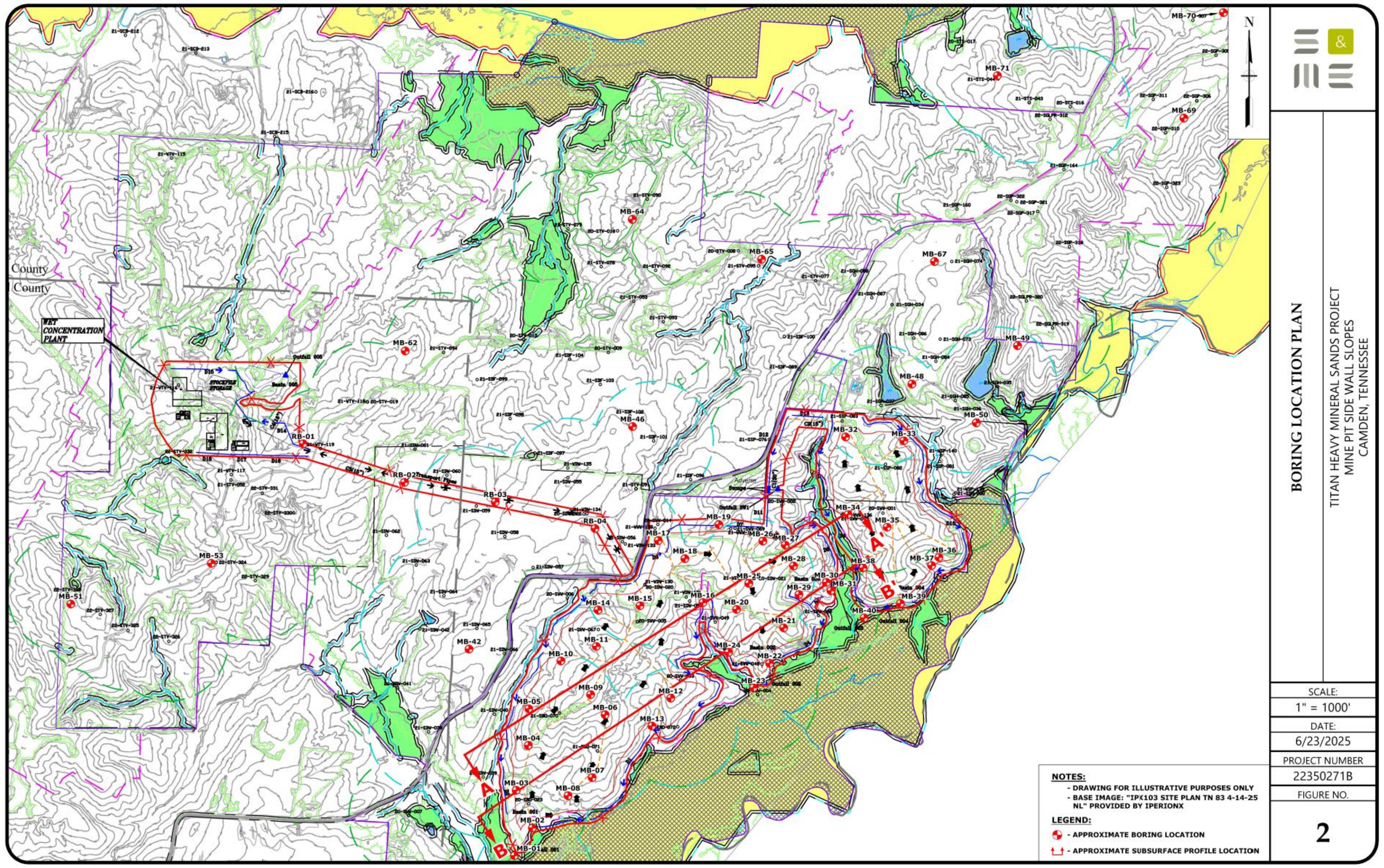
Criteria	JORC Code explanation	Commentary
Database integrity	> Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. > Data validation procedures used.	> Drill hole core samples were photographed with the sample ticket numbers that match the geologist's log ticket. For each sample, the ticket number and associated lithologic and depth information were recorded in the digital records of the GeoSparks database, by drill hole. From and To values were checked to ensure no overlaps or missing data. > To track laboratory samples, the field, geologists record sample numbers on logging tickets and into a field sample notebook and then enter records into the GeoSpark database. Samples coming from the lab are linked to the sample number already listed in the database. Data from SGS (excel file) is directly uploaded to both assays and mineral composition tabs by IperionX. The uploaded assay data is then verified that all data has been transferred correctly by referring back to a lab excel sheet. > Database validation occurred in Excel and when loaded into Vulcan for model development. Downhole data was checked for overlapping interval and for from and to interval completeness. Cross section analysis (model slices) was used to compare drill hole traces (with unit intercepts) from database records to the geologic model. To validate the block model mineral grades, block model slices in vertical and horizontal planes were used to view grade estimation values to compare with drill assay records.
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.	> MM&A's CP conducted a site visit in April 15 & 16 2025. > All site observations were from the surface which included exploration drill hole locations, McNairy Formation outcrops, and sample storage barrels. Heavy minerals were observed from panning sands. > The outcome confirmed of mineralization was present in the McNairy sand.
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 geological model was reviewed from cross section analysis. Cross sections across the deposit were created to include drill hole traces showing the geologic units. From these sections, the McNairy Formation, the overlying material and underlying Coon Creek Formation could be compared to the drill hole data to show proper representation. > Lithological data derived from the Titan GeoSpark drill hole database (collected and recorded in the field) were used for the geological model interpretation. > Mineral grade interpretations and Mineral Resource estimates adhered to upper and lower boundaries of geological units (McNairy Formation members) established in the geologic model. Vertical boundaries of the McNairy Formation members were recorded during exploration drilling and database records were checked to the geologic interpretation > Depositional factors can affect the grade continuity. Erosional factors can affect geological continuity or extent. Each factor could potentially reduce the grade over a relatively short distance.
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 mineralization has been traced for over 6 kilometers at near strike. In the dip direction the mineralization has been traced for over 3 kilometers. > The depth to the mineralization is shallow, with around 3 meters of overburden between the topography to the top of the McNairy Formation. > Beneath the overburden, the host McNairy Formation varies from 5 to 67 meters thick and averages 28 meters in thickness.
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.	> Model development grade interpolations were completed using Maptek's Vulcan 25.1 software. > Assay Sample of Heavy Minerals% were not composited for grade estimates. QEMSCAN samples with assays of titanium minerals (rutile, ilmenite), zircon, rare earth minerals (monazite, xenotime), and additional minerals were composited for the mineral assemblage grade estimates. > Weight averaged bulk sample densities were used for the geologic units of the geologic model, [overburden 1.72 t/m^3, Upper McNairy 1.57 t/m^3, Lower McNairy 1.57 t/m^3, Coon Creek 1.54 t/m^3] > The top and bottom horizons of the Upper and Lower McNairy Formation geologic units established the vertical domains for each interpolation. > Data used for interpolations were derived from samples and mineral assemblage values in the GeoSparks database. Grade interpolations of sample assays and mineral assemblage assays were estimated using an inverse distance weighting (ID2) algorithm. > Ellipsoid search regions for grade estimations.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>
> Estimation of deleterious elements or other non-grade variables of economic significance (e.g. 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 model data to drill hole data, and use of reconciliation data if available.
</td><td>
Table of Search Regions for Grade Estimations
<table>
<tr><th></th><th colspan="6">Samples Assay Data</th><th colspan="6">Mineral Assemblage Data</th></tr>
<tr><th></th><th colspan="3">Axis & Search Distance (m)</th><th colspan="3">Search Orientation</th><th colspan="3">Axis & Search Distance (m)</th><th colspan="3">Search Orientation</th></tr>
<tr><th>Pass</th><th>Major</th><th>Semi-m</th><th>Minor-x</th><th>Bearing</th><th>Plunge</th><th>Dip</th><th>Major</th><th>Semi-m</th><th>Minor-x</th><th>Bearing</th><th>Plunge</th><th>Dip</th></tr>
<tr><td>1</td><td>425</td><td>212</td><td>3</td><td>30</td><td>0</td><td>0</td><td>425</td><td>212</td><td>3</td><td>30</td><td>0</td><td>0</td></tr>
<tr><td>2</td><td>610</td><td>305</td><td>4.3</td><td>30</td><td>0</td><td>0</td><td>610</td><td>305</td><td>6</td><td>30</td><td>0</td><td>0</td></tr>
<tr><td>3</td><td>1220</td><td>610</td><td>6</td><td>30</td><td>0</td><td>0</td><td>2440</td><td>1220</td><td>9</td><td>30</td><td>0</td><td>0</td></tr>
<tr><td>4</td><td>2440</td><td>1220</td><td>9</td><td>30</td><td>0</td><td>0</td><td>3660</td><td>1830</td><td>18</td><td>30</td><td>0</td><td>0</td></tr>
</table>
> Non mineralized material, the overlying material of the McNairy Formation (overburden) and the below grade cut off mineralized McNairy Formation material (interburden) are treated as waste.
> The model process used data that were available for previous estimates. No mine data are available.
> Mining recovery assumptions were not applied for the estimate.
> Low grade and non-grade material were not estimated. Slime and oversized material were estimated.
> The block sizes are 25 meters*25 meters*1.524 meters (X*Y*Z), relative to hole samples spaced 300 meters*150 meters*1.52 meters. A search ellipsoid of 425 meters*212 meters*3 meters (major, semi-major, minor) axis were used for Pass 1, the smallest search volume.
> Identified the geology to model the mineralized and non-mineralized units Assumed the overburden material above the McNairy Formation has no mineralization.
> It was assumed that the deposition of heavy mineral laminations is relatively horizontal and shows lateral extent among drill hole groups.
> Variogram results of the Lower McNairy samples data were used in conjunction with drill hole spacing to establish resource classification criteria.
> No grade cutting or capping was used for interpolations. The grade estimation was not selective of grade values. All laboratory grades and composited values were used for block interpolations.
> To validate the block model mineral interpolations, model slices in vertical and horizontal planes were used to view grade interpolations to compare with drill assay values.
</td></tr>
<tr><td>Moisture</td><td>> Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</td><td>
> Unit bulk density is computed from dry unit weight samples. Mineral Resource in situ tonnes are estimated with bulk density.
> Moisture was not estimated in the model.
</td></tr>
<tr><td>Cut-off Parameters</td><td>> The basis of the adopted cut-off grade(s) or quality parameters applied.</td><td>
> A THM% (0.4%) cut-off parameter was used for resource estimates to exclude low grade and barren portions of the deposit. A bottom cut-off grade of 0.4% THM was used in the constraining pit shell, on the basis that the incremental cost of selectively extracting this material, hauling it to a long-term stockpile, and subsequently reclaiming and re-placing the material into a mine void for progressive rehabilitation would be higher than the net cost (operating cost less revenue) of the central case method.
</td></tr>
<tr><td>Mining factors or assumptions</td><td>> 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 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.</td><td>
> Mining factors such mining method, mine recovery and wash recovery or dilution have not been applied to determine mineral extraction.
> MM&A incorporated reasonable sales price estimates for the various commodities anticipated for the Titan project. Product prices were provided by IperionX based on “TZMI Titanium Feedstock Price Forecast to 2029, Issue 2, 2025” and Adamas Intelligence “Value of IperionX Monazite Concentrate, Q3, 2025” Market Reports. These product prices are more conservative than those included in the economic model and sensitivity analysis of the DFS. Mining costs used in the initial assessment are based on both input from prospective mining contractors along with estimates of projected processing, transportation, dewatering, wetlands and stream mitigation, general and administrative, and royalty costs.
> The reasonable prospects for economic extraction for the Mineral Resources were based on the parameters listed below.
</td></tr>
</table>

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
Assumptions Used in Defining Reasonable Prospects of Economic Extraction
<table>
<tr><th>Parameter</th><th>Units</th><th>Value</th></tr>
<tr><td>Commodity price</td><td></td><td></td></tr>
<tr><td>Rutile</td><td>US$/t</td><td>1,425</td></tr>
<tr><td>Ilmenite</td><td>US$/t</td><td>340</td></tr>
<tr><td>Rare earth mineral concentrate</td><td>US$/t</td><td>10,678</td></tr>
<tr><td>Zircon concentrate</td><td>US$/t</td><td>912</td></tr>
<tr><td>Metallurgical recovery</td><td></td><td></td></tr>
<tr><td>Rutile</td><td>%</td><td>70.6 (81.2% mineral in product)</td></tr>
<tr><td>Ilmenite</td><td>%</td><td>85.0 (95.8% mineral in product)</td></tr>
<tr><td>Heavy rare earth concentrate</td><td>%</td><td>89.5 (87.8% mineral in product)</td></tr>
<tr><td>Zircon</td><td>%</td><td>91.2 (46.9% mineral in product)</td></tr>
<tr><td>Operating costs</td><td></td><td></td></tr>
<tr><td>Mining cost</td><td>US$/m³</td><td>7.23</td></tr>
<tr><td>Processing cost</td><td>US$/ROM t</td><td>3.09</td></tr>
<tr><td>Transport cost</td><td>US$/ROM t</td><td>1.00</td></tr>
<tr><td>Reclaim/rehandle</td><td>US$/ROM t</td><td>Included in mining cost</td></tr>
<tr><td>Incremental in pit management</td><td>US$/ROM t</td><td>Included in mining cost</td></tr>
<tr><td>General and administrative cost</td><td>US$/ROM t</td><td>0.95</td></tr>
<tr><td>Dewatering</td><td>US$/ROM t</td><td>0.30</td></tr>
<tr><td>Wetlands mitigation cost</td><td>US$/ha</td><td>60,000</td></tr>
<tr><td>Stream mitigation cost</td><td>US$/ linear m</td><td>1,425</td></tr>
<tr><td>Royalty</td><td>%</td><td>5</td></tr>
</table>
> Factors that preclude conversion of a Mineral Resources to Ore Reserves include the following: inferred resource classification; absence of sample assays; lack of access; insufficient exploration; for areas of proposed for surface mining.
> While such factors were used to preclude the conversion of Mineral Resources to Mineral Reserves in this report, the acquisition of property or additional drill holes could include reasonable prospects for eventual economic extractions of additional Mineral Resources under favorable market conditions.
</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>> 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.</td><td>
> Three bulk samples were processed by Mineral Technologies through pilot equipment designed to emulate a full-scale feed preparation plant, wet concentrator plant, monazite flotation/concentrate upgrade plant, and a mineral separation plant.
> Two samples were sourced from the Lower McNairy Formation, and one from the Upper McNairy Formation.
> The samples were taken from drill holes 20-SWW-004 (B004), 21-SBF-047 (B047), and 20-SWW-014 (B014). The B004 and B047 samples were sourced from the Lower McNairy Formation. B014 was sourced from the Upper McNairy Formation. Mineralization in the Upper McNairy Formation is significantly coarser than mineralization in the Lower McNairy Formation. The approximate mass of each sample was:
- B004: approximately 512 kg of sample
- B047: approximately 496 kg of sample
- B014: approximately 483 kg of sample
> Test work demonstrated that the Upper and Lower McNairy Formation mineralized zones could be separated using processing stages common to most mineral sands operations.
> Deleterious elements such as iron, magnesium, uranium, thorium, chromium, and vanadium are present at low levels and can negatively impact the marketability of heavy mineral sands products.
</td></tr>
<tr><td>Environmental factors or assumptions</td><td>> 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</td><td>
> Environmental considerations, particularly tailings management and the potential presence of radioactive or toxic elements, can add complexity and expenses due to stricter regulations, water management, and the need for site rehabilitation after mining operations.
> The project assumes protecting the designated floodplain areas of the Big Sandy River and the Bear Creek tributary cross the Property.
</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	have not been considered this should be reported with an explanation of the environmental assumptions made.	
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.	> Density results were provided by S&ME using the ASTM International (ASTM) test D7263. Samples were collected from the overburden, Upper and Lower McNairy ore zones and the Coon Creek Formation. > Mud rotary drilling with split spoon and Shelby tube samples were collected for bullk density testing. > From 10 S&ME drilled holes, 40 soil sample intervals were logged. Of the 40 samples logged, 23 ore samples had adequate recovery for density analysis.

Geotechnical Drill Location Map



Criteria	JORC Code explanation	Commentary
		> Density samples were compiled for density results (ASTM) test D7263) by unit from the S&ME laboratory form results and computed a weighted average density. > For the evaluation, the calculated average unit bulk density was used for tonnage estimates. The Ore bulk density was calculated for each McNairy Formation separately from a mass weighted average. Bulk density was also calculated for the overburden material and the Coon Creek Formation. > Reportedly from a Hyperion 2021 ASX release, IperionX collected and tested 200 bulk density of the mineralized ore zone. Test results showed a density range of 1.38 t/m^3 to 1.82 t/m^3. This information has not been confirmed by MM&A since IperionX could not produce the data.
Classification	> The basis for the classification of the Mineral Resources into varying confidence categories. > Whether appropriate account has been taken of all relevant factors (i.e. relative	> The resource confidence classification was determined based on drill hole density reflecting geological confidence; firstly, from hole locations with QEMSCAN analysis and secondly from all drill holes with total heavy minerals assays and the variogram model. > A variogram of analysed Lower McNairy Formation THM% data demonstrates geologic continuity. The Lower McNairy is the primary mineralized Formation of the study. Results of the variogram were applied to the Upper and Lower McNairy Formations for grades interpolations.

Criteria	JORC Code explanation	Commentary
	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.	> Mineral Resources within a radius of 212 meters from QEMSCAN sample holes are assigned to a measured classification. > Mineral Resources within a radius between 212 meters to 244 meters from a drill hole with total heavy mineral % samples were assigned an indicated classification. The 244-meter maximum range was calculated from average of 80% of the sill range for both the strike direction (258 meters) and the dip direction (230 meters) variogram model. > Mineral Resource within a radius between 244 meters and 610 meters from a drill hole with total heavy mineral samples were assigned to an inferred resource classification. > The Mineral Resources were classified based on suitable distances from points of observations. Furthermore, radial arcs from points of measure were required to intersect with an adjacent arc from another drill hole, therefore eliminating isolated classification circles. > The classification reflects the Competent Person’s view of the deposit.
Audits or reviews	> The results of any audits or reviews of Mineral Resource estimates.	> No independent review or audit of the study were completed.
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.	> The relative accuracy of and confidence in the resource tonnage and mineral estimates provided herein are judged to be in conformance with current industry common practices. > The qualitative representation of the mineral assemblage should be understood to represent a reasonable estimation of the McNairy deposit. > Mineral Resource estimation has been completed using appropriate mineral estimation methods which are deemed appropriate for this deposit. > Regarding the analysis that classified of the Mineral Resource estimates into the measured, indicated, and inferred confidence categories, uncertainties from sampling and drilling methods, data processing and handling, geological modelling, and estimation were incorporated into the classifications assigned. The areas with the most uncertainty were assigned to the inferred category. The areas with fewest uncertainties were classified as measured. > There are no reconciliation data available, as the deposit is not in production.

Section 4 Estimation and Reporting of Ore Reserves

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

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	> Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	> The following comprises the Mineral Resources as at June 4, 2026 on a 100% basis.

Mineral Resource Estimate and Total Heavy Minerals Assemblage

Mineral Resource Estimate	In situ Tonnes	THM (%)	THM (t)	THM Assemblage: Zircon (%)	Rutile (%)	Ilmenite (%)	REE (%)
Inclusive of Reserve							
Measured (M)	120,434,000	2.5	3,060,000	11.1	9.5	40.9	1.5
Indicated (I)	28,388,000	2.9	828,000	11.8	9.2	52.0	1.5
Total M+I	**148,823,000**	**2.6**	**3,887,000**	**11.2**	**9.4**	**43.2**	**1.5**
Inferred (Inf)	0	0.0	0	0.0	0.0	0.0	0.0
Total M+I+Inf	**148,823,000**	**2.6**	**3,887,000**	**11.2**	**9.4**	**43.2**	**1.5**
Exclusive of Reserve							
Measured (M)	96,851,000	1.5	1,489,000	10.4	9.2	40.1	1.2
Indicated (I)	102,190,000	2.0	2,013,000	9.8	10.2	38.9	1.5
Total M+I	**199,041,000**	**1.8**	**3,502,000**	**10.0**	**9.8**	**39.4**	**1.4**
Inferred (Inf)	97,832,000	1.8	1,774,000	9.3	9.6	38.0	1.2
Total M+I+Inf	**296,872,000**	**1.8**	**5,276,000**	**9.8**	**9.7**	**39.0**	**1.3**
Grand Total							
Measured (M)	217,285,000	2.1	4,548,000	10.8	9.4	40.6	1.4
Indicated (I)	130,578,000	2.2	2,841,000	10.4	9.9	42.7	1.5
Total M+I	**347,863,000**	**2.1**	**7,389,000**	**10.6**	**9.6**	**41.4**	**1.4**
Inferred (Inf)	97,832,000	1.8	1,774,000	9.3	9.6	38.0	1.2
Total M+I+Inf	**445,695,000**	**2.1**	**9,163,000**	**10.4**	**9.6**	**40.8**	**1.4**

Notes to accompany Mineral Resource table:

1. Mineral resources are reported using the definitions set out in the 2012 JORC Code and are current as at June 4, 2026. Mineral Resources are reported on an in situ basis, inclusive of Ore Reserves.
2. The Competent Person responsible for the estimate is John Eckman.
3. Mineral Resources are reported within a conceptual pit shell that uses the key assumptions summarized above.
4. Mineral Resources are reported above a cut-off grade of 0.4% THM.
5. The Study Area contains 199.0 Mt of Mineral Resources (Measured + Indicated) exclusive of Ore Reserves.
6. Estimates have been rounded.

> The mineral assemblage is reported by resource classification, by geologic unit and weight-average composited for resource. Assemblage percentage values are reasonably consistent among the measured and indicated classes. The interpolated Inferred Resource class is also provided.

> The Competent Persons considered pertinent Modifying Factors, inclusive of mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors, in converting a portion of the Measured and Indicated Mineral Resources to Ore Reserves.

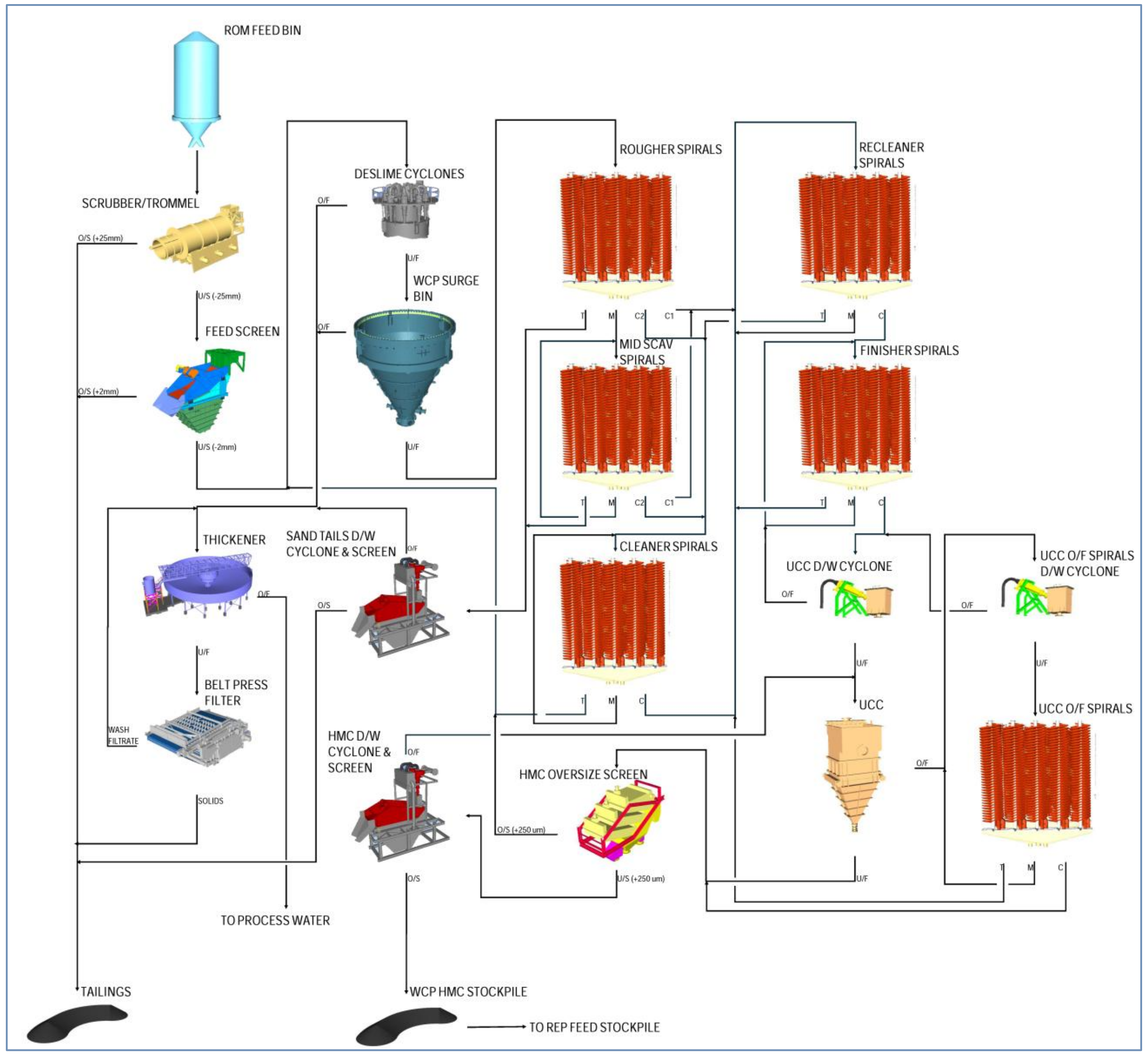
> Resource modeling and mine optimization as described in the report were used as a basis for the reserve estimate using the geologic model as the basis of the conversion from Mineral Resources to Ore Reserves. Proved and Probable ore reserves were derived from the defined Measured and Indicated Resources considering relevant processing, economic (including technical estimates of capital, revenue, and cost), marketing, legal, environmental, socio-economic, and regulatory factors. The Ore Reserve estimate is based only on Measured and Indicated Mineral Resources. Inferred Mineral Resources were treated as waste and were not used to support Ore Reserves or economic viability.

Titan Project – Estimate of Ore Reserves, ROM Basis

Unit	Grand Total ROM Tonnes: Proved	Probable	Total	THM (%)	THM (t)	THM Assemblage: Zircon (%)	Rutile (%)	Ilmenite (%)	REE (%)
Upper McNairy	24,565,000	2,415,000	26,980,000	2.3	620,000	6.2	6.2	23.6	0.2
Lower McNairy	68,740,000	21,307,000	90,047,000	3.4	3,086,000	12.7	10.5	48.3	1.9
Total	**93,306,000**	**23,722,000**	**117,027,000**	**3.2**	**3,706,000**	**11.6**	**9.8**	**44.2**	**1.6**

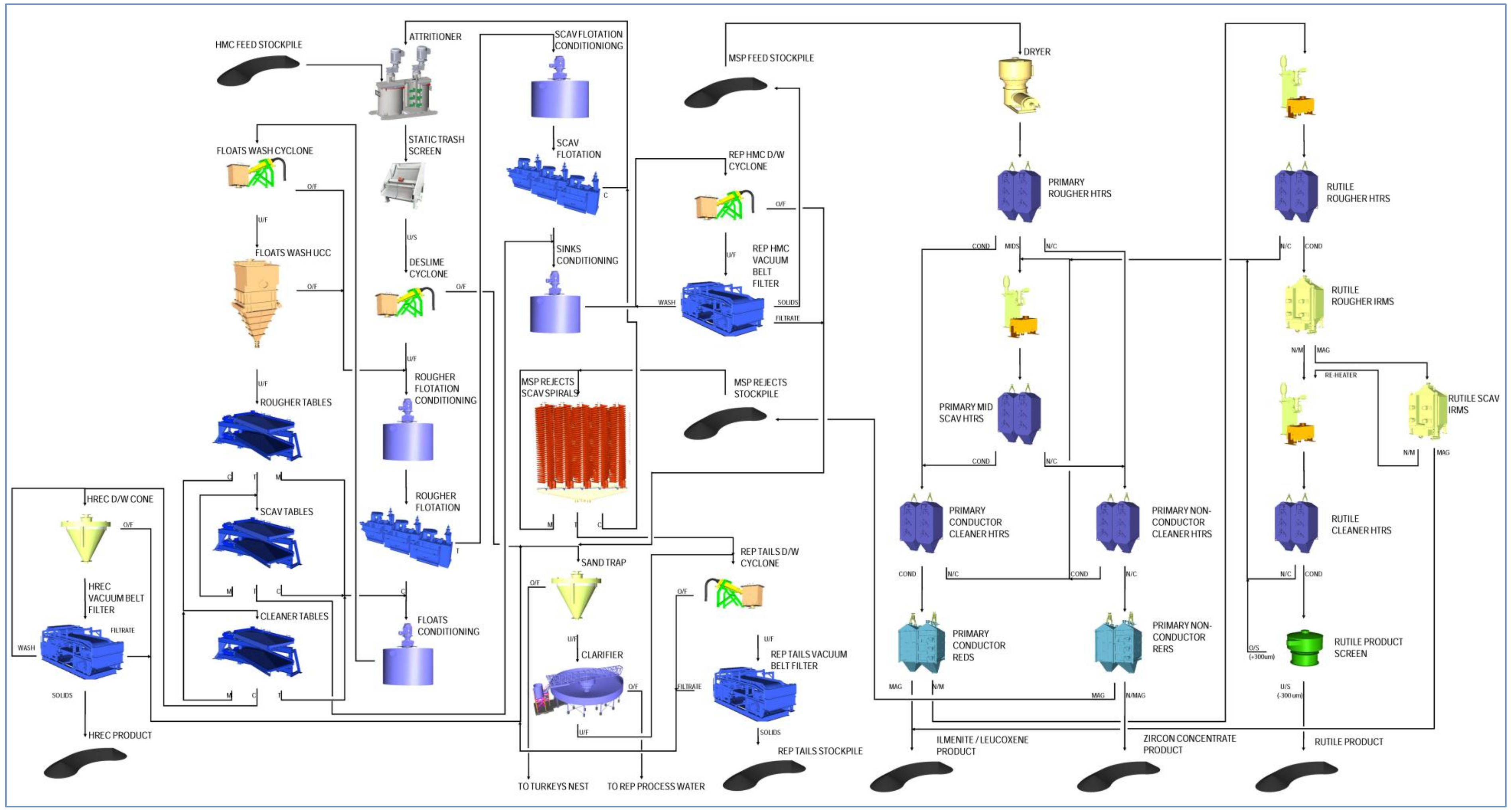
Notes to accompany Ore Reserve table:

1. Ore Reserves are reported using the definitions set out in the 2012 JORC Code and are current as at June 4, 2026. Ore Reserves are reported on a ROM basis.
2. The Competent Person responsible for the estimate is Justin Douthat.
3. Ore Reserves are reported within a finalized mine design pit shell that uses the key assumptions summarized above.
4. Ore Reserves are reported above a COG of 0.85% THM.
5. Ilmenite includes leucoxene, pseudorutile, and ilmenite and REE includes monazite, xenotime, and unclassified REE.
6. Estimates have been rounded.

Criteria	JORC Code explanation	Commentary
	> Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	> Mineral Resources are reported to be inclusive of the Ore Reserves.
Site visits	> Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	> MM&A's CP conducted a site visit to the Project area on April 15-16, 2025. The outcome was direct exposure to the property and a better understanding of the mining potential and challenges of the deposit.
Study status	> The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.	> A Definitive Feasibility Study (DFS) was prepared to support estimation of Ore Reserves in order to convert Mineral Resources to Ore Reserves. A DFS is equivalent to a "Feasibility Study". > While MM&A fulfilled the responsibility as the integrator of the DFS and was responsible for Mineral Resource and Mineral Reserve estimates along with mine plan and mining cost estimation, other consulting firms also completed vital aspects of the Study. KGS was responsible for historical exploration results for the Project. MT completed the wet and dry process design and related modular plant cost estimation. Primero completed the non-process infrastructure (NPI) design and related cost estimates, and was responsible for integrating the mining, process and NPI costs into a comprehensive discounted cash flow financial model for the DFS.
	> The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	> This geologic evaluation conducted in accordance with 2012 JORC standards and in conjunction with the DFS is sufficient to conclude that the estimated Ore Reserves are economically mineable under reasonable expectations of market prices for products, estimated operating costs, and capital expenditures. > The processing flowsheet is based on metallurgical testwork programs conducted in 2021 and 2023 on representative Upper and Lower McNairy Formation mineralization. Testwork demonstrated that the mineralization is amenable to conventional mineral sands processing techniques, including desliming, wet gravity separation, flotation, and dry electrostatic and magnetic separation. **DFS Process Flowsheet – Block Flow Diagram (FPP, TDC, WCP & CUP)**  Note: Figure prepared by MT, 2026

Criteria	JORC Code explanation	Commentary

DFS Process Flowsheet – Block Flow Diagram (REP & MSP)



Note: Figure prepared by MT, 2026

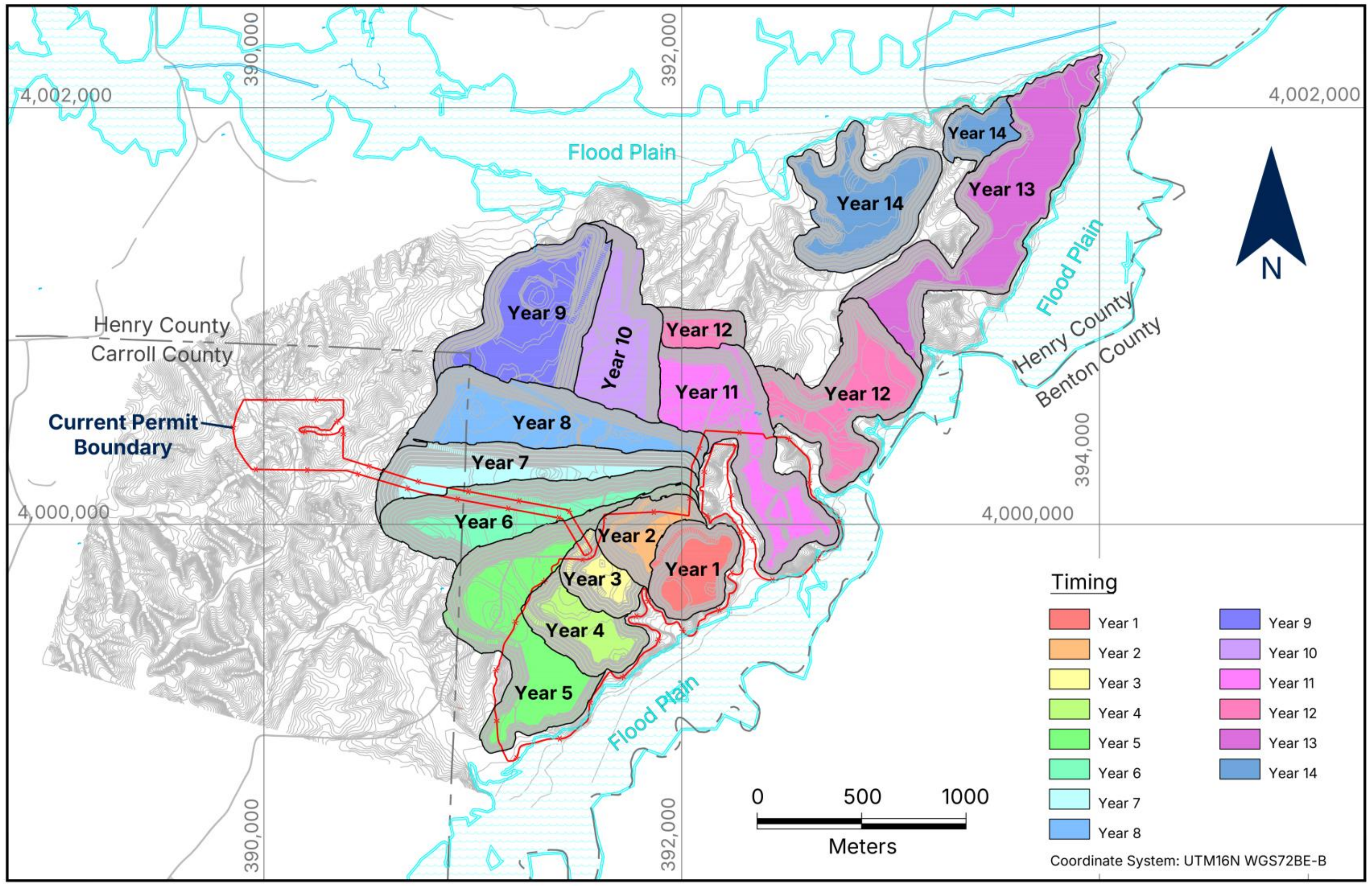
> The proposed process and recovery methods outlined in the sections below were selected based on well-established and conventional approaches to processing mineral sands, including recovery of heavy mineral content using wet gravity separation equipment (such as spiral separators and up-current classifiers) followed by dry separation of titanium (ilmenite and rutile) and zircon minerals using electrostatic and magnetic separation equipment. With the increased focus on recovery of rare earth mineral content from mineral sand deposits, the use of flotation to extract these minerals (prior to dry mineral separation), and wet shaking tables to upgrade them, has become a more conventional approach and was selected for this flowsheet.

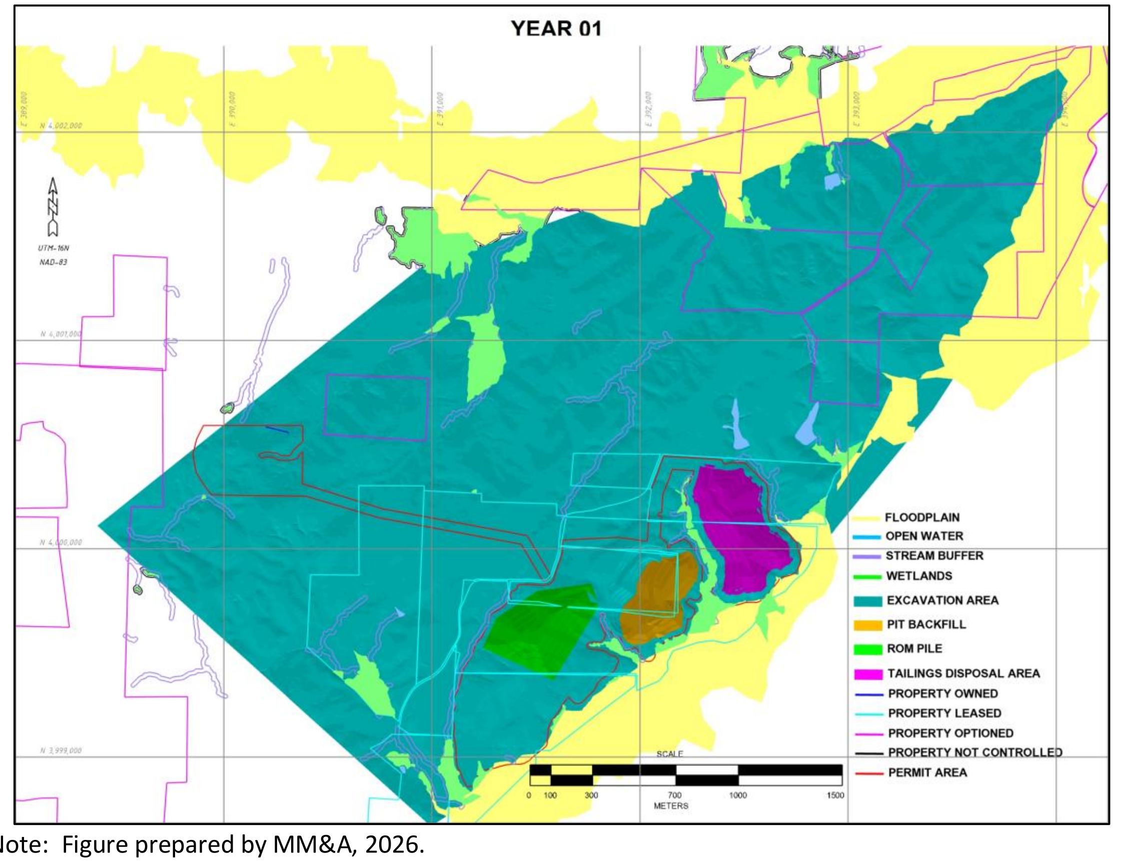
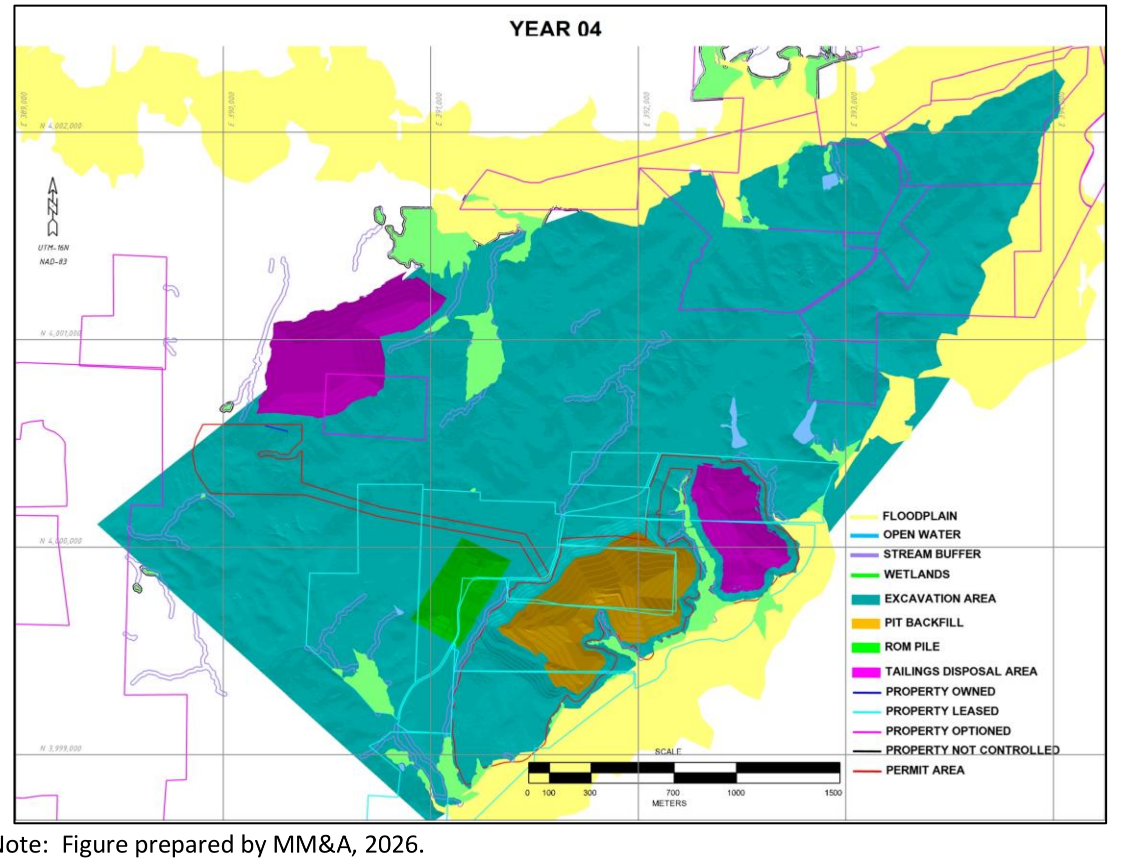
> The process plant layout is broken down further within each site into specific areas as follows:

a. WCP Site:
   i. Mining Unit Plant (MUP)
   ii. Feed Preparation Plan (FPP)
   iii. Wet Concentrator Plant (WCP)
   iv. Concentrate Upgrade Plant (CUP)
   v. Tailing Dewatering Circuit (TDC)

a. MSP Site:
   i. Rare Earth Plant (REP)
   ii. Mineral Separation Plant (MSP)

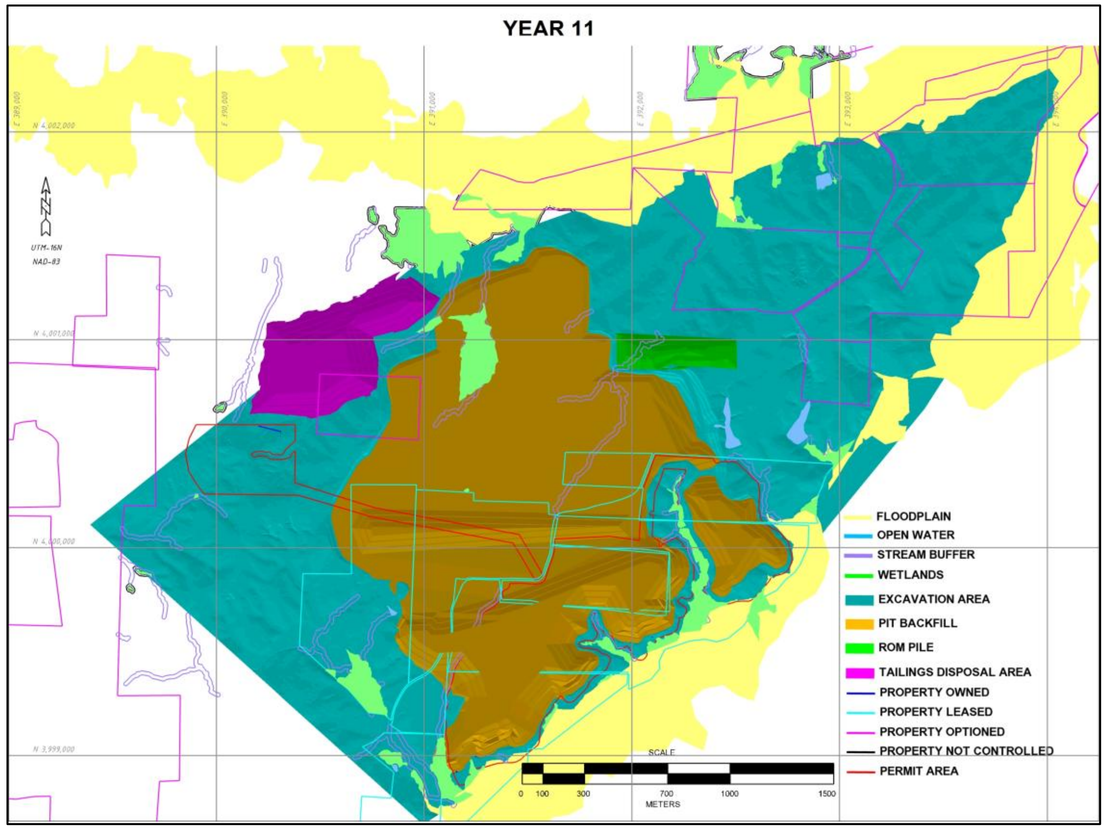
Criteria	JORC Code explanation	Commentary
		> Each site has been designed to first accommodate the 400 tph plant and then cater for the future expansion to 1,200 tph of rougher spiral head feed by adding a parallel 800 tph plant. The method for expansion for each area was considered individually to provide the most flexibility during operations, whilst also considering economies of scale in construction, and minimizing the variation of required spare parts for each plant area. > The DFS financial model prepared by Primero was developed to test the economic viability of the Ore Reserves. The financial model was developed using second-quarter 2026 (Q2 2026) price forecasts and cost estimates, with all figures presented in US dollars and expressed in real terms. The analysis was performed on an unlevered basis, assuming 100% equity financing. A real discount rate of 8% was applied, consistent with industry benchmarks for mining projects in the US. No escalation was applied to operating costs or revenues over the life of the model. > Proved and Probable Ore Reserves were converted from the Measured and Indicated Mineral Resource estimates considering relevant processing, economic (including independent estimates of capital, revenue and costs), marketing, legal, environmental, socioeconomic, and regulatory factors. > No Inferred Mineral Resources were included in the Ore Reserve estimates. Any Inferred Mineral Resources within the mine plan were treated as waste.
Cut-off parameters	> The basis of the adopted cut-off grade(s) or quality parameters applied.	> MM&A developed a mine plan and reserve estimate using K-MINE Group's (K-MINE) Planning and Optimal Pit Boundaries modules. > The initial cutoff grade (COG) for mineral reserve estimation was set at 0.4% THM based on previous work. Upon coordination with process engineers designing the Wet Concentrator Plant (WCP), it was determined that a COG yielding a rougher feed grade of 3.2% THM would yield better recoveries through the process plant. > A detailed COG analysis was completed whereby additional optimizations were run at COGs of 0.6% THM, 0.7% THM, 0.8% THM, and 0.85% THM to arrive at 3.2% THM grade feed to the WCP. Final COG used for optimization, scheduling, and mine planning was set at 0.85% THM. This selection was supported by a sensitivity analysis.
Mining factors or assumptions	> The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).	> Price coefficients (or revenue factors) were set up as part of the optimization process with a range of 20% to 110% with a 10% price correlation step for the final products. It was decided to proceed using a 90% price coefficient, which provides the best correlation between maximizing profit and maximizing the mineral reserves mined (ilmenite, rutile, zircon concentrate and heavy rare earth concentrate, heavy rare earth elements (HREE)-dominant by value). > All floodplain restrictions were observed for the optimization process. Production forecasts were based on a target production of 3.5 Mt per year for Phase 1 (Years 1-4) and 10.0 Mt per year for Phase 2 (Years 5-14). > Results of the optimization and detailed mine schedule indicated that about 117 Mt of ROM ore at a THM of 3.2 percent would be mined.
	> The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	> MM&A prepared a qualitative decision matrix. Based on a review of the key criteria (productivity, flexibility, separating plant-pit operations, operating cost, capital cost, ore selectivity and sensitivity to a potentially wet pit floor), MM&A recommends the excavator & truck mining method, which is a conventional mining method. > All labor necessary to operate the mobile mining equipment and conveyor movement at the Titan project will be provided by a mining contractor. The contractor will be responsible for all overburden removal, mining and loading of raw ore material onto conveyors, and handling and placement of all waste and tailings material in the final backfill. The contractor will also handle movement and maintenance activities for the materials handling and conveyor system at the mine. > IperionX labor at the mine is projected to include an engineering manager, geologists, and drafting personnel to support the necessary engineering, planning and grade control activities. > Mining contractors will provide all mobile mining equipment, water truck, dozer capable of maintaining the waste disposal volumes, motor grader, utility loader backhoe, fixed or portable lights, pumps, and a utility articulated haul truck (for erosion control measures, cleaning, etc.). > A mine plan was created using K-MINE's Dynamic Design module for multiple years based on nested pits created from initial optimizations in order to create route profiles for equipment sizing and scheduling. These plans were developed by MM&A in order to allow mining contractors to match production requirements by year to excavators, articulated haul trucks and fixed and mobile conveyors which ultimately resulted in preparing cost analysis data used in mining cost modeling.

Criteria	JORC Code explanation	Commentary
		Titan Mine LOM Production Timing Map  Note: Figure prepared by MM&A, 2026. Outer boundaries of the pits denote the designed finalized outline of the mine. > A combination of excavators and articulated trucks will be used to mine the ROM ore as well as all topsoil, overburden and interburden waste material. ROM stockpiles and initial waste disposal areas are designed to minimize haul distances. Conveyors will be used to transport ROM ore from the mine area to the WCP, and dewatered tailings from the WCP back to the pits for disposal in the final backfill.

Criteria	JORC Code explanation	Commentary
		Year 1 Mine Pit, ROM Pile, Waste Pile and Backfill Surfaces  Note: Figure prepared by MM&A, 2026. **Year 4 Mine Pit, ROM Pile, Waste Pile and Backfill Surfaces**  Note: Figure prepared by MM&A, 2026.

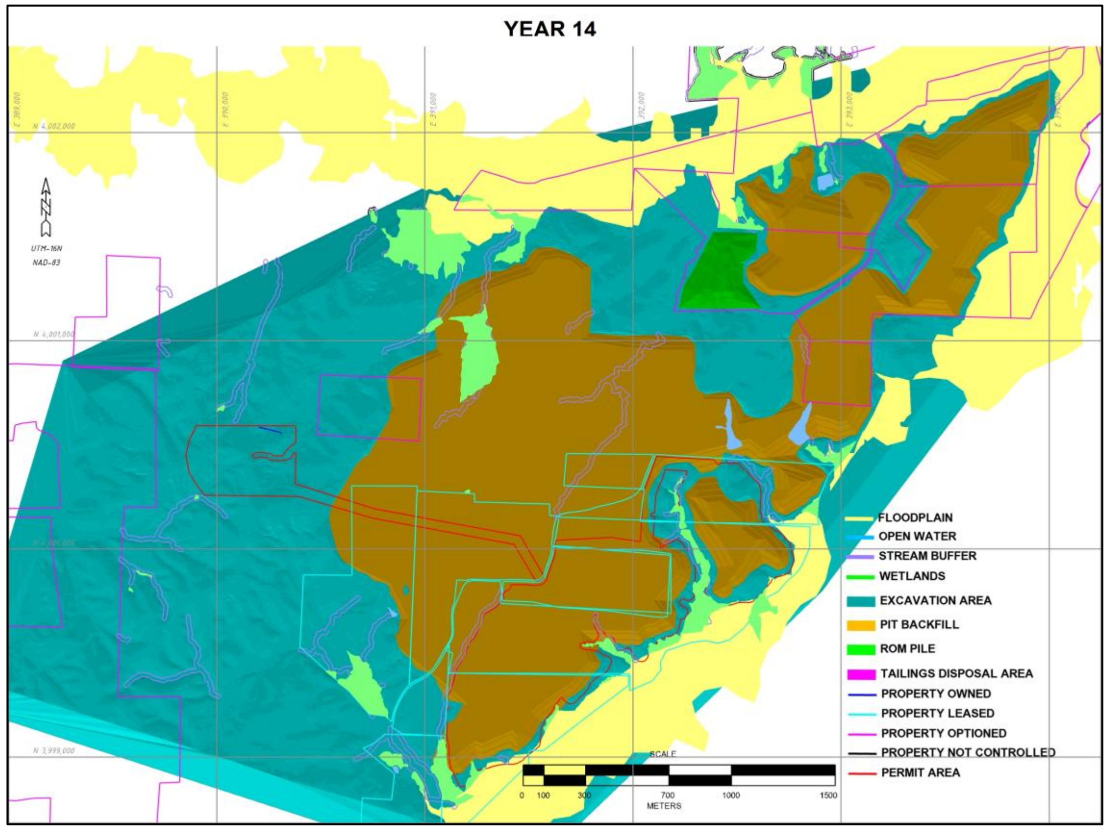
Criteria	JORC Code explanation	Commentary

Year 11 Mine Pit, ROM Pile, Waste Pile and Backfill Surfaces

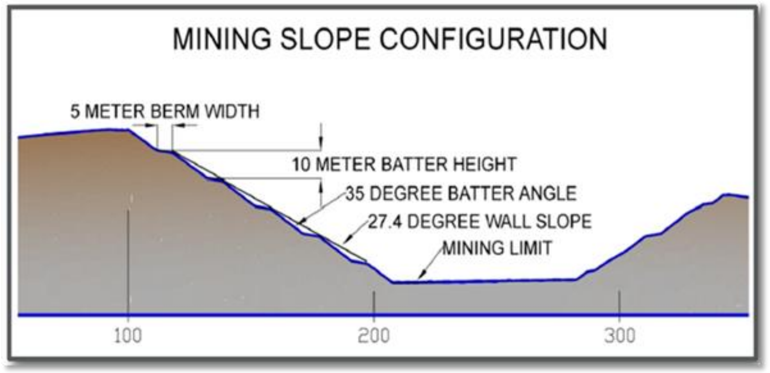


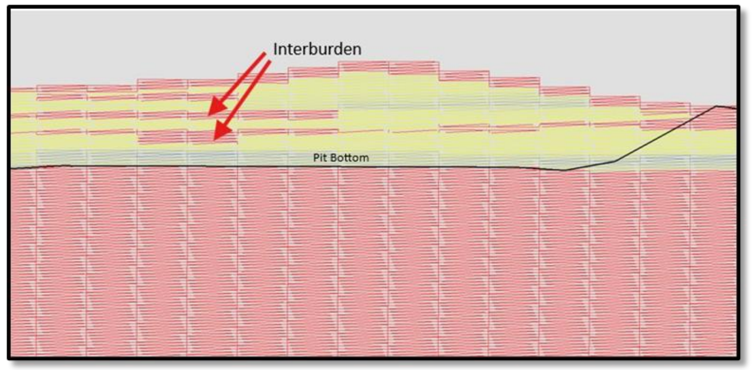
Note: Figure prepared by MM&A, 2026.

Year 14 Showing Final LOM Backfill Surfaces



Note: Figure prepared by MM&A, 2026.

Criteria	JORC Code explanation	Commentary
	> The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.	> Mine planning involved geotechnical and hydrogeological assessment. The geotechnical assessment completed for the project considered both pit slope stability and reclaimed, backfilled tailings stability. The geotechnical assessments incorporated hydrogeological modeling results. > Geotechnical review completed by S&ME, Inc. resulted in a final wall berm (batter) height of 10 meters with a batter angle of 35 degrees and 5-meter-wide benches, resulting in an overall 27.4-degree slope wall. No production drilling is required since the material is sand.  Note: Figure prepared by MM&A, 2026. > Due to the geometry of the mining pits, small amounts of economic material may have been excluded from the mine plan tonnages, while small amounts of sub-economic/low-grade material may have been included. This provides an opportunity during mining operations under the supervision of grade control geologists to improve recovery and grade of the production. An example of the interburden (low-grade) waste zones within the orebody is shown below. Note that only large areas of interburden (approximately 6-ha or 15-acre areas, approximately 9 meters or 30 feet thick) will be removed and placed in the same waste disposal manner as the WCP tailings. Smaller areas of interburden will be mined and processed through the WCP. > HDR Engineering, Inc. (HDR) completed groundwater models for two separate dewatering scenarios, one considering dewatering wells along the pit perimeter and another considering a reduced number of dewatering wells along the pit perimeter in combination with a series of slurry walls also along the pit perimeter. Project scheduling and necessary iterations that occurred through the life of the Titan Project resulted in the groundwater flow modeling being conducted on a slightly different mine plan, as compared to the finalized mine plan used for this DFS. The mine plan that was used for the groundwater modeling and the finalized mine plan relied upon for the DFS are nearly identical in location and similar in overall pit size, with some variation in mining sequence in the first five years of the mine life. To match the estimated groundwater inflow results from HDR's model to the finalized pit layout and mining sequence, each groundwater-modeled pit area was coupled with the associated model-estimated inflow to determine an average groundwater inflow rate per acre mined for each area. Then the finalized mine plan area and sequencing was overlain onto the inflow areas defined by the HDR modeling, and inflows were estimated for each final mine plan sequence area by applying the model-determined gallon per minute per acre values. > The final mine plan considers that no dewatering wells or slurry walls are necessary to maintain adequate stable pit walls, so the total inflow values estimated by the HDR modeling are utilized (total of estimated flow from dewatering wells and toe drains within the bottom of the advancing pit).
	> The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	> Beginning with the geologic block model described above, MM&A developed a mine plan and reserve estimate using K-MINE Group's (K-MINE) Planning and Optimal Pit Boundaries modules. The initial cutoff grade (COG) for mineral reserve estimation was set at 0.4% THM based on previous work. Upon coordination with process engineers designing the WCP, it was determined that a COG yielding a rougher feed grade of 3.2% THM would yield better recoveries through the process plant. A detailed COG analysis was completed whereby additional optimizations were run at COGs of 0.6% THM, 0.7% THM, 0.8% THM, and 0.85% THM to arrive at 3.2% THM grade feed to the WCP. Final COG used for optimization, scheduling, and mine planning was set at 0.85% THM. This selection was supported by a sensitivity analysis. Optimization parameters for the pit dimensions were compiled with input from IperionX, S&ME and MM&A and are shown in the table below. > Revenue streams as projected in the economic portions of the report assume a sales realization (FOB-mine) of US$1,425 per tonne for rutile final product, US$340 per tonne for ilmenite final product, US$912 per tonne for zircon concentrate, and US$10,678 for rare earth elements concentrate. Product prices were provided by IperionX based on "TZMI Titanium Feedstock Price Forecast to 2029, Issue 2, 2025" and Adamas Intelligence "Value of IperionX Monazite Concentrate, Q3, 2025" Market Reports. The DFS economic analysis in utilizes higher overall commodity prices in aggregate than Ore Reserve price assumption. This difference reflects updated market information available at the time of completion of the DFS economic model. A separate pit optimization economic review and sensitivity analysis demonstrates that the project remains economically viable at the Ore Reserve commodity price assumption. > Mining, transportation and processing costs estimated for pit optimization were assumed to be US$7.23/tonne, US$1.00/tonne, and US$3.09/tonne, respectively. In addition, general and administrative cost of US$0.95/tonne and dewatering cost of US$0.30/tonne were assumed. Wetlands mitigation and stream mitigation cost assumptions of US$60,000/hectare and US$1,425/linear meter, respectively, were applied. Royalties were estimated based on 5% of net revenue.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td rowspan="5"></td><td>> The mining dilution factors used.</td><td>> Due to the geometry of the mining pits, small amounts of economic material may have been excluded from the mine plan tonnages, while small amounts of sub-economic low-grade material may have been included.
> This provides an opportunity during mining operations under the supervision of grade control geologists to improve recovery and grade. An example of the interburden (low-grade) waste zones within the orebody is shown below (not to scale).


Note: Figure prepared by MM&A, 2026.
> Note that only large areas of interburden (~ 15-acre or 6-hectare areas, ~ 30 feet or 9 meters thick) will be removed and placed in the same waste disposal manner as the WCP tailings. Smaller areas of interburden will be mined and processed through the WCP.</td></tr>
<tr><td>> The mining recovery factors used.</td><td>> Recovery factors by material type are as follows:
<table><tr><td>Metallurgical recovery</td><td></td><td></td></tr><tr><td>Rutile</td><td>%</td><td>70.6 (81.2% mineral in product)</td></tr><tr><td>Ilmenite</td><td>%</td><td>85.0 (95.8% mineral in product)</td></tr><tr><td>Heavy Rare Earth Concentrate</td><td>%</td><td>89.5 (87.8% mineral in product)</td></tr><tr><td>Zircon</td><td>%</td><td>91.2 (46.9% mineral in product)</td></tr></table></td></tr>
<tr><td>> Any minimum mining widths used.</td><td>> Not applicable.</td></tr>
<tr><td>> The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</td><td>> Proved and Probable Ore Reserves were converted from Mineral Resources considering relevant processing, economic (including independent estimates of capital, revenue, and costs), marketing, legal, environmental, socioeconomic, and regulatory factors.
> Inferred mineral resources were not used in the mine plan, production forecast or economic analysis. They represent an upside opportunity for the Project.</td></tr>
<tr><td>> The infrastructure requirements of the selected mining methods.</td><td>> Transportation of ROM and tailings materials between the mine pits and the processing plants will be conducted by conveyor belts. The main transportation belt will be dual-purpose with the top belt taking ROM material from the pits to the plant and the bottom belt returning to the pits with the tailings.</td></tr>
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<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
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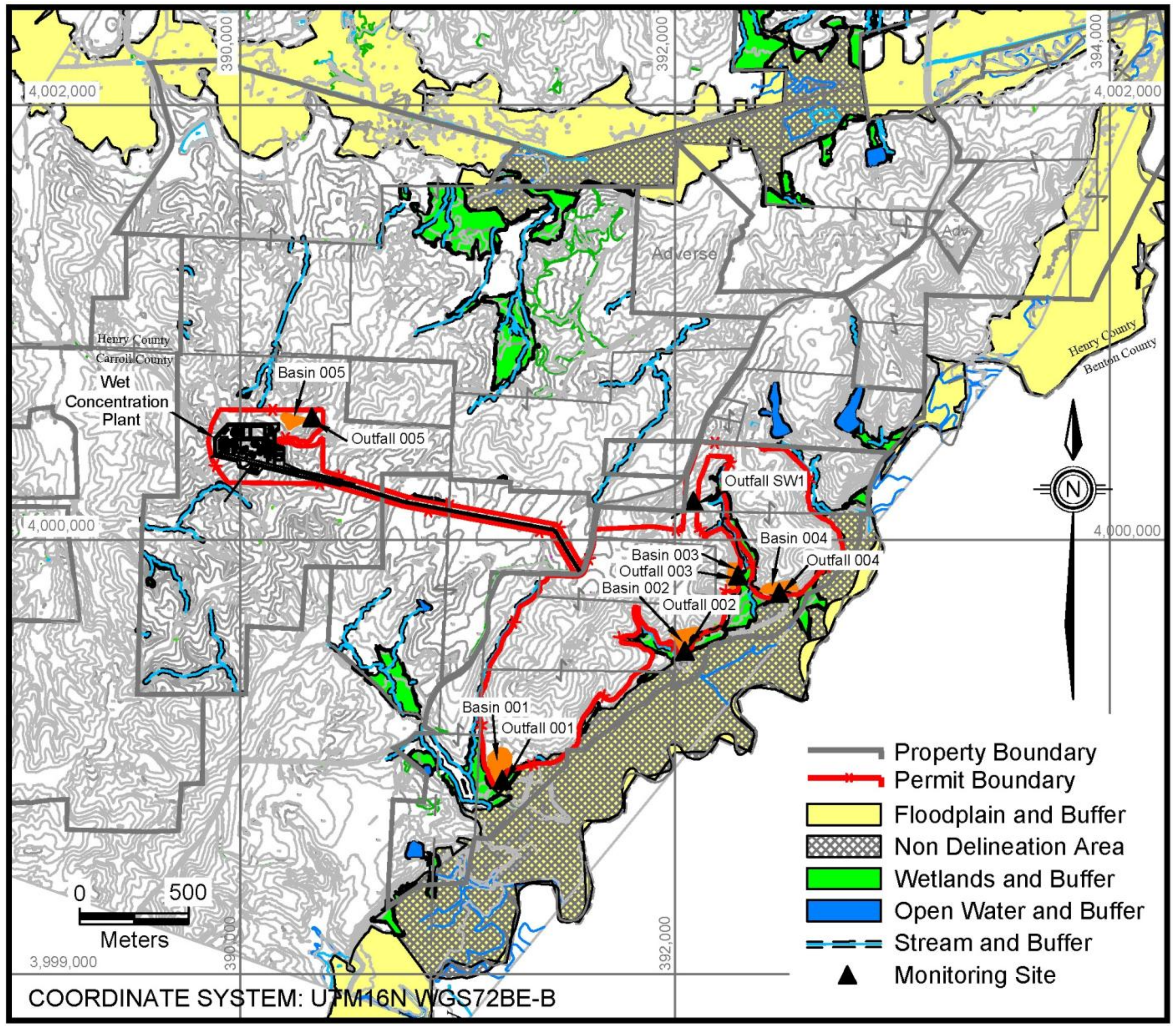
Titan Project Mine Site



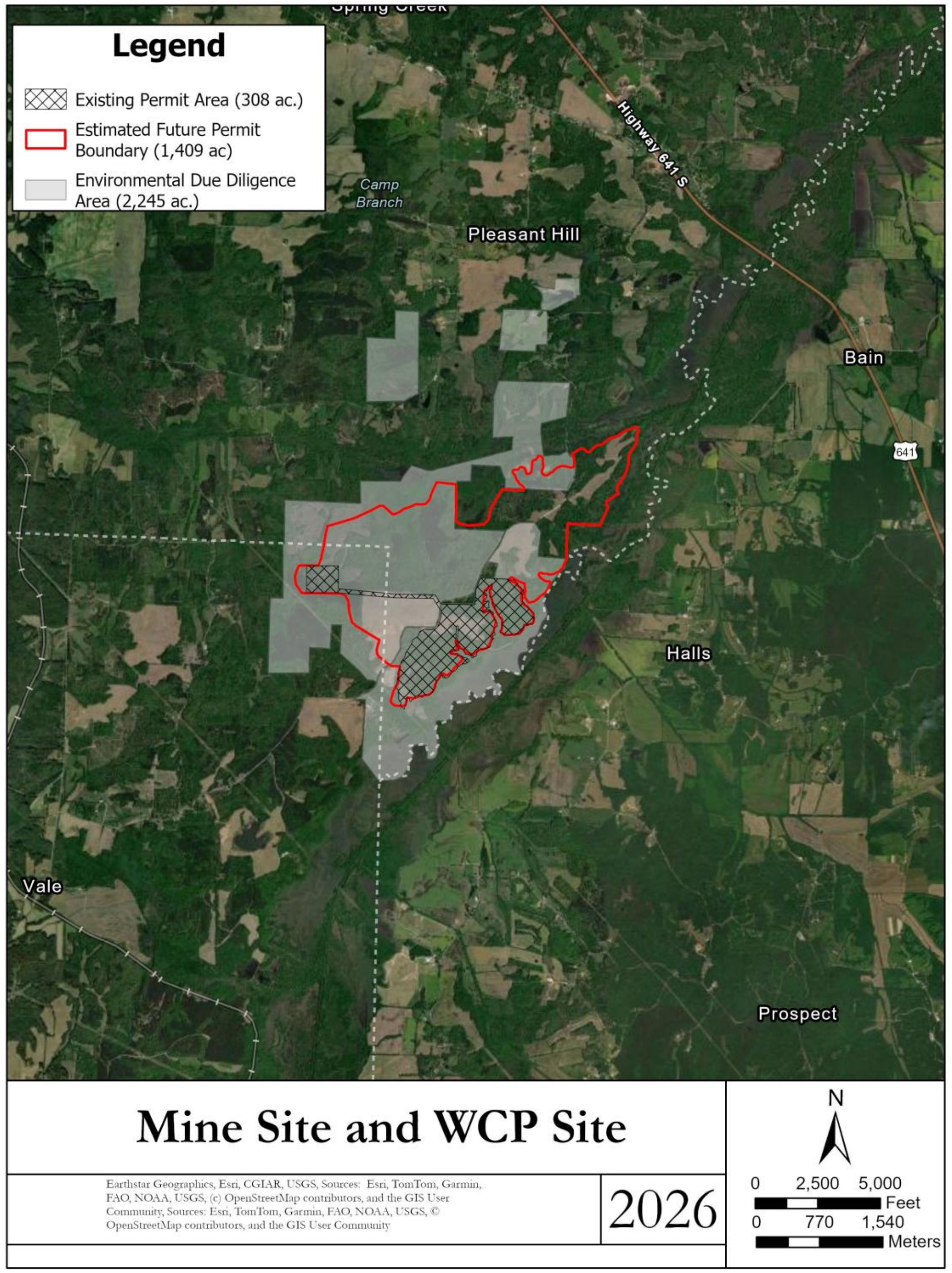
Note: Figure prepared by MM&A, 2026.

- Process plant layouts for both the WCP and MSP sites were developed to DFS level, incorporating allowance for staged expansion, operability, maintenance access, and material handling. A modular construction strategy was adopted across the major plant areas to reduce site construction duration and execution risk.
- Electrical, utilities, water management, tailings handling, and supporting infrastructure were defined to DFS accuracy. The capital costs were developed in accordance with the requirements of a Class 3 estimate, consistent with the Association for the Advancement of Cost Engineering (AACE) Cost Estimating Classification System, as defined in AACE International Recommended Practice No. 17R-97. In keeping with the intended Class 3 estimate maturity, the estimate has been prepared to reach a target accuracy range of ±15%.
- NPI buildings will be located at the WCP and MSP facilities for all operations and maintenance personnel either as vendor supplied modular buildings or engineered structures. NPI at the WCP includes control room, warehouse and ablutions building. NPI at the MSP includes control room, administration building, warehouse and laboratory and sample preparation building. The design developed in this DFS is based on established design precedents from facilities with similar functions and requirements and is consistent with the approved Basis of Design for this Project. This approach ensures that the NPI at both the WCP and MSP reflect proven layouts and operational needs while maintaining alignment with regulatory, safety, and project standards.
</td></tr>
<tr><td>**Metallurgical factors or assumptions**</td><td>

- The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.
</td><td>

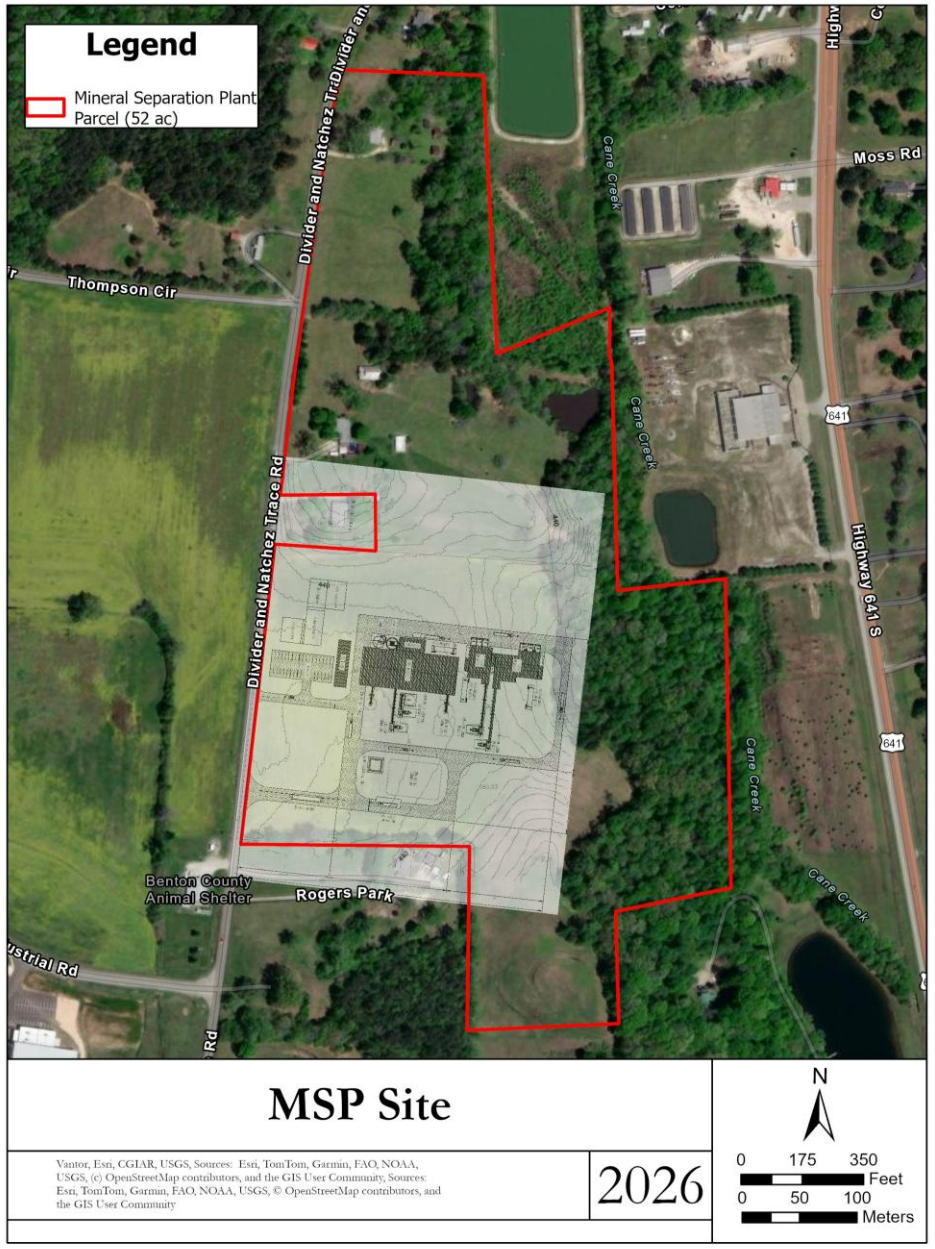
- The proposed process and recovery methods outlined in the sections below were selected based on well-established and conventional approaches to processing mineral sands, including recovery of heavy mineral content using wet gravity separation equipment (such as spiral separators and up-current classifiers) followed by dry separation of titanium (ilmenite and rutile) and zircon minerals using electrostatic and magnetic separation equipment. With the increased focus on recovery of rare earth mineral content from mineral sand deposits, the use of flotation to extract these minerals (prior to dry mineral separation), and wet shaking tables to upgrade them, has become a more conventional approach and was selected for this flowsheet.
- The testwork programs were acceptable for the mineralization type. The proposed flowsheet configuration, mass balance, and recovery assumptions are based on available testwork data, supported by industry experience and appropriate engineering design for the level of study. The process solution is considered conventional industry practice.
</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		> The DFS has defined a technically robust and scalable process design for the Titan Project, accommodating both the initial 400 tph development and the planned expansion to 1,200 tph. > The adopted design provides a clear execution pathway for staged development while maintaining a high degree of equipment commonality between the initial and expanded plant phases. This approach reduces operation complexity, improves maintainability, and supports efficient capital deployment across the life of the project. The extensive use of modularization across the WCP, REP and MSP is expected to reduce site construction risk, improve schedule certainty, and enhance overall cost control. > Trade-off studies completed for tailings dewatering and zircon product pathways informed key design decisions. The selected tailings dewatering configuration is considered feasible at the DFS level to meet the moisture targets necessary to support progressive landform rehabilitation. The zircon trade-off study identified a preferred product pathway that balances metallurgical performance, regulatory compliance, processing simplicity, and market acceptance.
	> Whether the metallurgical process is well-tested technology or novel in nature.	> The selected flowsheet, equipment selections, and plant layouts are based on conventional, well-proven mineral sands processing technologies and are supported by extensive prior testwork, process modelling and MT's operational experience.
	> The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.	> The processing flowsheet is based on metallurgical testwork programs conducted in 2021 and 2023 on representative Upper and Lower McNairy Formation mineralization. Testwork demonstrated that the Titan mineralization is amenable to conventional mineral sands processing techniques, including desliming, wet gravity separation, flotation, and dry electrostatic and magnetic separation. > Three bulk samples were processed in 2021 by MT through pilot equipment designed to emulate a full-scale feed preparation plant, WCP, monazite flotation/concentrate upgrade plant and a mineral separation plant (MSP). Testwork demonstrated that the Upper and Lower McNairy Formation mineralized zones could be separated using processing stages common to most mineral sands operations. > MT completed additional metallurgical testwork in early 2023. The testwork was based on one bulk sample and three variability samples. Three bulk composite samples ranging from 2 to 3 t were prepared for the variability testwork. The composites consisted of different ratios of Upper McNairy and Lower McNairy Formation material, with the mass percentage of Upper McNairy Formation in the three composites being 0%, 37.5% and 50%. The objective of the variability testwork was to quantitatively assess potential product quality with qualitative estimates of recovery of three composite samples that reflected different mineralized domains. The final products from the 2023 testwork were: b. ilmenite – at a grade of 64.9% titanium dioxide (TiO_2) c. rutile – at a grade of 91.2% titanium dioxide (TiO_2) d. zircon – at a grade of 66.8% zirconium dioxide (ZrO_2) e. heavy rare earth concentrate, HREE-dominant by value (HREC) – at a grade of 59.1% total rare earth oxides (TREO) > The DFS flowsheet incorporates configuration, scale, and operational changes relative to the flowsheets tested during the metallurgical programs. As such, the final DFS design represents a combination of demonstrated testwork performance, experience from comparable operations, vendor data, and process modelling. > The adopted process configuration includes: a. feed preparation with scrubbing, screening, and desliming b. multi-stage wet gravity separation to produce a HMC c. rare earth mineral recovery using attritioning, flotation, and gravity upgrading to produce a HREC d. dry electrostatic and magnetic separation to produce ilmenite, rutile, and zircon concentrates > Indicative metallurgical recoveries were estimated through process modelling informed by metallurgical testwork results. On an in-size (+45 micron) basis, estimated recoveries from run-of-mine feed to final products are approximately 82.6% for rare earth minerals, 79.7% for ilmenite, 66.9% for rutile, and 77.6% for zircon. Product grades achieved during testwork are considered saleable, subject to further confirmation and optimisation during subsequent project phases. > The testwork programs were acceptable for the mineralization type. The proposed flowsheet configuration, mass balance, and recovery assumptions are based on available testwork data, supported by industry experience and appropriate engineering design for the level of study. The process solution is considered conventional industry practice.
	> Any assumptions or allowances made for deleterious elements.	> Deleterious elements such as iron, magnesium, uranium, thorium, chromium, and vanadium are present at low levels and can negatively impact the marketability of heavy mineral sands products, especially uranium and thorium for the Project. High levels of these contaminants may reduce product quality, result in regulatory penalties, or require additional processing, which increases costs. Environmental considerations, particularly tailings management and the potential presence of radioactive or toxic elements, can add complexity and expenses due to stricter regulations, water management, and the need for site rehabilitation after mining operations.
	> The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole	> The test work was based on one bulk sample and three variability samples. > The main bulk sample of 12.7 tonnes was composed of approximately 30% Upper McNairy and 70% Lower McNairy Formation mineralization, representing the average material that might be mined in the initial years of any future mining operations. > Three bulk composite samples ranging from 2–3 tonnes were prepared for the variability test work. The composites consisted of different ratios of Upper McNairy and Lower McNairy Formation material, with the mass percent of Upper McNairy Formation in the composites being 0%, 37.5% and 50%. The objective of the variability test work was to quantitatively assess potential product quality with qualitative estimates of recovery of three composite samples that reflected different mineralized domains.

Criteria	JORC Code explanation	Commentary
	> For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet specifications?	> The test work showed that high-quality ilmenite, rutile, and zircon products could be achieved using conventional separation equipment through a typical wet concentrator plant and fine and coarse mineral separation plant flowsheet. A heavy rare earth concentrate product was created at a high monazite recovery using flotation and gravity separation processing. > Flowsheet development was conducted based on the main sample test work. The variability testwork mirrored the flowsheet of the main sample where practical. Despite the variance in the flowsheet procedure, mineralogy and feed grades, the variability test work showed that high-grade ilmenite, rutile, and zircon products could be achieved using the process flowsheet developed during testing.
Environmental	> The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	> The proposed mine site and Wet Concentrator Plant location is the estimated future permit boundary consisting of approximately 570 ha (1,409 acres), and consists of forested land, active silviculture and agricultural land, and a maintained utility right-of-way (ROW). The proposed mine site includes the existing 125-ha (308-acre) permit area. An environmental due diligence study area was subject to desktop analyses and field investigations from 2021 to 2023. **Mine and WCP Site Boundaries**  Note: Prepared by HDR, 2026.

Criteria	JORC Code explanation	Commentary
		> IperionX has secured the following permits and agency approvals for the Existing Permit Area: Mining permit (surface mining of titanium and mineral sands), National Pollutant Discharge Elimination System (NPDES) permit (to discharge treated mine wastewater and stormwater), insignificant activity registration (air quality registration for sources of insignificant emissions), approved jurisdictional determination (from the US Army Corps of Engineers for review/verification of stream and wetland locations), and hydrological determination (from the Tennessee Department of Environment and Conservation or "TDEC"). > The necessary NPDES permitting for the existing permit area site was conducted through a joint mine permit and individual NPDES permit application package covering construction, industrial, and process wastewater discharge. This permit was issued in August 2023 and will expire in August 2028. An amendment to the existing joint Mine/NPDES Permit is required for the ultimate build out of the estimated future permit boundary. > As mining planning progresses, the existing permits and agency approvals noted above will require modification to incorporate the entirety of the mine site in the future. Additionally, though there have been environmental due diligence studies performed within the Environmental Due Diligence Study Area that cover the majority of the Mine Site, they are outdated and would also require appropriate re-reviews, updates, and field work as applicable. > The Mineral Separation Plant (MSP) parcel, located in unincorporated Benton County, Tennessee, is approximately 21 Ha (52 acres) in extent. It is part of an industrial park; however significant development has yet to occur within the MSP parcel boundary. The MSP parcel boundary currently consists of active agricultural land and unmaintained forest. Land use in the vicinity of the area consists of industrial, agricultural, undeveloped forested land, and low-density residential land. Neither the mineral separation plant nor the rare earth plant are currently permitted.

Mineral Separation Plant Boundary



Note: Prepared by HDR, 2026

Criteria	JORC Code explanation	Commentary

- Site due diligence investigations that need to be completed for the MSP site to more accurately assess environmental permitting needs/risk are listed below with additional detail summarized in are summarized as follows:

Titan Minerals IperionX Potential Environmental Permits/Authorizations for the MSP Site*

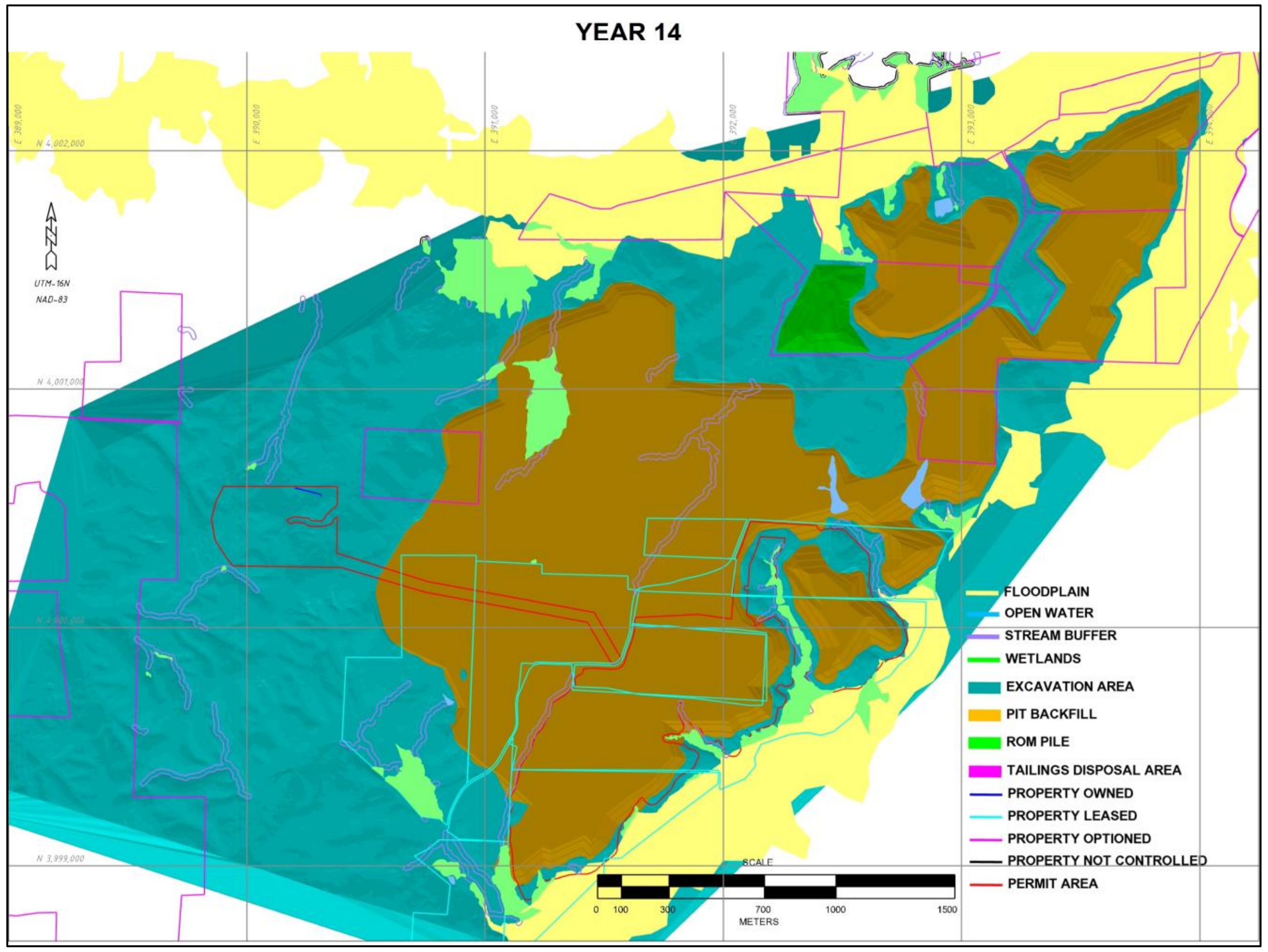
Reviewed and Issued By:	Permit /Authorization Name	Anticipated Actions	Estimated Timeline (If required)
Federal (United States)			
United States Army Corps of Engineers (USACE)	404 Jurisdictional Determination	Submittal of JD required for USACE review/verification of stream and wetland locations; JD required for CWA 404/401 permitting.	3 to 6 months (From start of delineation to issuance of JD)
	404 Nationwide Permit (NWP) or Individual Permit (IP)	Nationwide Permit required for impacts of up to 0.5 acres of WOTUS losses Individual Permit (IP) required for more than 0.5 acre of impacts to streams and wetlands per USACE Nashville Regulatory District Regional Conditions	NWP: 3 to 6 months (From start of permit preparation to issuance) IP: 12 to 18 months (From start of permit preparation to issuance)
United States Fish and Wildlife Service (USFWS)	Consultation regarding Endangered Species	Consultation occurs as part of the 404/NPDES Process	Occurs concurrently with USACE and NPDES Permit process
Tennessee Historical Commission	Consultation regarding Architectural and Archaeological Resources	Consultation occurs as part of the 404/NPDES Process	Occurs concurrently with USACE and NPDES Permit process
State (Tennessee)			
TDEC Division of Water Resources	NPDES Construction Stormwater Permit	An industrial facility must apply for a NPDES general permit to authorize stormwater runoff during construction (e.g., ES&C phase).	1-3 months from start of permit prep to Notice of Coverage issuance
TDEC Division of Water Resources	NPDES Multi-Sector General Permit for Industrial Activities	An industrial facility must apply for a NPDES general permit to authorize discharge of process wastewater at the site to the ground as well as stormwater runoff during operations of the facility.	1-3 months from start of permit prep to Notice of Coverage issuance
TDEC Air Pollution Control	Insignificant Emission Documentation		1 month for emission documentation; No review timeline.
	Air Quality Construction Permit (Minor or major)		Minor: 2-4 months (agency review) Major: 5-12 months (agency review)
	Air Quality Operating Permit (Title V or non-Title V)		Non-Title V: 2-4 months (agency review) Title V: 9-18 months (agency review)
TDEC Division of Water Resources	TDEC Hydrologic Determination (HD)	Delineate site and apply for HD	3 to 6 months (From start of new/updated delineation to issuance of HD)
TDEC Division of Water Resources	Clean Water Act Section 401 Water Quality Certification/Aquatic Resources Alteration Permit (ARAP)		3 to 6 months (From start of permit preparation to issuance of ARAP)
TDEC Division of Water Resources	Underground Injection Control Permit		60 days to 6 months
Tennessee Division of Radiological Health	Radioactive Material License		60-120+ days depending on level of complexity (agency review)
Tennessee Division of Solid Waste Management	Treatment, Storage, and Disposal Facility Permit	Identify volume and composition of waste slimes and sand tailings OR contract with licensed disposal facility	6-21 months (From start of permit preparation to issuance of TSDF permit)
Local (unincorporated Benton County)			
No local environmental permitting will be necessary			

* Studies and permit applicability are dependent on, at a minimum, the recommended baseline studies being performed and final design of the MSP facility.

- The waste and tailings disposal plan is fully integrated with the overall mine plan. At the beginning of mining, waste and tailings material will be placed, as needed, in temporary waste piles on the ground surface located 1.) in the Year 11 mining area (this waste pile area is included in the current permit) and 2.) in the area northeast of the WCP (a permit amendment is required for this second waste pile). Tailings material will be filtered at the WCP to an optimum moisture content of approximately 16 to 18 percent and conveyed back to the pits for placement into the backfill. The use of filtered tailings allows the material to be placed like soil in backfilled lifts in the pits as mining progresses, thus minimizing the tailings storage footprint and reclaiming the pit areas to near their original surface elevations. The temporary, out-of-pit waste storage areas are estimated to only be required through approximately Year 5 of mining, after which all tailings and waste material will be backfilled into the pit as mining progresses. The following figure shows the final waste and tailings backfill area required for the Project.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>

Year 14 Showing Finalized Mine Plan LOM Backfill Surfaces



Note: Figure prepared by MM&A, 2026.

- Water management on the site will be important for dewatering the mine pits, supplying the WCP, ensuring stability of the in-pit backfill material, and ensuring compliant discharge at the NPDES outfalls. Expected groundwater inflow to the pits has been estimated via groundwater modeling conducted by HDR. Groundwater that enters the pit will be collected in a sump near the mining face and pumped into settling ponds on the perimeter of the property. Water that is pumped to the ponds will be settled to remove turbidity and suspended solids. If necessary, pH control of the water will be conducted within the settling ponds.
- The process water storage will be located in the northeastern corner of the WCP site and was sized for the full 1,200-tph throughput. This was done in consultation with IperionX to take advantage of the local topography and site discharge constraints of the environmental permits. Overflow from the tailings dewatering circuit thickeners will gravitate to a settlement pond to enable further settling (and periodically removal) of remnant solids, with overflow going to the process water pond for reuse in the process. A turkey's nest design will be used for all process water pumps to increase the hydraulic efficiency of the pump suction network. These process water pumps will be located on the eastern side of the process water pond to limit the chances of the area flooding by using the topography of the site in this location. A flocculant plant(s) will be located near the thickener(s) and consist of a silo for storing powdered flocculant, mixing and storage tanks for producing and storing primary diluted flocculant slurry, and dosing pumps to deliver the primary diluted flocculant slurry to the thickeners and belt presses, via secondary dilution points.
- Tennessee state regulations require mines to be properly closed and reclamation commenced immediately upon abandonment. In general, site reclamation includes removal of structures, backfilling and replacement of topsoil, regrading, and revegetation of disturbed areas in accordance with the approved post-mining land use for the permit. Reclamation of surface mines includes backfilling and grading operations typically associated with the final pit. Reclamation requirements were incorporated into the contract mining operating costs based on information provided from permit maps, documents, and other information supplied by IperionX along with the mine plan prepared by MM&A. Reclamation requirements were based on both the currently approved permit associated with the proposed Titan Mine operations, as well as those future planned disturbance areas. None of the reclamation liabilities are expected to require perpetual treatment. The financial model for the Titan Project includes cost for mine reclamation and closure within the contract mining operating cost of US$5.23 per cubic meter.

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<tr><td>**Infrastructure**</td><td>

- The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour,

</td><td>

- The proposed locations for the WCP and mining pits are split between Benton and Carrol Counties in Tennessee with the proposed WCP to reside in Carrol County.
- IperionX has acquired surface, subsurface and water rights to the properties within the area that hosts the mineral resource estimates. Some of the properties have been acquired in fee simple by IperionX, with IperionX now being the sole owner of the surface, subsurface and water rights for such properties. IperionX has entered into long-term ground leases for other properties, with the right to control the surface, subsurface and water rights related to those properties for the term of the respective ground leases. For the rest of the properties, IperionX holds an option to lease

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Criteria	JORC Code explanation	Commentary
	accommodation; or the ease with which the infrastructure can be provided or accessed.	such properties conditioned on annual option payments that are current and ongoing. The option agreements grant IperionX the right to evaluate the surface, subsurface and water rights to such optioned properties. > CSX Transportation operates a railyard approximately seven miles from the MSP/REP site. Transportation of material between the MSP/REP and the railyard will be conducted by over the road trucking. Similarly, the movement of product from the WCP to the MSP/REP will be conducted through over the road trucking. > The existing utilities available to the Project include electric power, natural gas, and water. Electricity is supplied via 161-kV transmission lines near the Project area. The power supply assumes 100% renewable power supply from TVA. The grid connection to TVA will supply the MSP and REP site substation with redundant 12.47-kV distribution lines. The existing electrical distribution system to the WCP will undergo a system upgrade to supply electricity to the WCP substation with redundant 12.47-kV distribution lines. The associated cost for this upgrade has been incorporated in the estimated capital expenditure. This will offer a stable power supply to the plant sites, and on-site power generation will provide backup power. There will be a 12.47-kV switchgear that distributes power radially at each site substation to 12.47/0.480 kV stepdown transformers and in turn 480 V e-houses with 480V MCCs in the various plant areas. The primary distribution voltage will be 12.47 kV, three phase, 60 Hz. The secondary distribution voltage will be 480 V, three phase, 60 Hz for all loads. Lighting and small power will be stepped down to 120/208 V, single phase, 60 Hz. > Natural gas will be provided by West Tennessee Public Utility District to the site tie-in point through the NPI to the MSP. > Sources of raw water will be needed for mining and ROM material processing. Water in the mining process will primarily be used for dust suppression. No public water supplies exist in the Project area so the raw water will need to be sourced from in situ sources. The Project area sits between several floodplains associated with large marshy areas and rivers. This combined with the sandy soil that makes up the surrounding area, allows for the groundwater table to be close to the surface, and creates an aquifer with sufficient quantity to support the operation for the bulk of the processing needs. > Raw water supply for the WCP will primarily come from a permitted withdrawal point along Big Sand River with a secondary source being groundwater seeping into the pit from the working face and the side walls of the mine pits, with a lesser quantity from the tailings being placed during reclamation. Water will be collected into sumps in the bottom of the pits and then pumped with a portable diesel pump into collection ponds adjacent to the pits for settling and clarifying before being pumped to the WCP for use in processing the ROM material, as necessary. > There is no permanent infrastructure within the Project area to supply potable water for the WCP site. A potable water well will be drilled adjacent to the personnel facilities at the WCP. Current pumping tests indicate that a single well should be able to supply all of the potable water needs of the site when used in conjunction with a storage tank. From the well, a 21,000-gallon storage tank will distribute the potable water to the necessary fixtures and supply points. At the MSP site, water will be supplied by the City of Camden. > Communications at the project site will have to be facilitated by cellular and/or satellite provided data communication equipment, as permanent phone and/or data infrastructure is not available. Communication around the mine pits and processing plant will be accomplished through radio devices that are either vehicle-mounted or handheld. > Given the availability of local construction workers, there is no requirement for living out allowance.

Costs	> The derivation of, or assumptions made, regarding projected capital costs in the study. > The methodology used to estimate operating costs.	> The capital cost estimate includes the direct and indirect costs required to execute the defined project scope in accordance with the basis, assumptions, and design information available at the time of estimate preparation. Direct costs generally comprise labor, materials, equipment, and subcontracted services associated with the supply, installation, and construction of the project facilities. These costs were developed from the relevant material takeoffs (MTOs), scope definitions, vendor and contractor inputs, and estimating assumptions applicable to each discipline. > The capital cost estimate was developed in accordance with the requirements of a Class 3 estimate, consistent with the Association for the Advancement of Cost Engineering (AACE) Cost Estimating Classification System, as defined in AACE International Recommended Practice No. 17R-97. In keeping with the intended Class 3 estimate maturity, the estimate has been prepared to reach a target accuracy range of ±15%. The estimate is based on an estimate base date of Q2 2026 and is expressed in United States dollars (US$). > Major procurement pricing provided by MT was originally developed in Australian dollars (AUD) and has been converted to US$ for incorporation into the capital cost estimate using a currency conversion rate of 1 AUD = US$0.6957. The exchange rate used is the Reserve Bank of Australia's 3-month daily average for January, February, and March 2026. > The estimate also includes indirect costs necessary to support overall project execution. These generally comprise the temporary facilities, construction support, supervision, field management, and other project-related costs required to plan, manage, and deliver the work within the defined execution framework. > The capital cost estimate summaries were prepared and reported in accordance with the proposed phased development approach, comprising Phase 1 – 400 tph and Phase 2 – 800 tph configurations. The summaries present the capital cost estimate at a consolidated level for each phase, consistent with the scope definitions for this study. > For reporting purposes, the non-process infrastructure scope was incorporated into the Phase 1 – 400 tph scope of work and is reflected within that phase's capital cost estimate summary accordingly. > The capital cost for Phase 1 is estimated at US$228.1 million, while that for Phase 2 is estimated at US$153.2 million, for a total Project capital cost estimate of US$381.3 million.

Capital Cost Summary (Phase 1 – 400 tph and Phase 2 – Incremental 800 tph)

Item	Phase 1 400 tph (US$)	Phase 2 – Incremental 800 tph (US$)	Total Phase 1+ Phase 2 (US$)
Direct Costs			
1000 - Site Wide - Mining	$23,238,000	$347,000	$23,585,000
1000 - Site Wide - NPI	$18,317,000	$0	$18,317,000
1000 - Site Wide - Balance of Scope	$18,499,000	$3,191,000	$21,690,000
2000 - Feed Preparation Plant	$10,087,000	$15,587,000	$25,674,000
3000 - Wet Concentrator Plant	$44,144,000	$62,212,000	$106,356,000
4000 - Mineral Separation Plant	$25,058,000	$33,436,000	$58,494,000
5000 - Rare Earth Plant	$33,181,000	$1,241,000	$34,422,000
8000 - Mining Unit Plant	$1,305,000	$2,133,000	$3,438,000
Direct Costs Sub-total	**$173,829,000**	**$118,147,000**	**$291,976,000**
INDIRECT COSTS			
EPCM	$22,414,000	$14,664,000	$37,078,000
Temporary Facilities and Services	$2,240,000	$1,248,000	$3,488,000
Vendor's ME Installation Assistance	$250,000	$190,000	$440,000
Contractor's Pre-Commissioning Assistance	$186,000	$245,000	$431,000
Commissioning & Testing	$1,898,000	$1,620,000	$3,518,000
Spare Parts	$929,000	$1,196,000	$2,125,000
First Fills	$143,000	$223,000	$367,000
Indirect Costs Sub-total	**$28,061,000**	**$19,386,000**	**$47,447,000**
TOTAL No CONTINGENCY nor OWNER'S COSTS	**$201,890,000**	**$137,533,000**	**$339,423,000**
Owner's Costs	$5,598,000	$1,638,000	$7,236,000
Contingency	$20,638,000	$14,027,000	$34,666,000
TOTAL CAPEX 400tph and 800tph	**$228,126,000**	**$153,198,000**	**$381,324,000**

Note: Totals may not sum due to rounding.

> In keeping with the intended Class 3 estimate maturity, the estimate was prepared to reach a target accuracy range of ±15%. A contingency allowance of 10%, assumed by the Company, has been applied to the sum of Direct Costs, Indirect Costs, and Owner's Costs. This has been reviewed and considered reasonable by the Qualified Person for a Feasibility Study-level estimate.

> The operating cost estimate was performed to DFS standards. The following list of cost centers have been used for the estimation: Salaries; G&A; reagents; consumables; utilities (electricity, fuel, water, etc.); maintenance; and mobile equipment.

		> The operating costs are based on prices from mine contractor services for moving ROM ore material from the pits to the WCP and dewatered tailings and waste material back to the pits to the disposal areas and all associated work. Reclamation and mine closure, waste pile rehandling and maintenance costs are all included in the contract mining rate of US$5.23 per cubic meter. > The parameters for the estimate used are as follows: a. Estimate Target Accuracy Operating Costs = +15%/-15% b. Estimate Base Date = Q2 2026 c. Estimate Base Currency = United States Dollars. > Average operating costs including salaries; G&A; reagents; consumables; utilities (electricity, fuel, water, etc.); maintenance; and mobile equipment ranges between approximately US$13.31 and US$10.57 per tonne of ore for Phase 1 and Phase 2, respectively.

Operating Cost Estimate Summary

	US$/year		US$/t ore	
Operating Costs	**Phase 1 Average**	**Phase 2 Average**	**Phase 1 Average**	**Phase 2 Average**
Mining	21,505,614	64,334,874	6.32	6.22
Process Plant	15,520,852	27,967,350	4.56	2.70
Product Transport	3,558,600	8,900,738	1.05	0.86
Royalties	4,747,628	8,052,134	1.39	0.78
Total Operating Costs	**45,332,694**	**109,255,096**	**13.31**	**10.57**

Note: Totals may not sum due to rounding.

	> Allowances made for the content of deleterious elements.	> No allowances have been made for deleterious elements; no impact to quality from deleterious elements is anticipated.
	> The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.	> The Titan Project is differentiated within the US critical minerals landscape by its ability to produce multiple saleable mineral products from a single mineral sands project. On the current DFS design basis, Titan is planned to produce ilmenite, rutile, and zircon concentrates and a HREC, providing exposure to titanium feedstocks, zirconium-bearing minerals and strategically important rare earth oxides from one domestic source. This product mix is commercially important because it serves multiple large and established end markets, while also aligning with the strategic objective of rebuilding secure US supply chains for critical minerals presently dominated by foreign producers, and in particular by China. > Revenue assumptions in the DFS were provided by IperionX and are based on independent third-party commodity price forecasts and concentrate valuation methodologies incorporated into the consolidated DFS commodity pricing tables and applied in the financial model. All prices are modeled in real 2026 US dollars.

Historic and Forecast Prices (US$/t, real 2026 terms)

Product	Historic 2021-2025 (annual avg. US$/t)	Forecast 2028-2042 (annual avg. US$/t)
Rutile	1,335	1,471
Chloride ilmenite	318	353
Zircon*	1,818	1,907*

Source: TZMI and Argus Media. Historic prices converted to real 2026 US dollars. Forecast averages derived from TZMI (Issue 3, 2025) base case. *Zircon prices were used to calculate zircon concentrate prices.

> The IperionX Rare Earth Concentrate Calculations (April 2026) Report prepared by Argus Media provides forecast for 15 individual rare earth oxide prices and the resulting TREO basket value for the Project HREC, expressed in real 2026 US dollars over the 2020-2040 horizon. IperionX engaged Mine Value Partners (MVP), an independent mining consultancy with significant expertise in commodity markets, mineral development operations, and commercial analysis, to undertake an assessment of the payability of IperionX Heavy Rare Earth Concentrate. MVP's analysis concluded that the implied sustainable payability for a rare earth concentrate like Titan's is expected to sit between 46% and 65% of theoretical basket value, dependent on pricing assumptions. The range supports downstream capital recovery while allowing upstream rents to be allocated in line with long-run economic theory for commodities and represents a return to economically sustainable value sharing where both upstream and downstream participants can invest with confidence and continuity. For financial modelling purposes, a 50% payability assumption is considered a reasonable assumption that is not anomalous or aggressive, and one that is well supported by projected netback economics and other Western precedents. The basket price below was generated by applying a 50% payability factor to the TREO basket value to derive the IPX HREC price. The DFS LOM average price of HREC is US$41,759 per tonne based on the financial model.

	> Derivation of transportation charges.	> Transportation of concentrates and final products, as well as power, water supply, tailings handling, and other site services, are expected to be provided by third parties, but no binding transportation, offtake, or utility agreements are currently in place.
	> The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	> The specifications used represent the DFS design basis grades used in the production schedule and revenue modeling. Product grades may vary during operations and will be subject to offtake and sales agreement specifications. > The Project is designed to produce four saleable mineral concentrate products from the processing of heavy mineral sands. The products and their estimated specifications used in the DFS are summarized in the following table.

Titan DFS Product Estimated Specifications

Titan DFS Product	Key Specification	DFS Design Value
Ilmenite	TiO_2 content	62.5%
Rutile	TiO_2 content	91.1%
Zircon concentrate	ZrO_2 content	34.4%
Heavy Rare Earth Concentrate	TREO content	61.4%

> The HREC specification of 61.4% TREO is based on assay data incorporated into the DFS design basis. The estimated distribution of individual rare earth oxides within the TREO used for pricing assumptions is summarized in the following table.

Titan HREC Estimated TREO Distribution (%)

CeO_2	Dy_2O_3	Er_2O_3	Eu_2O_3	Gd_2O_3	Ho_2O_3	La_2O_3	Lu_2O_3	Nd_2O_3	Pr_6O_{11}	Sc_2O_3	Sm_2O_3	Tb_4O_7	Tm_2O_3	Y_2O_3	Yb_2O_3	TREO
25.15	0.90	0.39	0.16	1.49	0.16	11.72	0.04	11.30	3.08	0.004	2.05	0.20	0.05	4.39	0.32	61.40

> The specifications presented above represent the DFS design grades used in the production schedule and revenue modeling. Product grades may vary during operations and will be subject to offtake and sales agreement specifications.

> The allowances made for royalties payable, both Government and private.

> Upon exercise, in the case of an option to lease, IperionX will pay an annual minimum royalty, generally US$75 per acre, or a mining royalty, generally 5% of net revenues from products sold on all leased properties. There are no applicable government royalties.

Revenue factors

> The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.

> As discussed above, revenue assumptions in the DFS were provided by IperionX and are based on independent third-party commodity price forecasts and concentrate valuation methodologies incorporated into the consolidated DFS commodity pricing tables and applied in the financial model. All prices are modeled in real 2026 US dollars.

> The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.

> Revenue assumptions in the DFS were provided by IperionX and are based on independent third-party commodity price forecasts and concentrate valuation methodologies incorporated into the consolidated DFS commodity pricing tables and applied in the financial model. All prices are modeled in real 2026 US dollars.

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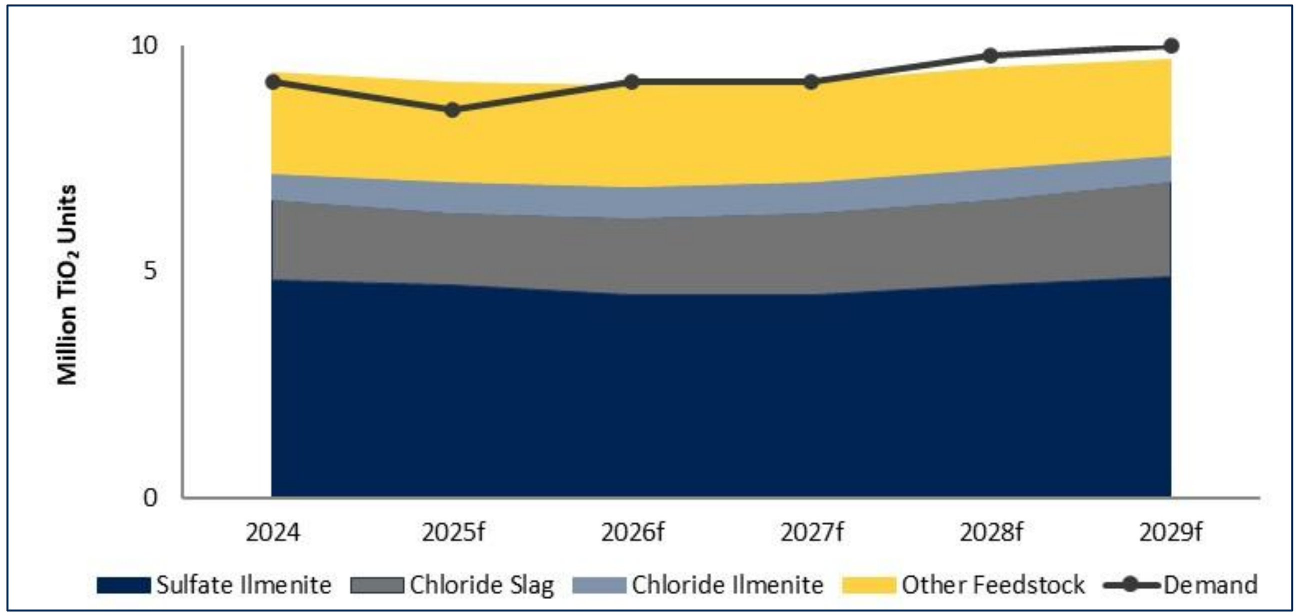
Market assessment

> The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.

> Market analysis and commodity price projections used in the DFS were provided by IperionX and are derived from independent third-party market studies.

> Titanium and zircon mineral sands market conditions and price forecasts are based on the Titanium Feedstock Price Forecast (Issue 3, 2025) prepared by TZ Minerals International Pty Ltd (TZMI). HREC pricing is based on the IperionX Rare Earth Concentrate Calculations (April 2026) prepared by Argus Media and Expected Payability for Rare Earth Concentrates from IperionX's Titan Project (April 30, 2026) prepared by Mine Value Partners (MVP). Magnet rare earth oxide supply and demand data referenced in this sub-section are based on the 'Rare Earth Magnet Market Outlook to 2040' report (Q4 2025) prepared by Adamas Intelligence (Adamas)..

> Global titanium feedstock market demand is projected to grow at a 5-year compound annual growth rate (CAGR) of 1.7% from 2024 through 2029. TZMI's analysis forecasts a transition from modest surplus to modest deficit in global titanium feedstock markets, beginning in 2026. The market is estimated to have been in modest surplus in 2024 and 2025. This trend of softening demand

		continued into early 2026, and the market is expected to remain in modest surplus through early 2027, before consumption growth begins to increase in 2028 and 2029. This structural shift underpins the favorable outlook for new titanium feedstock supply and is projected to help incentivize new supply to enter the market. Near-term supply growth is expected to remain constrained, driven by project delays, existing mines ceasing operations, and production decreases in Asia. Longer-term supply response is expected to grow at a slower pace than demand, with a 5-year CAGR of 0.8%, resulting in the market remaining in modest deficit in 2029. > Global titanium feedstock (ilmenite and rutile) demand is primarily driven by the pigment industry, which accounts for approximately 90% of TiO2 consumption. The TZMI study provides global supply and demand forecasts for titanium feedstocks from 2024 to 2029. Supply is composed of sulfate ilmenite, chloride slag, chloride ilmenite, and other feedstocks including rutile, synthetic rutile, upgraded slag, and leucoxene. The supply composition and demand outlook are summarized in the figure below. **Titanium Feedstock Supply & Demand (Million TiO_2 Units)**  Source: TZMI and IperionX analysis, 2026 > Ilmenite markets are projected to change from modest surplus in the near-term to modest deficit in 2029, with surpluses primarily localized to specific Asian jurisdictions. Chloride ilmenite demand is projected to grow at a CAGR of 4.2% over the forecast period against supply growing at 1.3%, driving the switch from surplus to deficit. The rutile market is estimated to remain balanced in the near term before shifting to modest deficit in 2029, primarily driven by year over year decreases in global supply. New supply is expected to remain tight, requiring higher commodity prices to incentivize new projects. > The forecasted annual average zircon production from the Project represents about 2% of 2025 global zircon demand. Demand has been relatively unchanged in the 1.0-1.3 Mtpa range since 2020, and global zircon markets are expected to enter modest surplus in the near term, before returning through balance in the late 2020s and into slight deficit in the long term beyond 2030. The market is expected to enter deficit towards the end of the decade due to limited new supply, as demand growth is projected to remain relatively modest through 2030 and beyond. > Demand for select rare earth oxides used in the manufacturing of NdFeB magnets is forecast to grow significantly through 2040, driven primarily by the electrification of transport, expansion of renewable energy generation, and the emergence of robotics, which is expected to become the largest global demand driver by 2040. Overall REE market growth is driven by magnet REOs— demand for the NdPr oxides are projected to increase at a CAGR of 8.2% from 2024 through 2040, and global demand for dysprosium and terbium oxides are projected to increase at a CAGR of 7.0% and 6.7%, respectively, during the same period. Demand growth for non-magnet REOs is projected to be more modest, leading to projected market surpluses for some of in these elements. Mine production growth in dysprosium and terbium oxides is expected to increase at a CAGR of 4.4% and 4.9% respectively through the forecast period, implying a widening supply deficit for these heavy rare earth oxides.
	> A customer and competitor analysis along with the identification of likely market windows for the product.	> From 2015 to 2024, China's share of global magnet REO mine production fell from approximately 82% to 65%, with most of the diversification occurring to other Asian jurisdictions. China is expected to remain the dominant source of supply over the forecast period. Chinese supply is subject to government quotas and export restrictions, which can result in structural uncertainty for consumers outside China. Over the same period, the US has emerged as an increasingly important supply source of NdPr oxides via the Mountain Pass mine, but remains supply-constrained on heavy rare earths. Global supply of dysprosium and terbium was dominated by Myanmar in 2024. > China's zircon consumption for its construction industry remains a core driver for global zircon market growth. Recent tempering of China's economy is expected to tip near-term market balance towards modest surplus, and major zircon suppliers such as Iluka Resources have reduced zircon production targets in response in the first half of 2026. In the medium term, the zircon market is expected to tighten towards balance and modest deficit beyond 2030, driven in part by supply side reductions and in part by a projected demand CAGR of 3% through 2030. > Ilmenite markets are projected to change from modest surplus in the near-term to modest deficit in 2029, with surpluses primarily localized to specific Asian jurisdictions. Chloride ilmenite demand is projected to grow at a CAGR of 4.2% over the forecast period against supply growing at 1.3%, driving the switch from surplus to deficit. The rutile market is estimated to remain balanced in the

		near term before shifting to modest deficit in 2029, primarily driven by year over year decreases in global supply. New supply is expected to remain tight, requiring higher commodity prices to incentivize new projects. > IperionX has previously engaged in non-binding Memoranda of Understanding (MOUs) with major domestic and international counterparties across both the titanium feedstock and heavy rare earth concentrate markets. > These engagements, while non-binding, demonstrate commercial interest from established market participants and support IperionX’s market entry strategy for the Titan product suite. > In addition to the historical engagements above, IperionX has engaged in substantive discussions with major Japanese industrial counterparties regarding potential offtake arrangements and strategic investment in the Titan Project. Several counterparties have made preliminary investments to evaluate the proposed product suite, including a major Japanese conglomerate self-funding independent bulk sample and subsequent metallurgical test work to evaluate IperionX’s product suite. > IperionX is also in active discussions with U.S. and Japanese government agencies regarding potential project funding support. These discussions are indicative of the strategic importance of domestic titanium and rare earth supply chains to national security and industrial policy.
	> Price and volume forecasts and the basis for these forecasts.	> The production schedule comprises an initial and an expanded production phase. > Revenue assumptions in the DFS were provided by IperionX and are based on independent third-party commodity price forecasts and concentrate valuation methodologies incorporated into the consolidated DFS commodity pricing tables and applied in the Primero financial model. All prices are modeled in real 2026 US dollars.
Economic	> The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.	> A discounted cash flow (model was developed to evaluate the economic viability of the IperionX Titan project. This financial assessment is based on a 14 year mine life and two-phased approach to construction and production. > Phase 1 is based on a feed to the rougher circuit of 400 tph and a duration of 4 years (86,000 metric tonnes per annum) and Phase 2 is based on a feed to the rougher circuit of 1,200 tph (215,000 metric tonnes per annum) and a duration of 10 years. > All cost inputs are expressed in real (2026) U.S. dollars (US$) and presented as non-escalated values within the financial model. > The model incorporates key technical and financial assumptions such as ramp-up profiles, operating and sustaining capital expenditures, taxes, royalties, and discount rates. > A summary of the key financial assumptions is included in the table below.

Key Financial Assumptions

Key Financial Assumptions	Unit of Measure	Value
Ilmenite LOM Average Sale Price	US$/t	*353*
Rutile LOM Average Sale Price	US$/t	*1,471*
HREC LOM Average Sale Price	US$/t	*41,759*
Zircon Concentrate LOM Average Sale Price	US$/t	*829*
Ilmenite Transport Cost	US$/t	11.85
Rutile Transport Cost	US$/t	11.85
HREC Transport Cost	US$/t	555
Zircon Concentrate Logistics Cost	US$/t	65
Discount Rate	%	8
Royalties (leased and optioned land)	%	5
Federal corporate income tax rate	%	21
Tennessee state corporate tax rate	%	6.5
Ilmenite Depletion	%	22
Rutile Depletion	%	22
REE/Monazite Depletion	%	14
Zircon Concentrate	%	22
Depreciation	100% (OBBBA guidelines)	

> The key production inputs are summarized in the table below.

Key Production Inputs

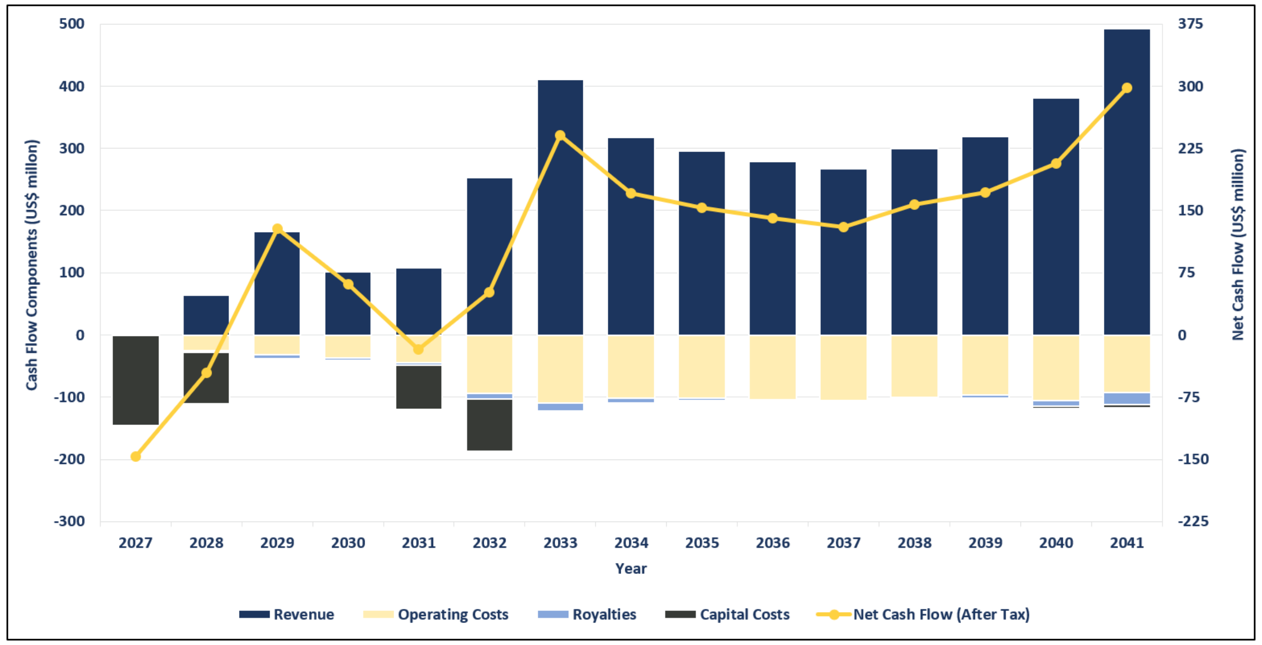
Key Production Inputs	Units	DFS
Total Ore	Mt	117.0
Total Waste	Mt	95.6
Total mine	Mt	212.6
Mine life	years	14
Strip ratio	(w/o)	0.82
Rougher Feed	tph	400/1,200 (Phase 1/Phase 2)
HMC Produced	Mt	3.44
Ilmenite Production	Mt	1.37
Rutile Production	Mt	0.29
HREC Production	Mt	0.06
Zircon Concentrate Production	Mt	0.77
LOM Average In Situ HM grade	% HM	3.17
Average Ilmenite product recovery	%	80.7
Average Rutile product recovery	%	64.3
Average REE/Monazite product recovery	%	91.4
Average Zircon Concentrate product recovery	%	91.8

> NPV ranges and sensitivity to variations in the significant assumptions and inputs.

> The base discount rate selected was 8.0%.

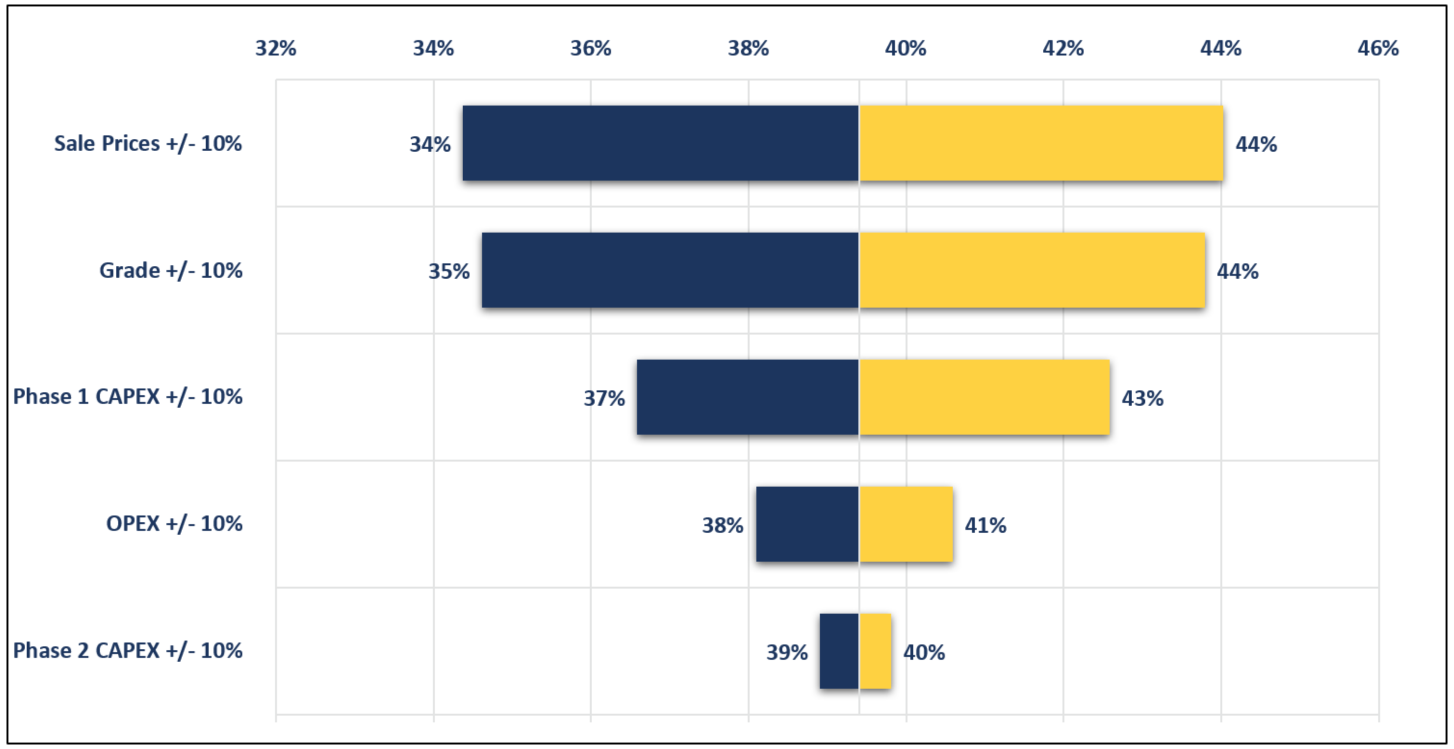
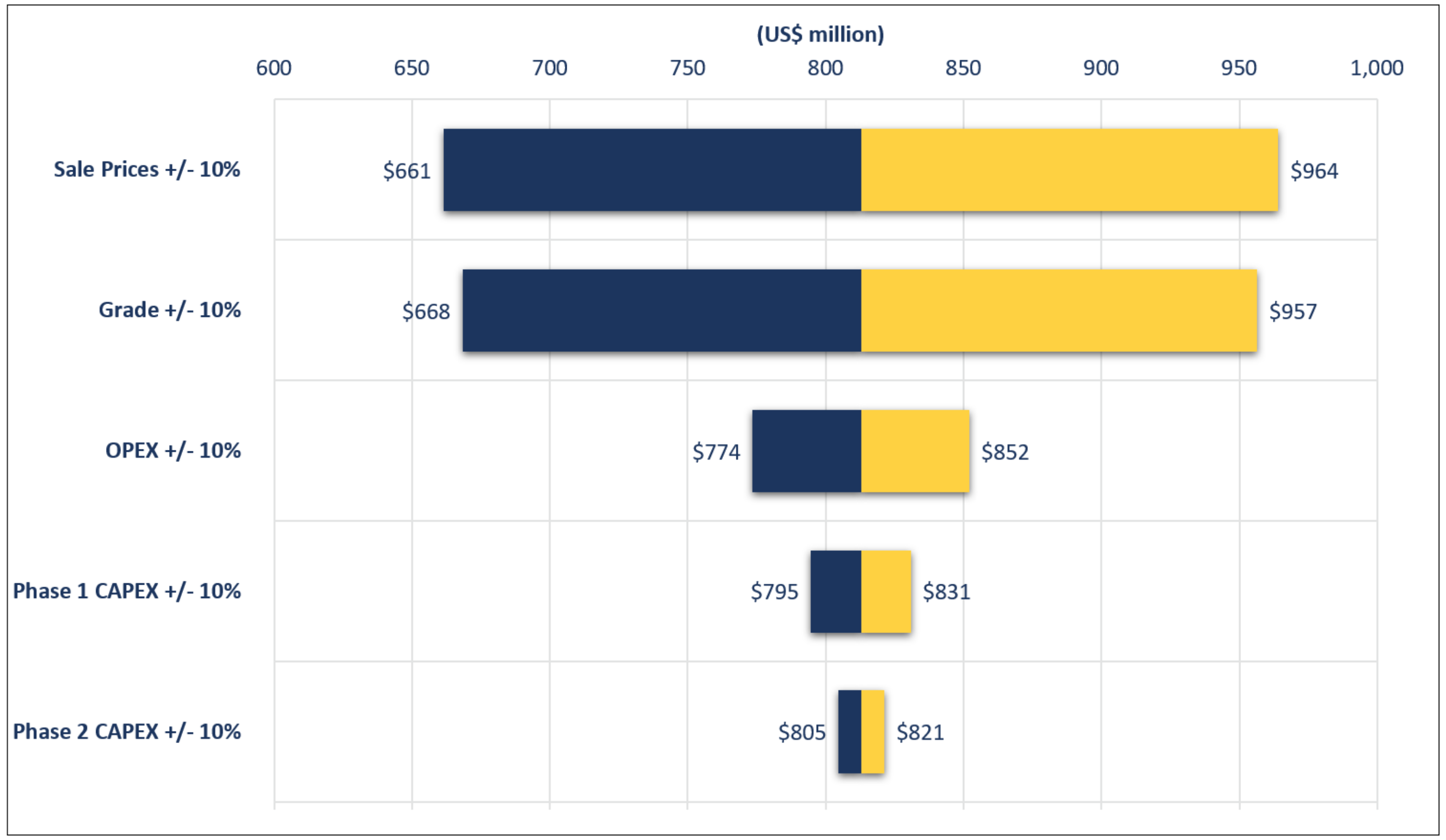
> Using variable product pricing based on external market studies the project generates US$1.93 billion free cashflow and the post-tax financial model, developed on an unlevered basis, yields a strong net present value (NPV8) of US$813 million and internal rate of return (IRR) of 39.4%, with a payback period of 3.63 years.

Titan Project After Tax Real Cash Flows



Note: Figure prepared by Primero, 2026.

> A sensitivity analysis was performed to assess Project sensitivity to: capital cost estimates, operating cost estimates, grade, and product pricing. The results are summarized in the figures below and demonstrate that the project is most sensitive to sales prices followed by grade.

		Titan Project Sensitivity Analysis – After Tax IRR  Note: Figure prepared by Primero, 2026. **Titan Project Sensitivity Analysis – After Tax NPV8**  Note: Figure prepared by Primero, 2026.

		> In terms of IRR, the Project is most sensitive, in order from most to least sensitive, to: a. product pricing b. grade c. Phase 1 capital costs d. operating costs e. Phase 2 capital costs > In terms of the NPV, the Project is most sensitive, in order from most to least sensitive, to: a. product pricing b. grade c. operating cost estimates d. Phase 1 capital costs e. Phase 2 capital costs
Social	> The status of agreements with key stakeholders and matters leading to social license to operate.	> IperionX has undertaken preliminary engagement with local stakeholders in the Project area, including landowners, community representatives, and local or regional authorities, to support Project planning and to identify social, land access, and community considerations relevant to development.
Other	To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: > Any identified material naturally occurring risks.	> There are no significant topographic issues that would affect the proposed Project. The designated floodplain areas of the Big Sandy River and the Bear Creek tributary cross the Property, and a floodplain exclusion was used in the Study.
	> The status of material legal agreements and marketing arrangements.	> The development of the Titan heavy mineral sands project is expected to require material contracts related to contract mining, wet concentration and mineral separation plant equipment and services, transportation and logistics, utilities, and product handling; however, as of the date of the Market Study, no material contracts required for Project development have been executed. > The Project economics assume that required contracts will be secured prior to construction and operations on commercially reasonable terms consistent with industry practice.
	> The status of government agreements and approvals critical to the viability of the project, such as mineral tenement status and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	> IperionX has secured the following permits and agency approvals for the Existing Permit Area: Mining Permit (surface mining of titanium and mineral sands), NPDES Permit (to discharge treated mine wastewater and stormwater), Insignificant Activity Registration (air quality registration for sources of insignificant emissions), Approved Jurisdictional Determination from the United States Army Corps of Engineers (*USACE*), and Hydrological Determination from the Tennessee Department of Environmental Control (*TDEC*). > As mining planning progresses, the existing permits and agency approvals noted above will require modification to incorporate the entirety of the Mine Site in the future. Additionally, though there have been environmental due diligence studies performed within the Environmental Due Diligence Study Area that cover the majority of the Mine Site, they are outdated and would also require appropriate re-reviews, updates, and field work as applicable. There is currently no work proposed in FEMA floodplains.
Classification	> The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	> Measured and Indicated Mineral Resources were converted to Proved and Probable Ore reserves, respectively. > Proved and Probable Ore Reserves incorporate reasonable expectations of costs and performance. The Competent Persons have considered the rules and regulations promogulated by the Australasian Joint Ore Reserve Committee in estimating Ore Reserves. The Qualified and Competent Persons find the assumptions and modifying factors used for the DFS to be sufficient and satisfactory in the delineation of Proved and Probable Ore Reserves based upon 2012 JORC standards. >
Audits or reviews	> The results of any audits or reviews of Ore Reserve estimates.	> None.
Discussion of relative accuracy/ confidence	> Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the	> Under the assumptions presented in the DFS, the Project has a mine plan that is technically feasible and economically viable. The positive net present value of the Project supports the mineral reserve estimates.

	Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.	> MT, Primero, and MM&A contributed to a Project risk register and risk workshop. Following completion of the workshop, Primero carried out a Monte Carlo simulation to quantify the potential cost impact of the identified risks and to support the development of an appropriate contingency allowance. Noteable project risks identified by the QPs that could potentially impact the Titan mining and processing operations include: a. Commodity pricing drops unexpectedly, due to overseas competition and flooding of the market. b. Discharged water does not meet permit requirements for discharge from site, which may result in permit violations and public protests or environmental incidents. c. Underperformance of the mining contractor may lead to lower-than-expected production levels. d. Permits and/or mitigation measures related to mining through streams and wetlands are unsuccessful and prohibit full extraction of reserves within mine plan. e. TVA is unable to provide the necessary electrical power to service the mine and plant operations prior to Phase 2 of the project. f. Desliming circuit may allow slimes through to the WCP which will result throughput reduction or restriction. g. Periods of high slimes may slow plant throughput, due to thickener constraint on load handling capability. h. Inability to maintain MSP building temperature and humidity impacting plant performance and recovery. > A nominal 10% contingency allowance was used for the direct and indirect costs of the design and supply estimate. Contingency allowance was not added to the budget estimate items. This was considered contractor’s contingency which would be applicable to a fixed price design and supply contract. This contingency allowance sits outside of the Owner’s contingency risk.
	> 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.	> Proved and Probable Ore Reserve were derived from the defined Measured and Indicated Mineral Resource considering relevant processing, economic (including independent estimates of capital, revenue, and cost), marketing, legal, environmental, socioeconomic, and regulatory factors on a global scale as current local data reflects the global assumptions. > Under the assumptions presented in the DFS, the Titan Project has a mine plan that is technically feasible and economically viable. The positive net present value of the Project supports disclosure of the Ore Reserve estimates.
	> Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.	A nominal 10% contingency allowance was used for the direct and indirect costs of the design and supply estimate. Contingency allowance was not added to the budget estimate items. This was considered contractor’s contingency which would be applicable to a fixed price design and supply contract. This contingency allowance sits outside of the Owner’s contingency risk. It is recommended the Owner’s contingency account for the following key risks that are not accounted for in the design and supply cost estimate: > Cost escalation resulting from time and economic events. > Movement in foreign exchange rates. > Escalation and uncertainty in logistics costs due to timing being a long way out from contract execution. > Escalation resulting from changing suppliers from low-cost country vendors. > Escalation resulting from restriction in trade or changes to import tariffs. > Process performance not being achieved due to equipment supplied from low-cost countries not performing as intended. > Unable to obtain enforceable process and throughput performance guarantees from vendors. > Unable to utilise low-cost equipment and manufacturing supply chain due to sanctions on supply of equipment into international projects associated with rare earths. > Tailings dewatering equipment proves to be ineffective as planned and additional CAPEX/OPEX is necessary to achieve required moisture contents. > The following project area opportunities have been identified: a. Potential to add to the property holdings and increase the exploration potential for the mineral tenure to host prospective McNairy Formation units. b. If the mineralization currently classified as Inferred, can be upgraded with additional drilling and mining study support. c. Review of the mining area vs floodplain buffer allocations to determine if a portion of the buffer area can be included in the mine plan. d. Varying the COG, thereby increasing annual ROM ore tonnage. e. Increasing the Revenue Factor, thereby expanding the optimized pit shell and increasing annual ROM ore tonnage. f. Outside the Project area, the “Camden area” mineral tenure drill results suggest the potential to support mineral resource estimation. The area is favourable because erosion has removed the Upper McNairy Formation unit, exposing Lower McNairy Formation sands. > The following processing opportunities have been identified for further exploration in subsequent project phases: a. Increase extent of modularisation, particularly around the belt filter press once preferred vendor has been selected b. Further optimise the extent of piping pre-assembly and balance the use of pipe racks to minimise site construction costs c. Complete transport study to investigate inland transport options to reduce risk and costs of freight to site

	> It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	> No previous heavy mineral sand mining has occurred on the IperionX Titan property.