



**tivan**  
a critical minerals company

asx announcement

7 January 2025

## Updated Investor Materials

The Board of Tivan Limited (ASX: TVN) ("Tivan" or the "Company") is pleased to provide updated Investor Materials, reflecting the progress the Company has made through the second half of 2024. The update captures the change to Tivan's corporate mission, announced at the 2024 Annual General Meeting, as well as various project updates.

The updated Investor Materials form part of this announcement and will be uploaded to Tivan's website shortly.

Tivan will provide separate materials ahead of the Investor Briefing scheduled for Thursday 9 January, 4.30pm AEDT. To facilitate this session, please forward any questions for Mr Grant Wilson, Executive Chairman, to [ama@tivan.com.au](mailto:ama@tivan.com.au) by 2pm on Thursday 9 January.

This announcement has been approved by the Board of the Company.

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# Investor Materials

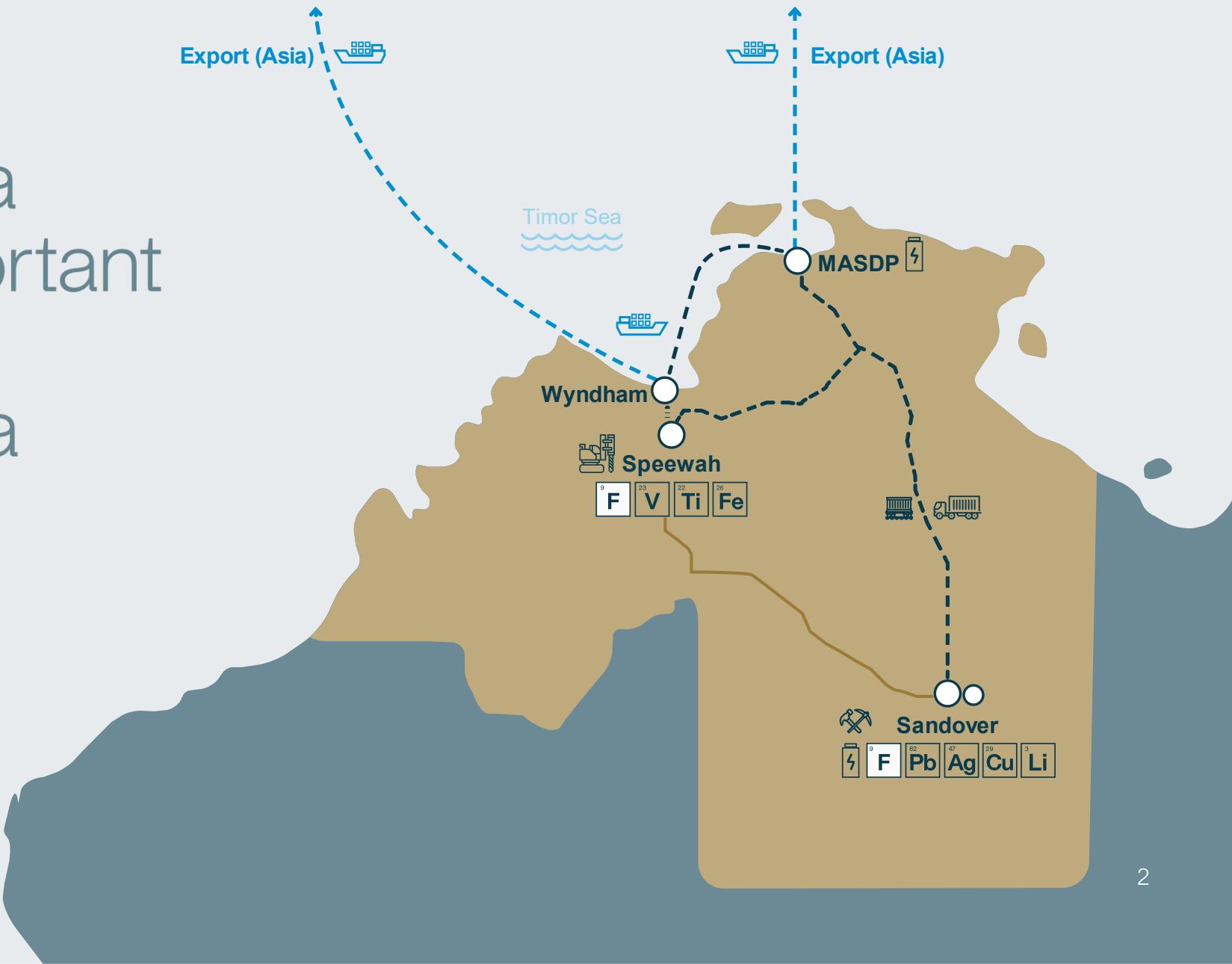
7 January 2025



# Mission

Tivan is building a strategically important company across northern Australia

Figure 1: Tivan's tenements, resources and projects



# Comparative Advantages

To build a company of strategic importance, Tivan believes that comparative advantages are required.

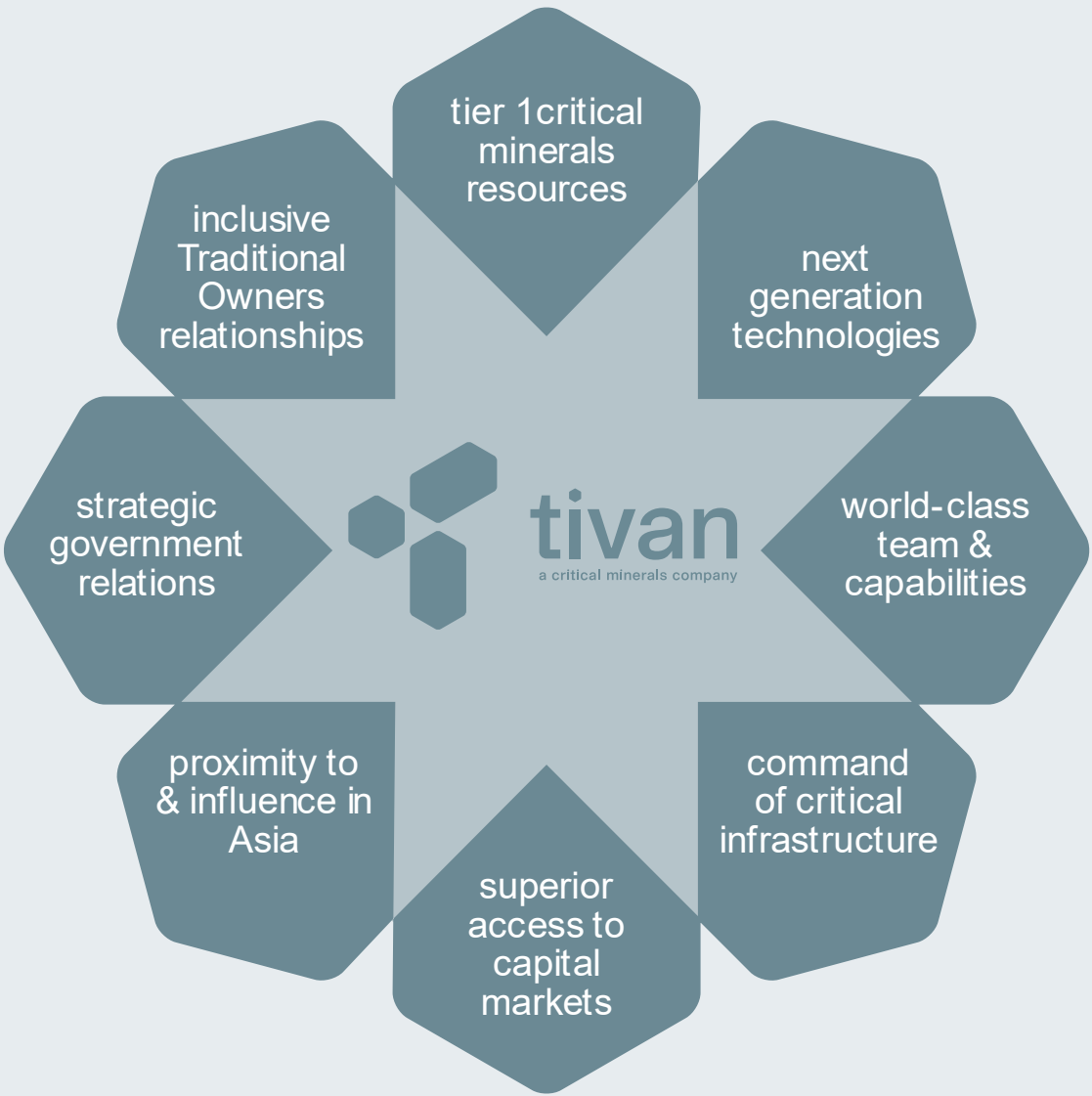
Tivan introduced eight, self-reinforcing comparative advantages at the 2024 AGM.

These comparative advantages underpin the rapid progress Tivan has achieved as a turnaround story over 2 years.

Throughout, Tivan has maintained a firm commitment to timely and forthright communications.

Tivan will continue to pursue its distinct mission in durable alignment with the interests of shareholders.

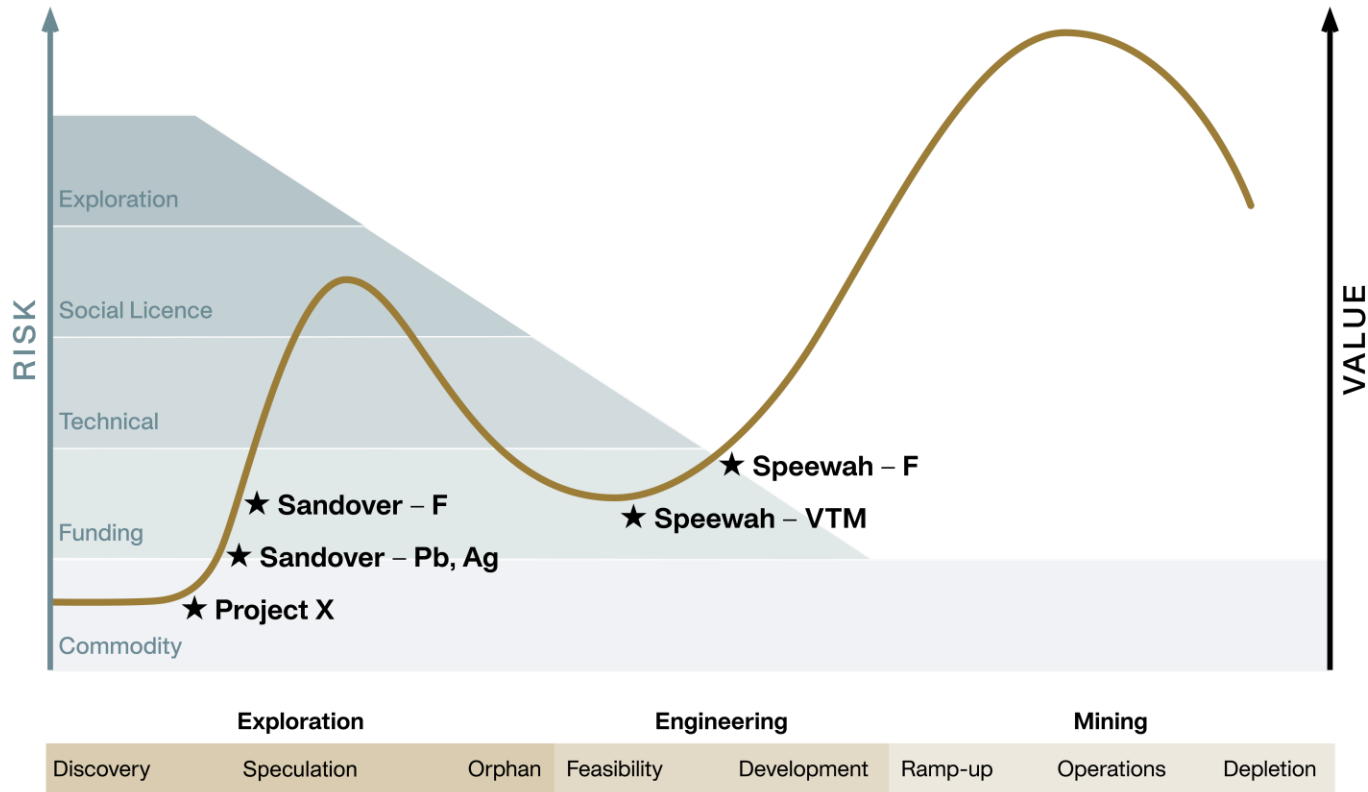
Figure 2: Tivan's comparative advantages



# Tivan: Rapidly progressing critical minerals projects

- Within 2 years Tivan has assembled and advanced a portfolio of highly prospective critical minerals projects across northern Australia.
- Through diversification across projects, Tivan aims to flatten out the Lassonde curve, achieving an optimal risk-adjusted return on equity for our shareholders over time.
- Tivan is operating at an unparalleled pace in advancing its projects, achieving productivity gains through rapid decision-making, organisational technologies and by achieving a durable alignment of interests with stakeholders and project partners.
- Tivan's unique geographical footprint provides strong operational synergies, proximity to and influence in Asia, strategic governmental relationships and inclusive pathways with Traditional Owners & Native Title holders.

Figure 3: Tivan's Lassonde Curve

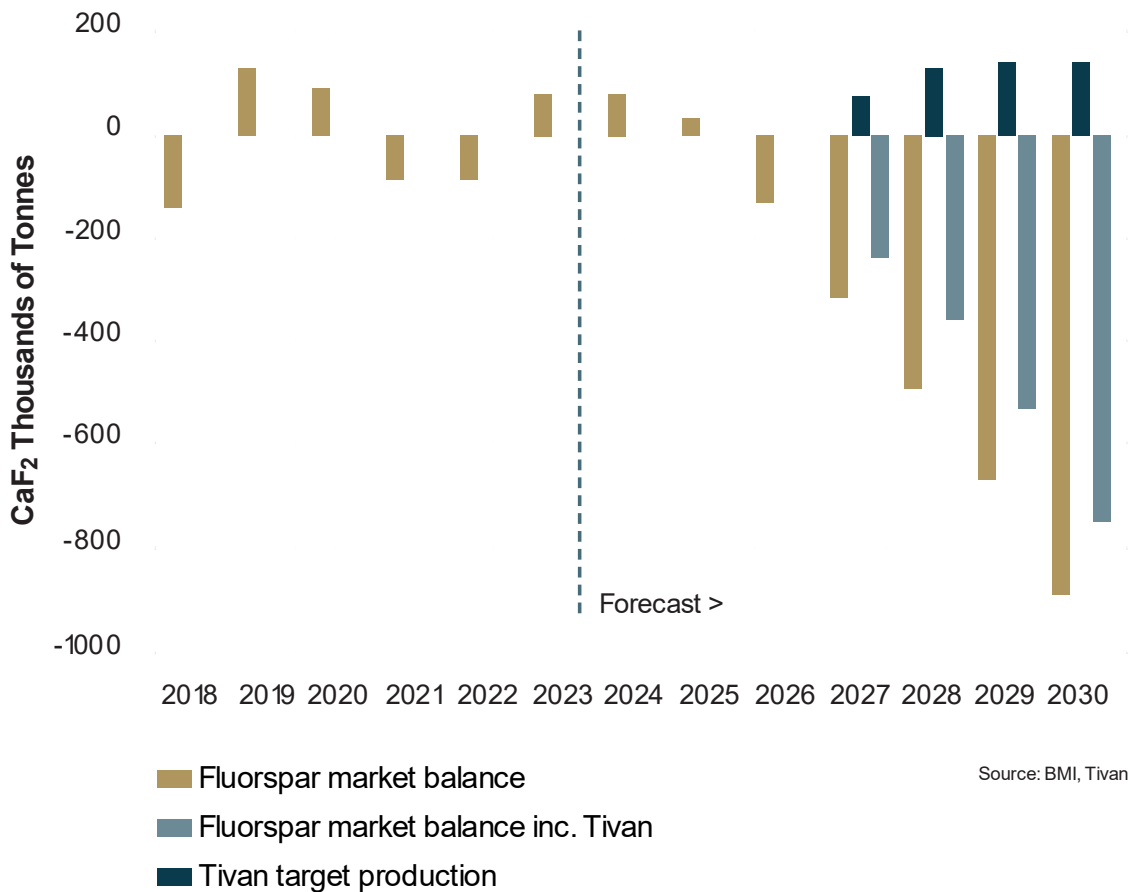


# Tivan: Ideally placed to secure long-term supply of Fluorite for Asia

- Tivan has secured 100% ownership of all Australia's known high-grade Fluorite deposits, at Speewah and Sandover, a singular achievement in the critical minerals sector.
- A significant global demand / supply imbalance in acidgrade Fluorspar is forecast to emerge from 2026.
- The demand profile is being driven by new, strategically important technologies, including semiconductor and EV battery manufacturing.
- China has shifted from the world's largest exporter to the world's largest importer of Fluorspar, supporting prices.
- Tivan is ideally placed to secure the long-term supply of high-grade Fluorite for Asia amid risks of market segmentation between East & West.
- Tivan's Fluorite strategy has been strongly validated by the material progress achieved toward binding Joint Venture with Sumitomo Corporation.

**Figure 4:** Projected supply / demand imbalance, with Speewah Fluorite Project target production.

Source: Benchmark, Tivan



# **Tivan:** On track to deliver Australia's first commercial production of Fluorite in 1H 2027 in Joint Venture with Sumitomo Corporation

Five Rivers Lookout & Port of Wyndham, Western Australia

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# Speewah Fluorite Project

# Fluorite: A compelling and unique opportunity

- Fluorine was included on Australia's Critical Mineral List in December 2023
- Tivan acquired the Speewah Fluorite Project in February 2023 & the Sandover Fluorite Project in November 2024
- Speewah hosts Australia's sole JORC compliant high-grade Fluorite resource
- Tivan delivered the Pre-Feasibility Study for Speewah in July 2024, confirming outstanding project fundamentals
- Effective C1 costs estimated at below US\$300/t, directly competitive with China & affording operating margins in excess of 50%
- Tivan has commenced resource definition at Sandover, with the support of NT Government & Central Land Council
- Fluorspar is critical to semiconductor manufacturing & underpins the 'battery-F' value chain in EVs
- Structural deficit forecast in Fluorspar from 2025, amid rapid resource depletion in China
- Fluorite production is low in capital intensity with conventional processing & low technical risk
- Tivan has materially advanced environmental & Traditional Owners portfolios, with strong community support
- Tivan has secured strong Federal government, including Major Project Status & International Partnerships in Critical Minerals grant
- Fasttrack project delivery schedule at Speewah, with first production targeted in 1H 2027
- Proposed Joint Venture with Sumitomo Corporation documented in December 2024, scheduled for completion in March 2025

# Tivan: Landmark Joint Venture with Sumitomo Corporation for Speewah Fluorite Project

- Tivan and Sumitomo announced terms of proposed JV on 24 December 2024:
  - TVN 77.5%, SC 22.5%
  - Total investment by SC of \$60m over stage-gates
  - 100% offtake
  - TVN management fee
  - Completion scheduled for March 2025
- [ASX announcement](#)
- Pathway to FID is fully funded by International Partnerships in Critical Minerals grant (\$7.4m) & Sumitomo (2x\$5m stage-gates = \$10m)
- Sumitomo Corporation:
  - Fortune Global 500 Company; Big 5 sōgō shōsha
  - Part of Sumitomo Group
  - 400 year business philosophy
- Active collaboration with government agencies of Australia continues.
- Proposed JV provides for security of supply of low arsenic acidgrade Fluorspar for Japan.

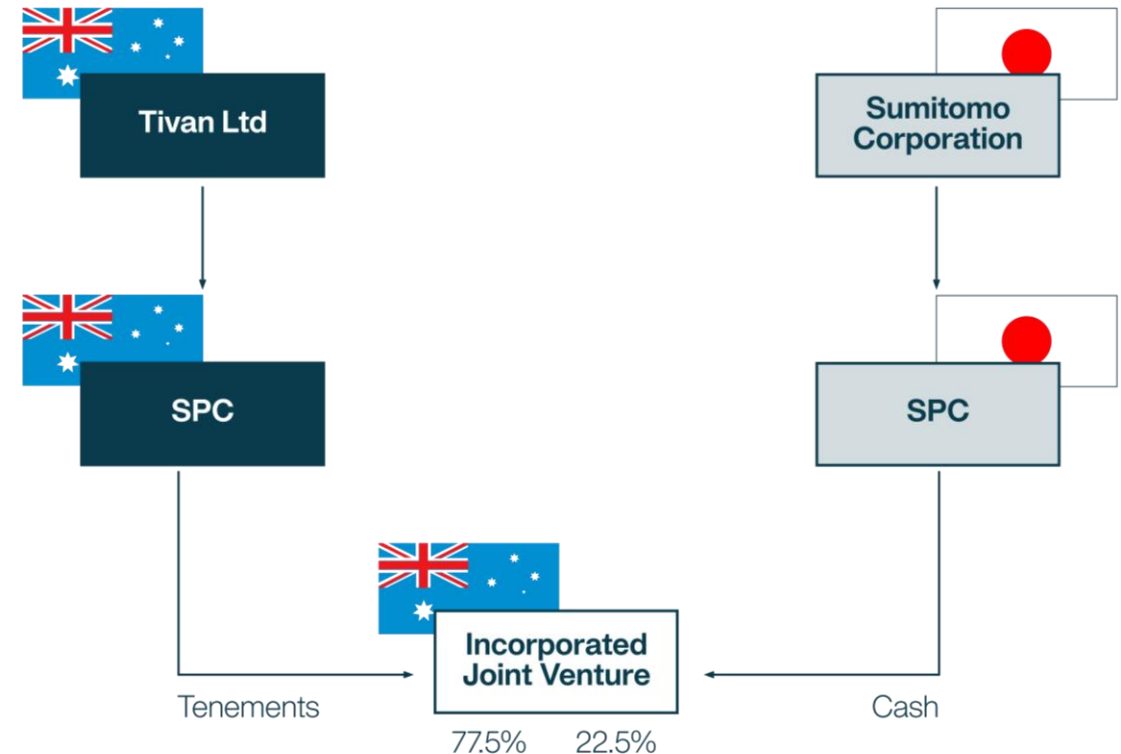


**Figure 5:** Basic proposed JV structure.  
Subject to entry into binding agreements, scheduled for March 2025.

# Tivan: Strong Federal government support

On 6 December 2024 Tivan announced the award of a \$7.4m grant under the International Partnerships in Critical Minerals program.

[ASX announcement](#)

On 9 December 2024 Tivan announced the Speewah Fluorite Project had been awarded Major Project Status by the Federal government.

[ASX announcement](#)

These consecutive awards reflect:

- The national significance of the Speewah Fluorite Project and its alignment with Federal government policies
- The high criticality of Fluorite as a new export commodity for Australia & the associated strong project fundamentals
- The strong standing of Tivan's international partner, Sumitomo Corporation, and Australia's strong bilateral relationship with Japan
- The positive regional impact for the East Kimberley region
- Tivan's strong commitment to work progressively with Traditional Owners and Native Title holders

**Figure 6:** Current projects with Major Project Status. The Speewah Fluorite Project is the northernmost major project in Australia.



# Tivan: Mineral Resource Estimate

Mineral Resource Estimate completed by SRK in April 2024:  
ASX announcement

1. Comprehensive upgrade of resource model
2. Increase of high-grade tonnage from 6.7mt to 8.6mt
3. Basis for further resource expansion established

Speewah confirmed as a world-class Fluorite resource in size & grade. Outcropping & with favourable mineralogy, including near zero Arsenic content.

Close proximity to one of Australia's most northern ports, reducing transit to Asian markets.

Peer resources have been extensively evaluated by Tivan & Benchmark Minerals Intelligence, and formed part of Pre-Feasibility Study.

**Figure 7: SRK 2024 Mineral Resource Estimate**

1. Differences in totals may occur due to rounding
2. The 2% cut off is based on a USD600 Fluorite (CaF<sub>2</sub>) average price from Q1 2024 and Revenue Factor of 1.5
3. The 2% cut off Mineral Resource is inclusive of the 10% High Grade resource
4. The Mineral Resource is reported within a constraining Revenue Factor 1.5 pit shell based on a USD600 Fluorite price.

| Mineral Resource 2% cut-off             |           | Mt   | %CaF <sub>2</sub> | kt CaF <sub>2</sub> |
|-----------------------------------------|-----------|------|-------------------|---------------------|
| Vein                                    | Indicated | 3.1  | 31.4              | 987                 |
|                                         | Inferred  | 1.9  | 25.3              | 488                 |
| Vein Sub Total                          |           | 5.1  | 29.1              | 1,475               |
| Stockwork                               | Indicated | 20.0 | 6.3               | 1,264               |
|                                         | Inferred  | 12.2 | 5.3               | 652                 |
| Stockwork Sub Total                     |           | 32.2 | 5.9               | 1,916               |
|                                         | Indicated | 23.2 | 9.7               | 2,251               |
|                                         | Inferred  | 14.1 | 8.1               | 1,139               |
| Total                                   |           | 37.3 | 9.1               | 3,390               |
| Inclusive of                            |           |      |                   |                     |
| High Grade Mineral Resource 10% cut-off |           | Mt   | %CaF <sub>2</sub> | kt CaF <sub>2</sub> |
| Vein                                    | Indicated | 3.1  | 31.8              | 982                 |
|                                         | Inferred  | 1.8  | 26.2              | 481                 |
| Vein Sub Total                          |           | 4.9  | 29.7              | 1,464               |
| Stockwork                               | Indicated | 2.7  | 13.4              | 363                 |
|                                         | Inferred  | 0.9  | 13.3              | 124                 |
| Stockwork Sub Total                     |           | 3.6  | 13.4              | 487                 |
|                                         | Indicated | 5.8  | 23.2              | 1,345               |
|                                         | Inferred  | 2.8  | 21.9              | 605                 |
| Total                                   |           | 8.6  | 22.8              | 1,950               |

# Tivan: Financial Metrics & Path to Free Cashflow

## Key Financial Metrics

| Metric                                                      | Unit         | PFS          |
|-------------------------------------------------------------|--------------|--------------|
| Life of Mine                                                | Years        | 10.6         |
| Tonnes mined (ore)                                          | Mt           | 8.4          |
| Processing rate (LOM average annual)                        | Mtpa         | 0.79         |
| Fluorspar production (LOM)                                  | Mt           | 1.48         |
| Fluorspar production (LOM average annual)                   | Ktpa         | 139.7        |
| Pre-production capital (including contingency)              | A\$M         | 236.3        |
| Revenue (LOM)                                               | A\$M         | 1,952        |
| Revenue (LOM average annual)                                | A\$M         | 184          |
| EBITDA (LOM)                                                | A\$M         | 1,203        |
| EBITDA (LOM average annual)                                 | A\$M         | 114          |
| Total C1 costs (LOM)                                        | A\$M         | 690          |
| C1 costs (LOM per tonne fluorspar shipped)                  | A\$          | 467          |
| C1 costs (LOM per tonne fluorspar shipped)                  | US\$         | 303          |
| <b>Effective C1 costs (LOM per tonne fluorspar shipped)</b> | <b>US\$</b>  | <b>288</b>   |
| NPV (8.0%, pre-tax)                                         | A\$M         | 480.1        |
| <b>NPV (8.0%, post-tax)</b>                                 | <b>A\$M</b>  | <b>354.7</b> |
| IRR (pre-tax)                                               | %            | 37.9         |
| <b>IRR (post-tax)</b>                                       | <b>%</b>     | <b>33.2</b>  |
| Pre-tax payback period (start of operations)                | Years        | 2.6          |
| <b>Post-tax payback period (start of operations)</b>        | <b>Years</b> | <b>2.8</b>   |

**Figure 8:** Speewah Fluorite Project – Key Metrics. See PFS for further details. Including all material assumptions in relation to the production target and forecast financial information.

## Project free cashflow (ungeared, A\$)

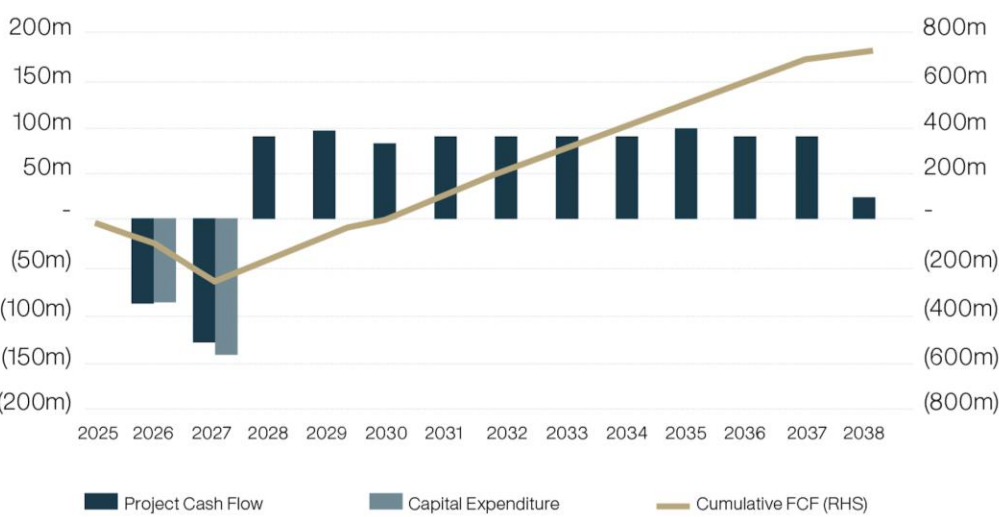


**Figure 9:** Output from financial model.

Source: Tivan

Tivan's Pre-Feasibility Study confirmed outstanding project fundamentals, including low capital costs, high operating margins & short payback period, without factoring resource extension potential.

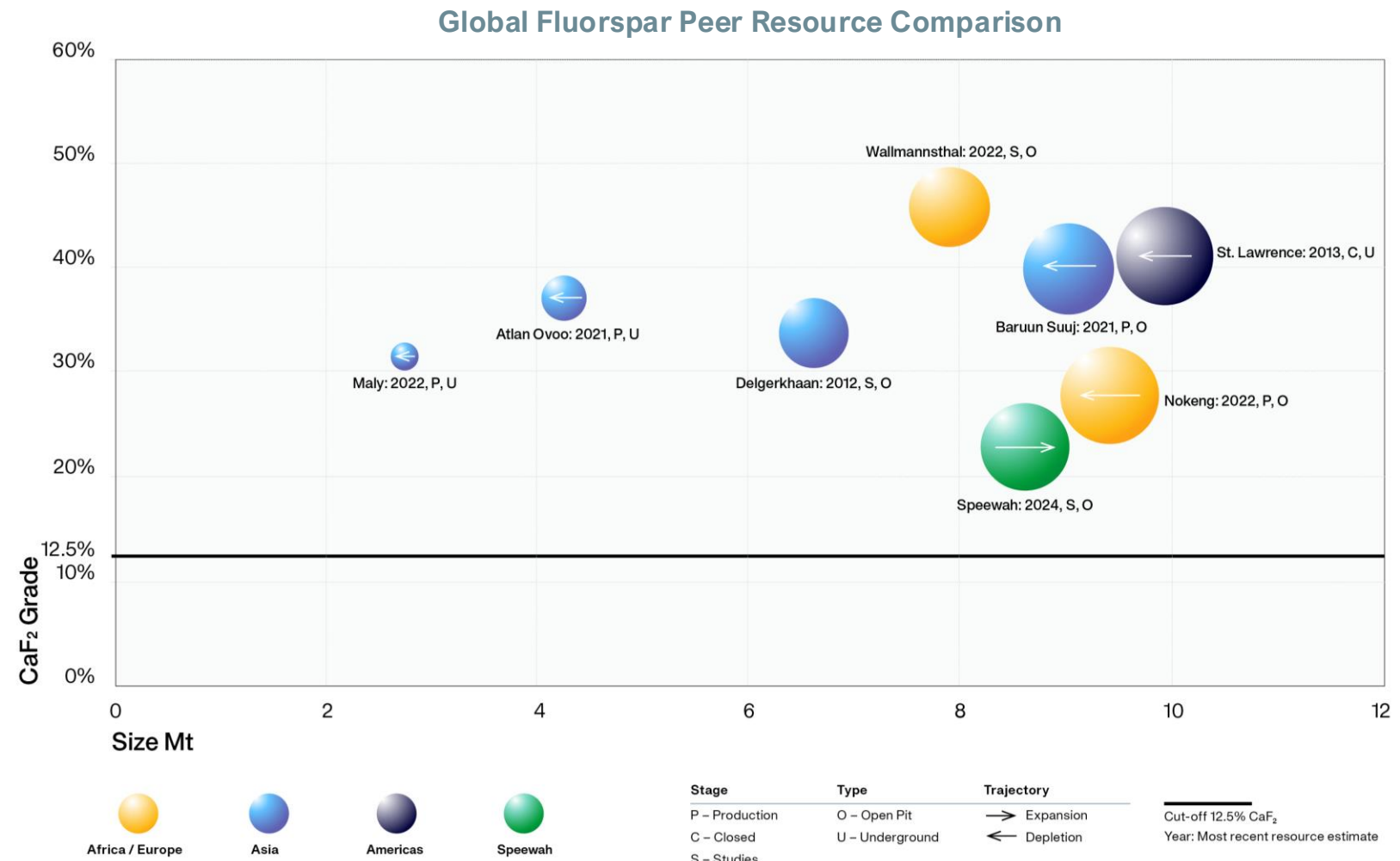
# Tivan: Speewah is set to emerge as a world-class Fluorite resource

Speewah is uniquely positioned as a large, high-grade Fluorite resource, located in a Western bloc country in Asia.

Unlike other major JORC compliant resources, Speewah is set to expand significantly with further exploration.

Speewah's mineralogy is amenable to the production of acidgrade Fluorspar, providing a security of supply rationale for Japan.

**Figure 10:** Global Fluorspar Peer Resource Comparison. The full dataset with relevant sources and notes is included in Appendix 1.

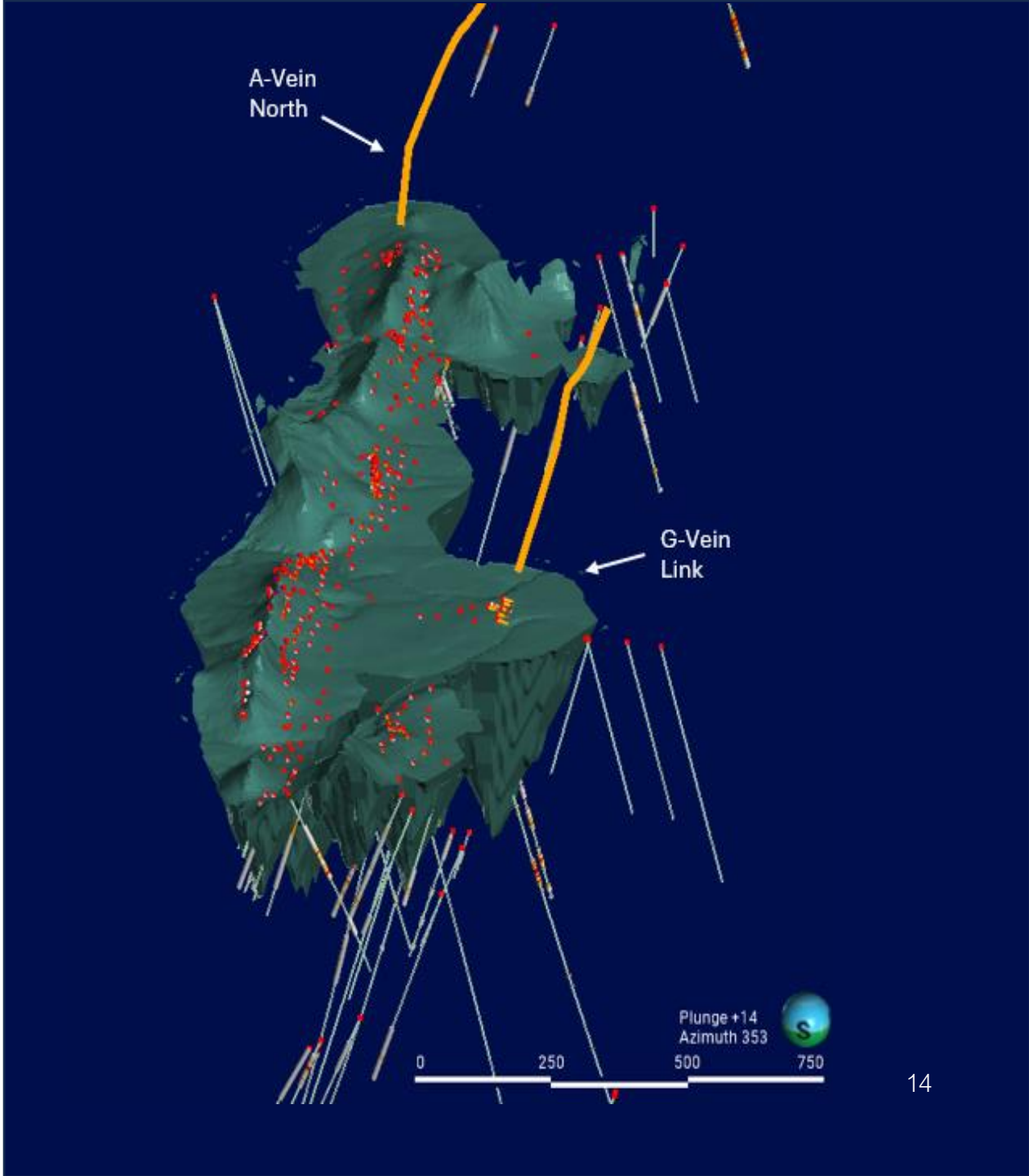


# Tivan: Pathway to Fluorite resource expansion

- Tivan has defined a multi-year pathway to resource expansion at Speewah, commencing with Exploration Target announced in May 2024 (1.9-3.9mt of high grade materials between 16% CaF<sub>2</sub> and 26% CaF<sub>2</sub>). Greater than 30km of unexplored greenfield strike independently identified by SRK: [ASX announcement](#)
- Stage 1 resource expansion scheduled for Q2 / Q3 2025, providing uplift at Feasibility Study and Definitive Feasibility Study. Stage 1 to focus on infill and extension drilling. Priorities include A, G Vein Links, with close proximity to main resource and proposed pit location.
- Drill program to proceed under Heritage Protection Agreements with KLC.

**Figure 11:** Elevated north looking view of the 2024 optimised resource pit shell with existing resource definition drill collars in red, and drill hole traces shown in white. The exploration targets\* G-Vein Link and A-Vein North can be seen in close proximity to the existing resource.

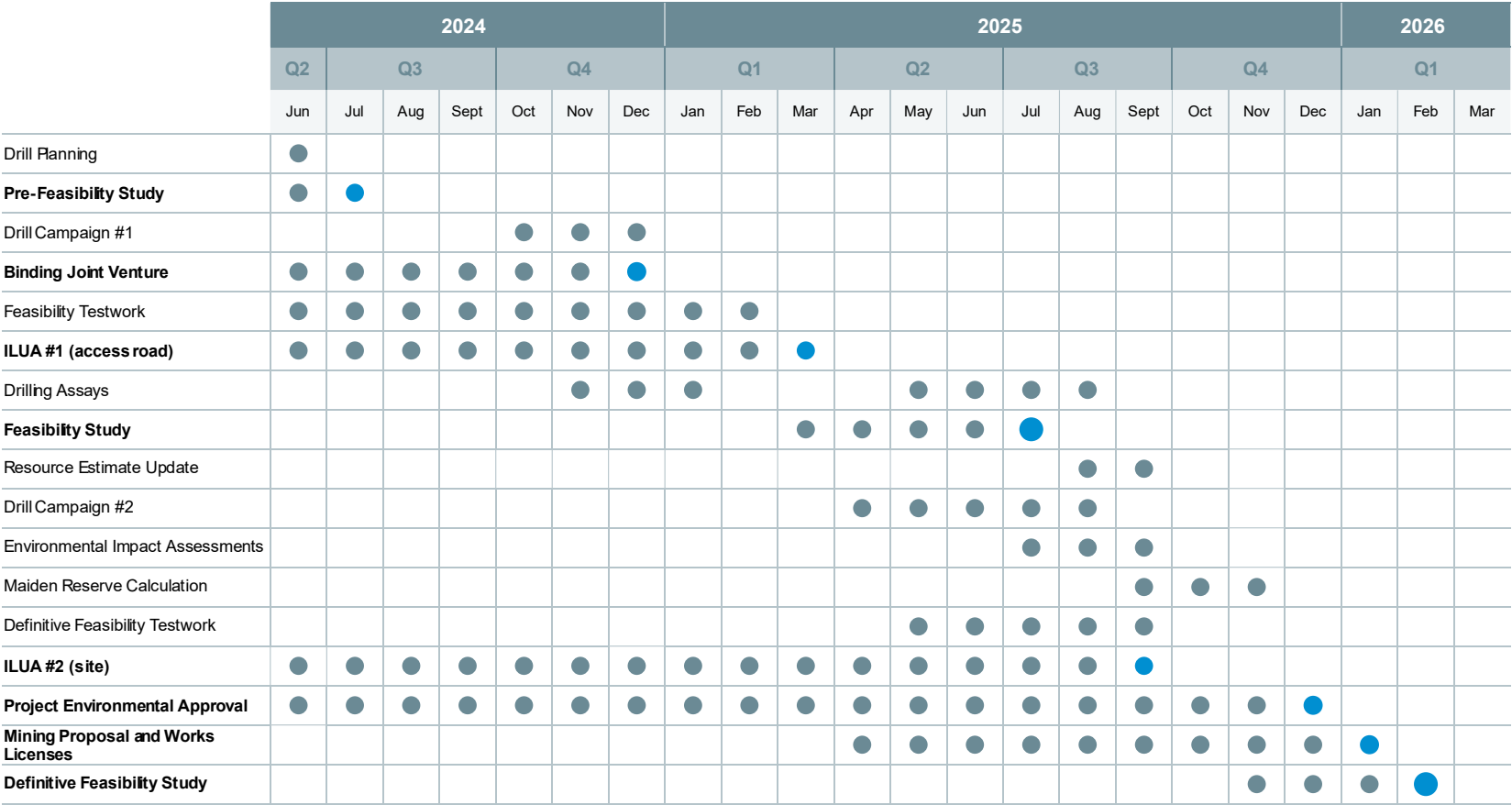
\*The potential quantity and grade of the Exploration Target is conceptual in nature and therefore is an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. The Exploration Target is exclusive of the Mineral Resource estimate prepared by SRK in April 2024.



# Tivan: Schedule to Definitive Feasibility Study

- Project advancing rapidly across multiple workstreams.
- Approximately 600 tasks on Gantt chart, coordinated by Tivan's Project Team, supported by Lycopodium & SRK.
- DFS scheduled for end Q3 2025. No FEED required.
- First production target Q1 2027, three years from commencement of the Speewah Fluorite Project.

**Figure 12:** Schedule and milestones to DFS. Schedule is indicative only and subject to risk of delay.



Fluorite production involves a simple flowsheet using physical separation.

Dig ➡ Crush ➡ Grind ➡ Float ➡ Ship

- Low technical risk, due to simplicity of flowsheet and extensive testwork programs that have achieved high recovery rates & acidgrade Fluorspar specifications.
- Low environmental impacts, leading to expedited approvals timeframe (see below). Port of Wyndham facilitation provided by Cambridge Gulf Ltd, strategic partner.
- Onsite processing achieves higher project economics than Direct Shipping Ore.
- Fluorite processing to qualify for the Critical Minerals Production Tax Incentive.

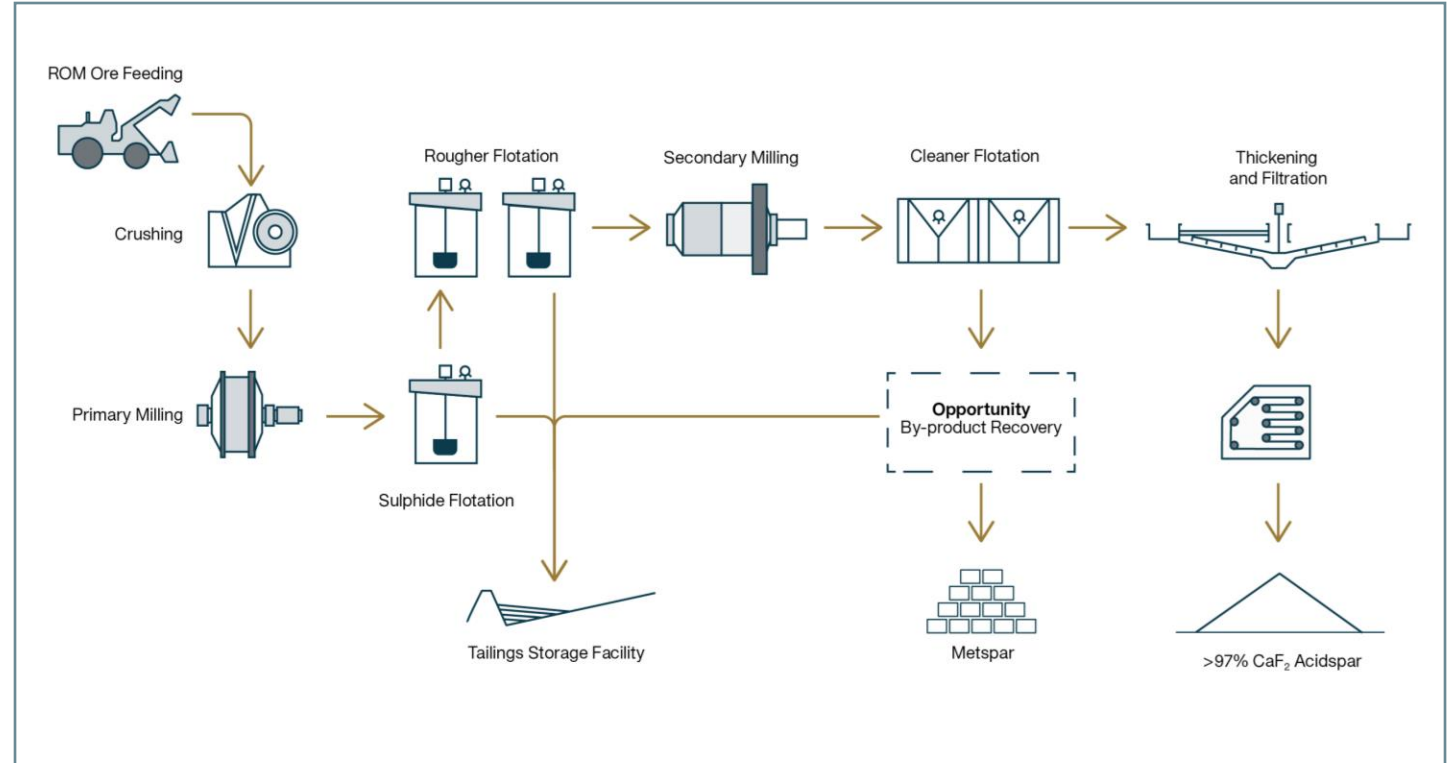


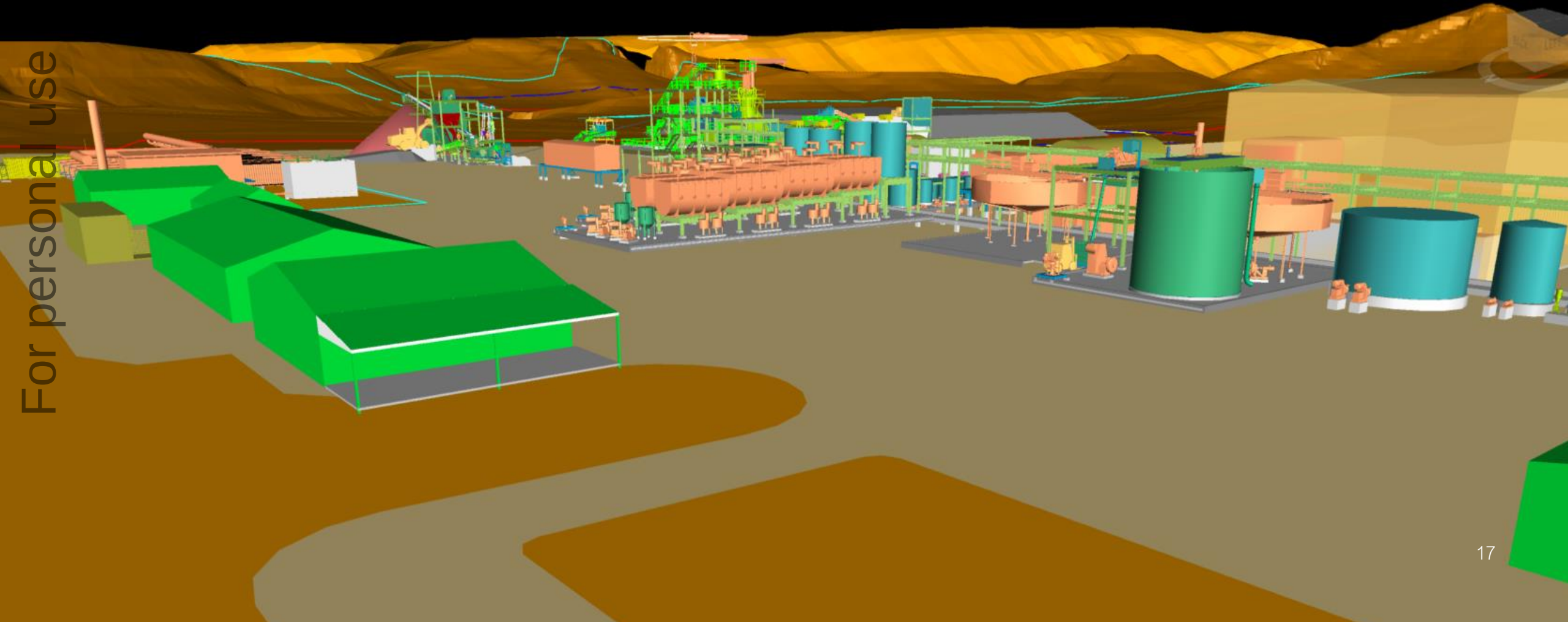
**Figure 13:** Flowsheet for Speewah Fluorite Project first published in Tivan's Pre-Feasibility Study.

# Tivan: Visualising the Speewah Fluorite Project: 3D Model

Tivan and Lycopodium completed PFS Engineering Design Review in May 2024 – a major PFS Engineering milestone.

**Figure 14:** Front gate view of Process Plant with Fluorite Resource outcrop in background.

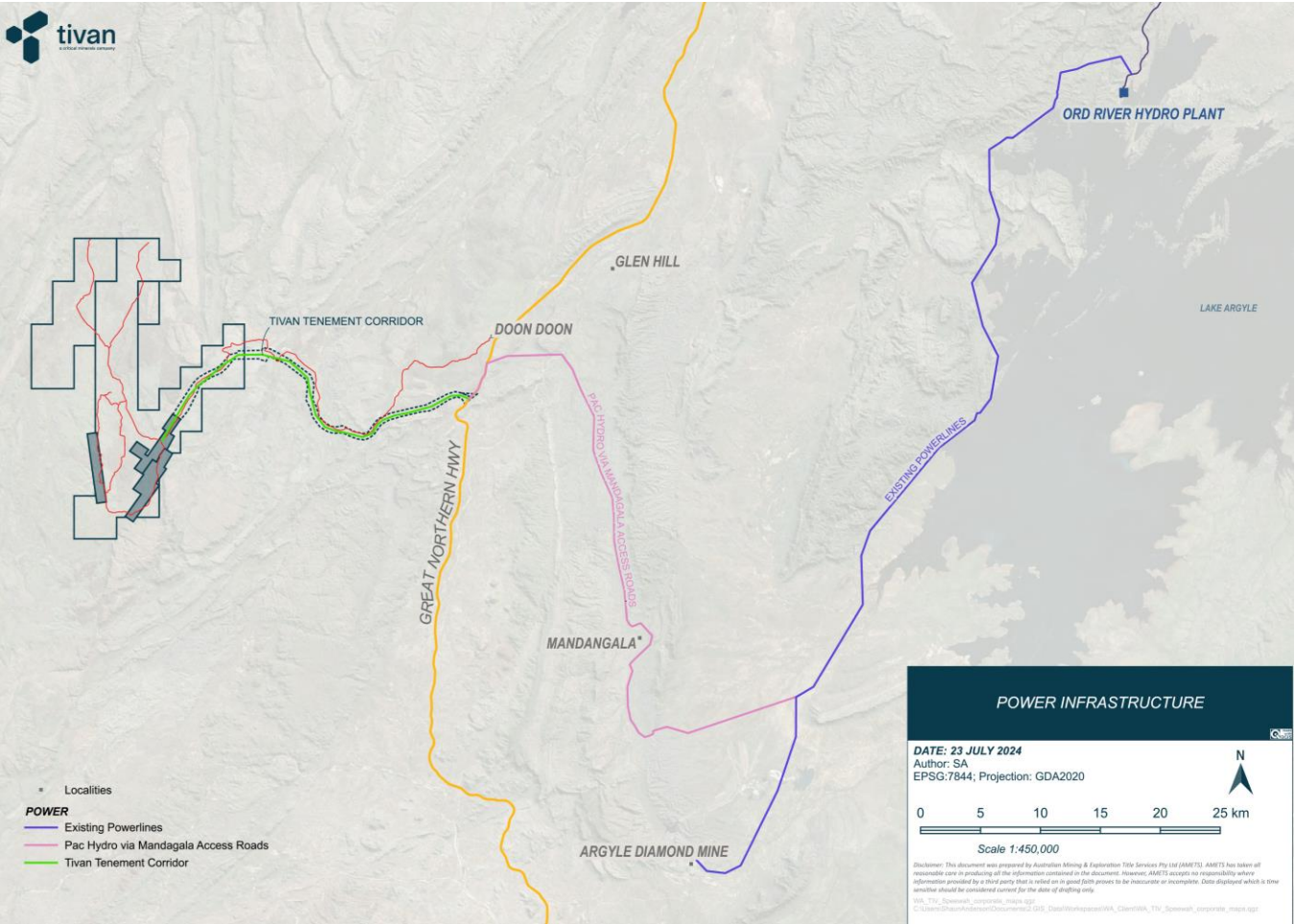
**Source:** Lycopodium PFS Engineering Design Review Navisworks 3D model.



# Tivan: Integrating Hydro

- Tivan's plans to integrate Ord River Hydro to Speewah's power supply were announced in early May, supported by MoU with Pacific Hydro and feasibility study with Horizon Power.
- The Speewah Fluorite Project is ideally placed to reuse existing transmission infrastructure and harness available hydro power, previously used at the Argyle Diamond Mine.
- Tivan continues to engage extensively with Traditional Owners and Native Title Holders and regional stakeholders across the East Kimberley.
- Tivan is focused upon maximising positive community wide impacts and establishing green critical minerals value chain, inclusive of Speewah's VTM.

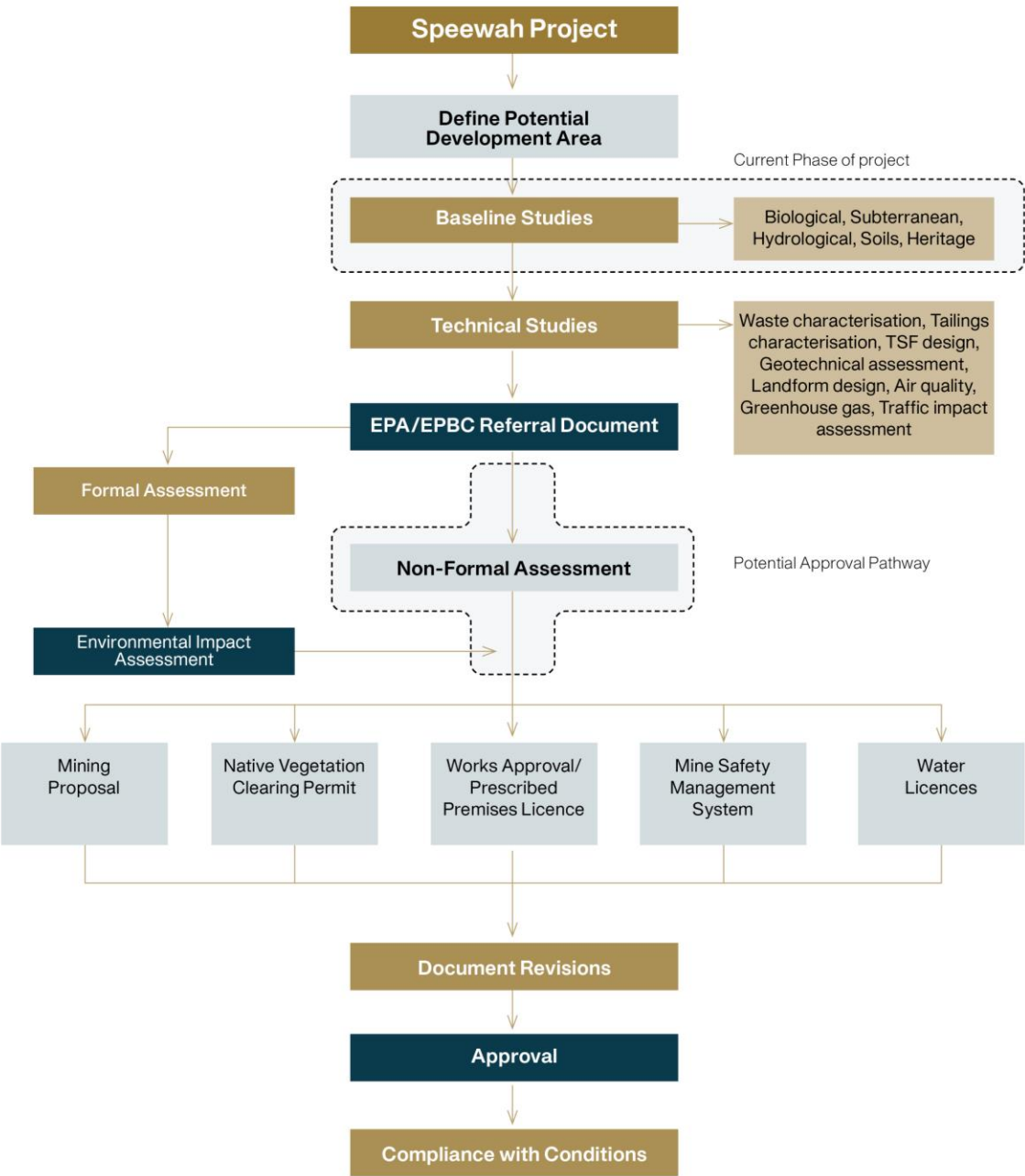
Figure 15: Provisional transmission routes.



# Tivan: Targetting environmental approvals in 2025

Tivan commenced baseline surveys in July 2023.

**Figure 16:** Overview of the environmental approval process for the Project, indicating Tivan's current progress through baseline studies and pathway through non-formal assessment.



# Tivan: Traditional Owners inclusion

Tivan is committed to developing innovative pathways that facilitate genuine inclusion and participation of Traditional Owners and Native Title Holders across the full project life-cycle.

Further information can be found in Tivan's submission to the Critical Minerals Strategy reset in early 2023, available [here](#).

## Agreements with Traditional Owners:

- Oct 2023: Larrakia Energy, majority owned JV of Larrakia Development Corporation: Letter of Intent
- Dec 2023: Kimberley Land Council: Heritage Protection Agreement
- Feb 2024: Kimberley Land Council on behalf of Yurriyangem Taam PBC: Heritage Protection Agreement
- May 2024: Glen Hill Pastoral Aboriginal Corporation: Heads of Agreement
- November 2024: Mineral Exploration Deed with Central Land Council at Sandover (Dneiper)
- December 2024: Mineral Exploration Deed with Central Land Council at Sandover (Aileron)

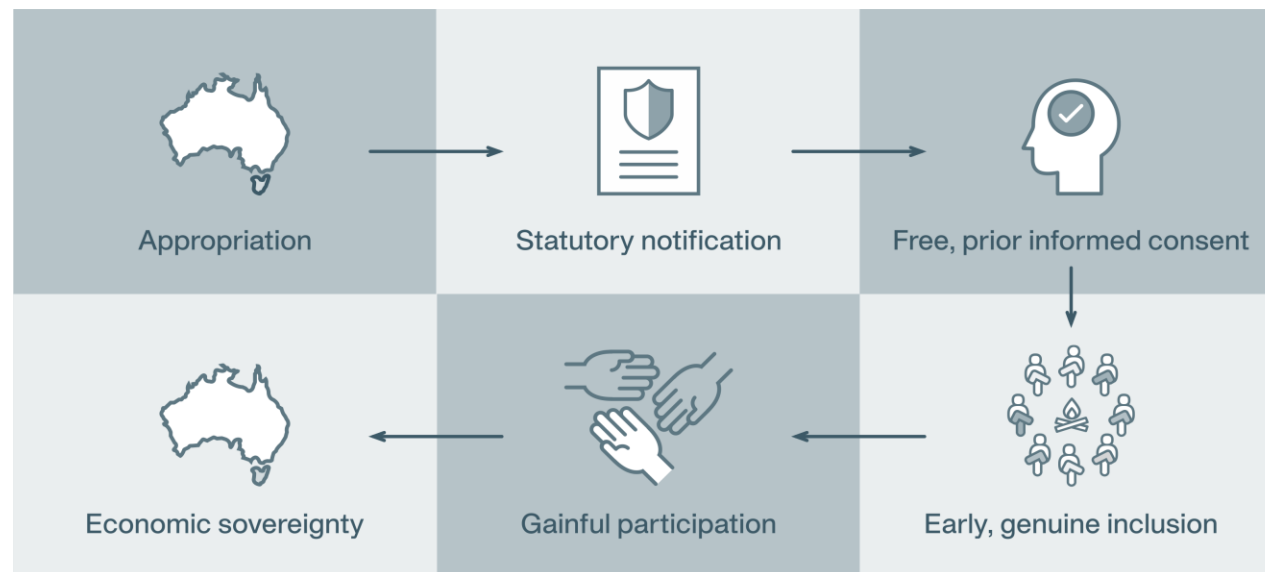


**Figure 17:** Tivan's First Nations Framework

# Tivan: China now the world's largest importer of Fluorspar

- China produces and consumes 2/3 of global Fluorspar, a vital feedstock for semiconductors & EV batteries, each geo-strategically relevant sectors.
- The AI boom is driving unprecedented CAPEX in the semiconductor industry, providing structural uplift in demand for Fluorspar and reinforcing its criticality.
- China is rapidly depleting reserves, driving a trend shift to net importer status, the largest globally in volume terms.
- Import tariffs for low arsenic Fluorspar (less than 5ppm) were cut to 0% at end 2023 by China's Ministry of Finance, reflecting high criticality.

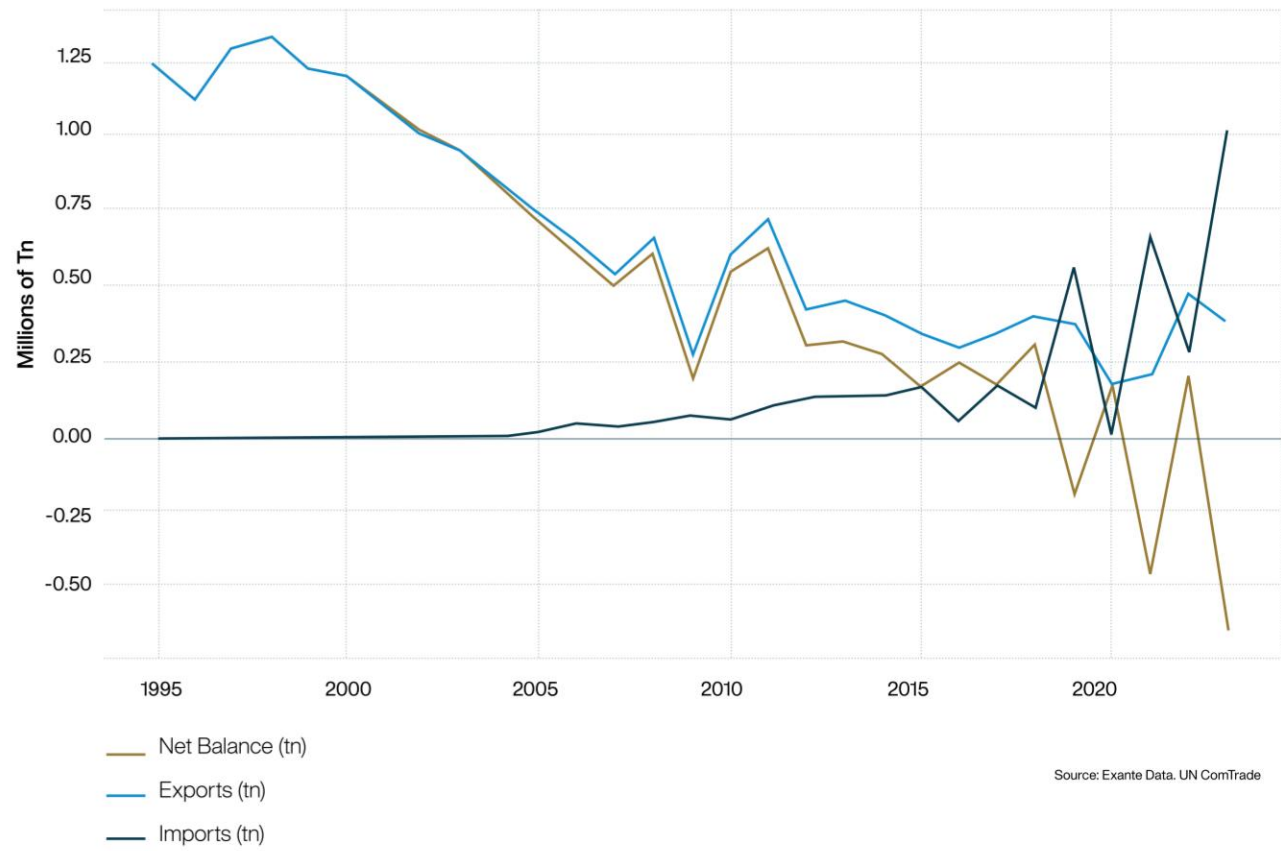


Figure 18: China net trade balance (volume): Fluorspar

Source: Exante Data

# Tivan: Fluorspar is a critical feedstock in the EV battery chain

Fluorine is the most electronegative element. This property underpins its widespread industrial use & its prominence in high energy density batteries, including all iterations of EV cells.

Fluorspar demand from EV Batteries

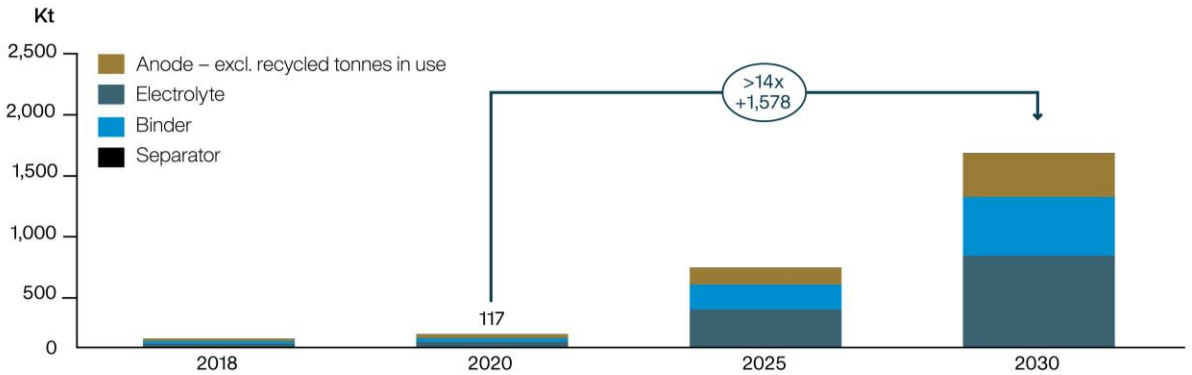


**Figure 19:** Fluorite is a vital input to the EV battery manufacturing.  
Source: Benchmark Mineral Intelligence

China dominates current production and consumption of Fluorspar (60%), yet on current trends will entirely deplete reserves by 2030. This is a critical vulnerability to China's leadership of the EV sector and provides upside risk to Fluorspar prices.

Global Fluorspar reserves by country, million tonnes

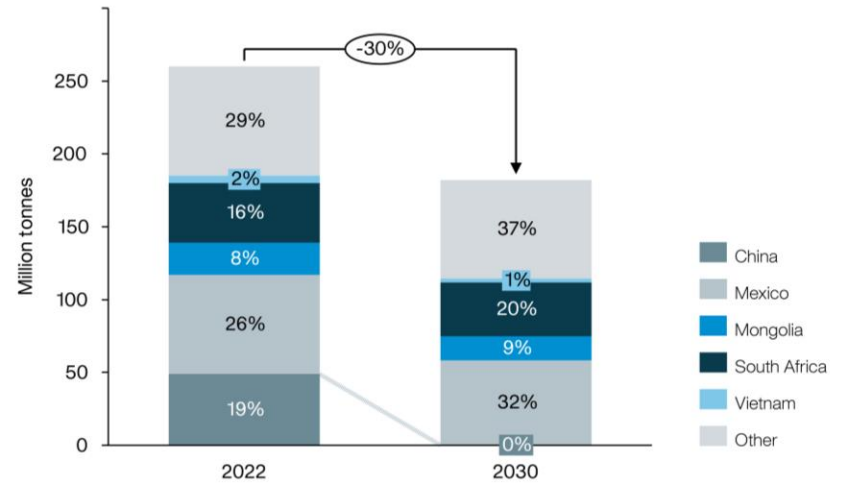
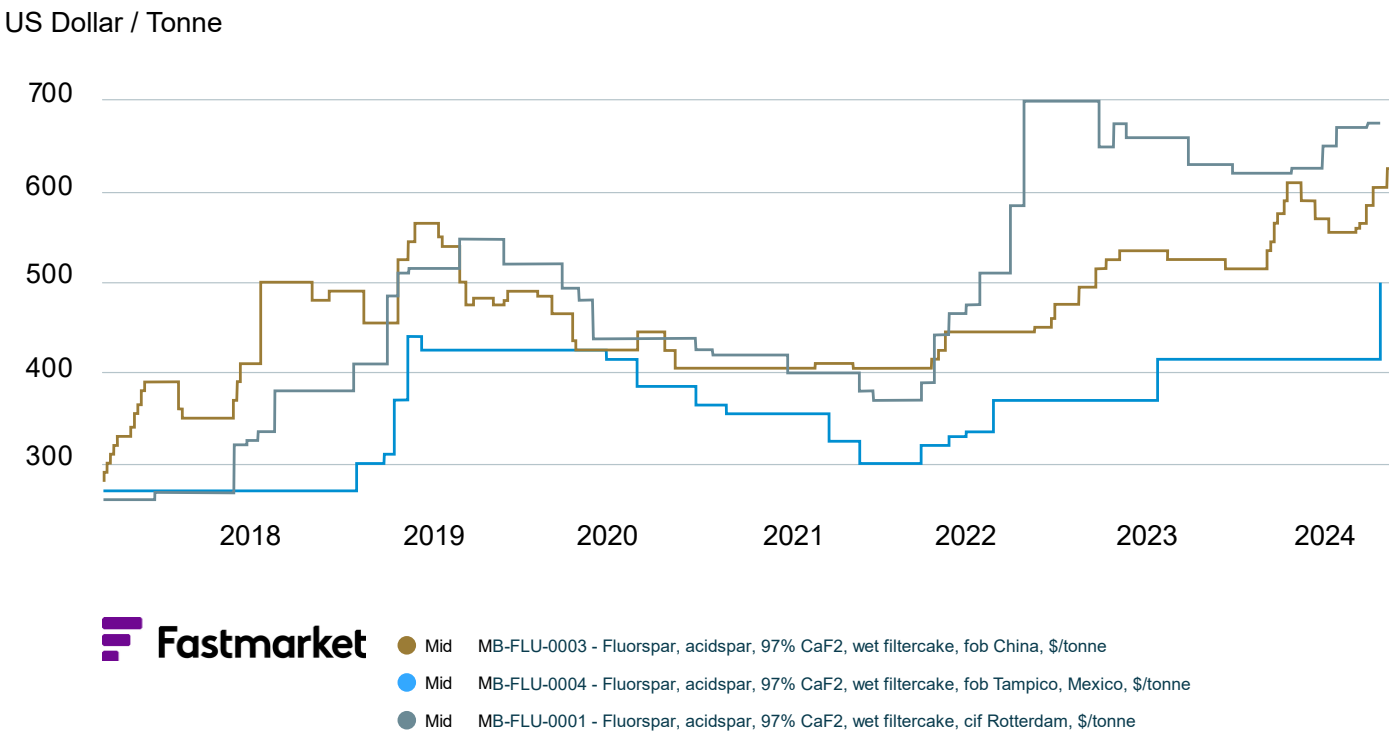


**Figure 20:** China is depleting reserves rapidly, exposing a critical vulnerability.  
Source: Benchmark Mineral Intelligence

# Tivan: Fluorspar prices are trending higher with low volatility

- Fluorspar prices are trending higher across all product segments and geographical regions.
- Fluorspar from Mexico trades at a discount due to high arsenic content.
- Fluorspar prices have exhibited low realised volatility (~15% annualised) when compared to other critical minerals and rare earths, reducing project finance risk.
- FastMarkets provides audited, IOSCO-compliant price data, with China FOB prices available weekly.

**Figure 21:** Global Fluospar prices are trending higher, reflecting structural supply deficit & China's migration from price maker to price taker.



# Sandover Fluorite Project



# Tivan: Sandover Fluorite Project – Acquisition

- On 21 November, Tivan announced the acquisition of Australia's highest grade Fluorite prospect, drilled in the 1970s.
- The acquisition is highly synergistic, enabling Tivan to leverage multiple workflows and capabilities associated with the Speewah Fluorite Project and the Sandover AI Project.
- Grade, metallurgy, depth & size all appear to be highly favourable to resource definition & project development.
- Tivan on track to be Australia's sole supplier of acidgrade Fluorspar to Japan and Asian markets, lending strategic importance.
- Tivan commenced field works in December 2024, with first assay results due mid-January 2025.



Figure 22: Subdivision of EL22349, to create the Sandover Fluorite Project. **Blue:** subdivided to Tivan. **Green:** Tivan has rights to explore for Fluorite.

# Sandover AI Project

# Tivan: Sandover AI Project – an industry leading collaboration

## Exploration Alliance with EARTH AI:

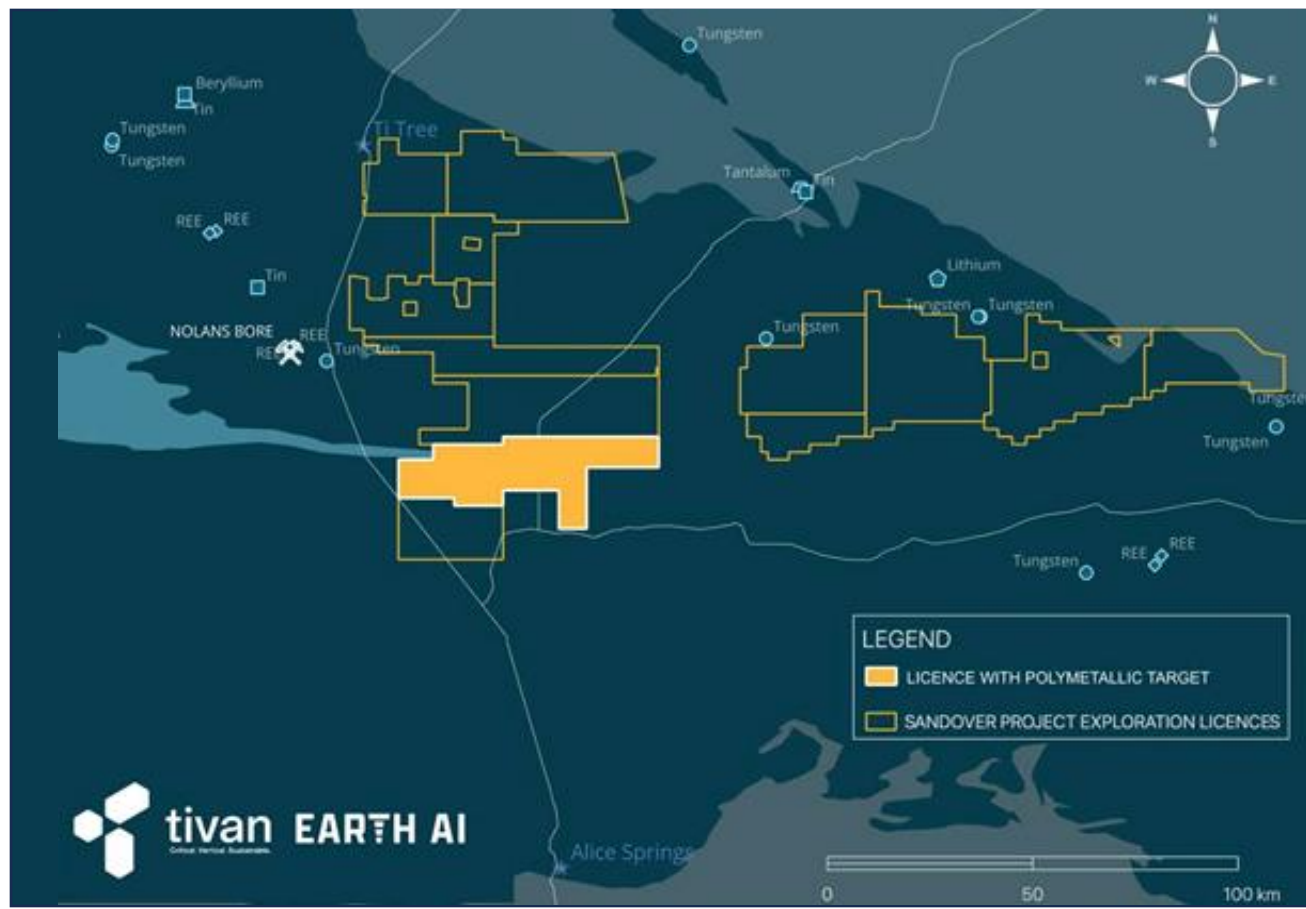
An industry leading AI-driven exploration in central Australia

- Commenced Q1 2023
- Maximises alignment with critical minerals secular thematic
- Use of cutting-edge AI technology to maximise success rates, minimise cost & time
- Strong relationships with key stakeholders in central Australia
- EARTH AI a trusted partner, with extensive Territory experience
- Tivan retains upside economics and decision making flexibility

## Current Status:

- Mineral Exploration Deeds with CLC & Traditional Owners secured in Nov / Dec 2024
- Commencement of drilling with EARTH AI scheduled for January 2025

Figure 23: Location map for the Sandover Project showing exploration licences



# Tivan: Rare High-Grade Lead-Silver Surface Mineralisation Discovery

## Discovery:

Surface rock sample mineralisation of Lead at 12.2% grade, Silver at 469ppm, confirmed by assay

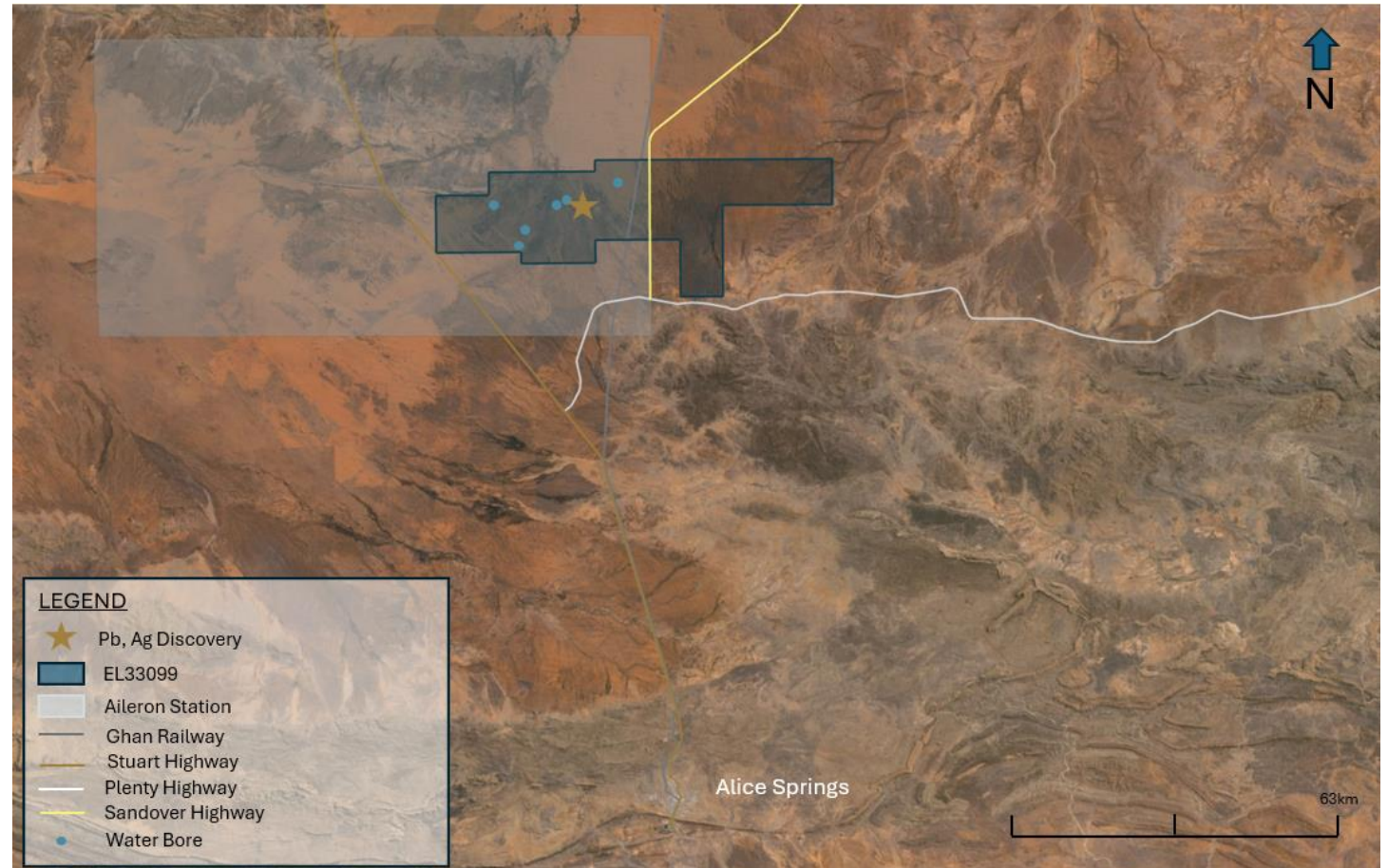
## Announced:

March/April 2024

## Details:

- Rare high-grade base metal surface discovery. Prominent indications of hydrothermal activity
- Advantageous location for logistics: 5km east of Ghan Railway, 100km north of Alice Springs.
- Ongoing engagement with Central Land Council, in support of heritage protection and sacred sites
- Drill campaign scheduled for January 2025
- Strong validation of EARTH AI's proprietary exploration technology
- NT Exploration grants awarded in June 2024.

**Figure 24:** Location of high-grade Lead-Silver target



# Speewah Vanadium Project / TIVAN+

# Tivan Life Cycle

Tivan is aiming to build sovereign capabilities in long duration energy storage across northern Australia

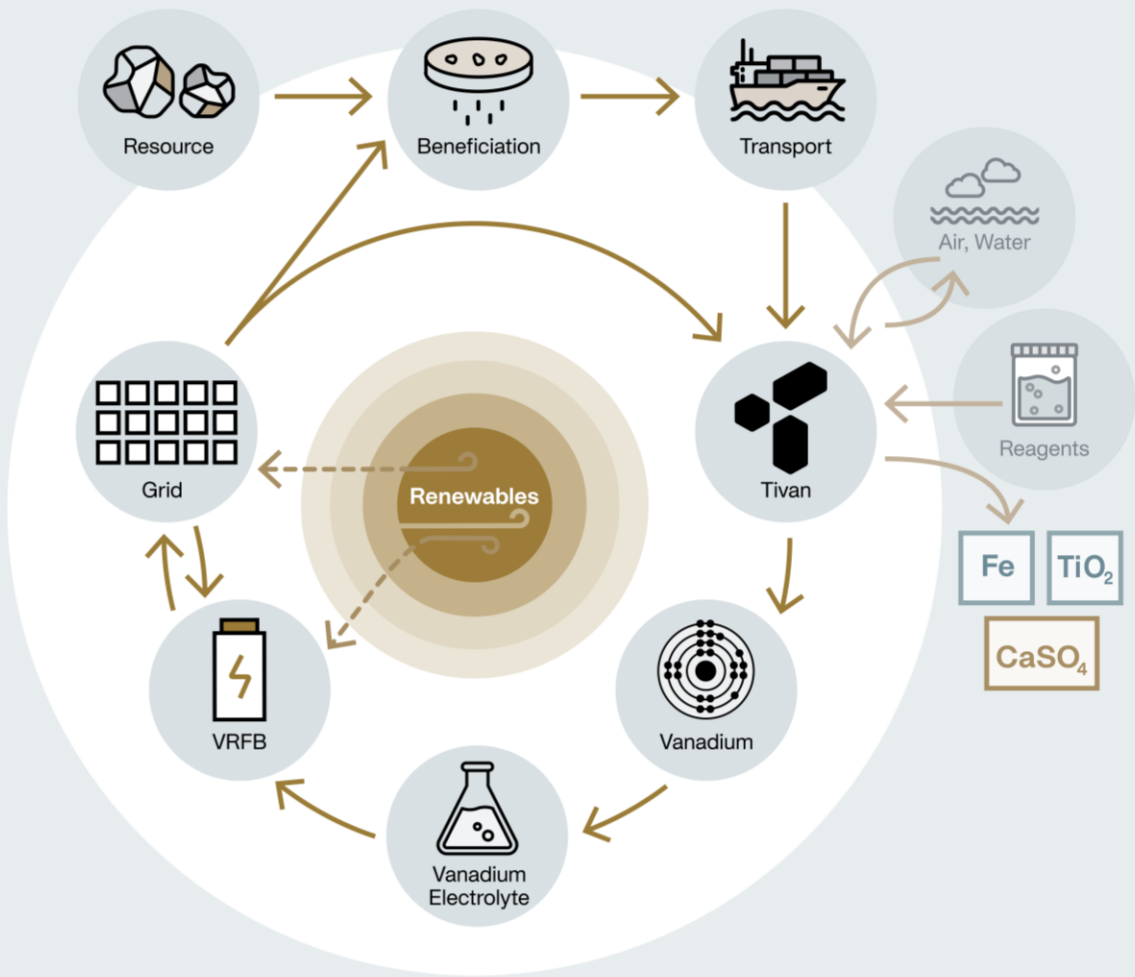


Figure 25: Tivan life cycle – circularity is integral to sustainability

# Tivan: Speewah is Australia's Premier VTM Resource

**Background:**

Tivan acquired Speewah in Q1 2023 following an extensive review of global VTM resources.

**Development Pathway:**

Tivan has pursued two development pathways: Salt Roast & TIVAN+ critical minerals technology with CSIRO.

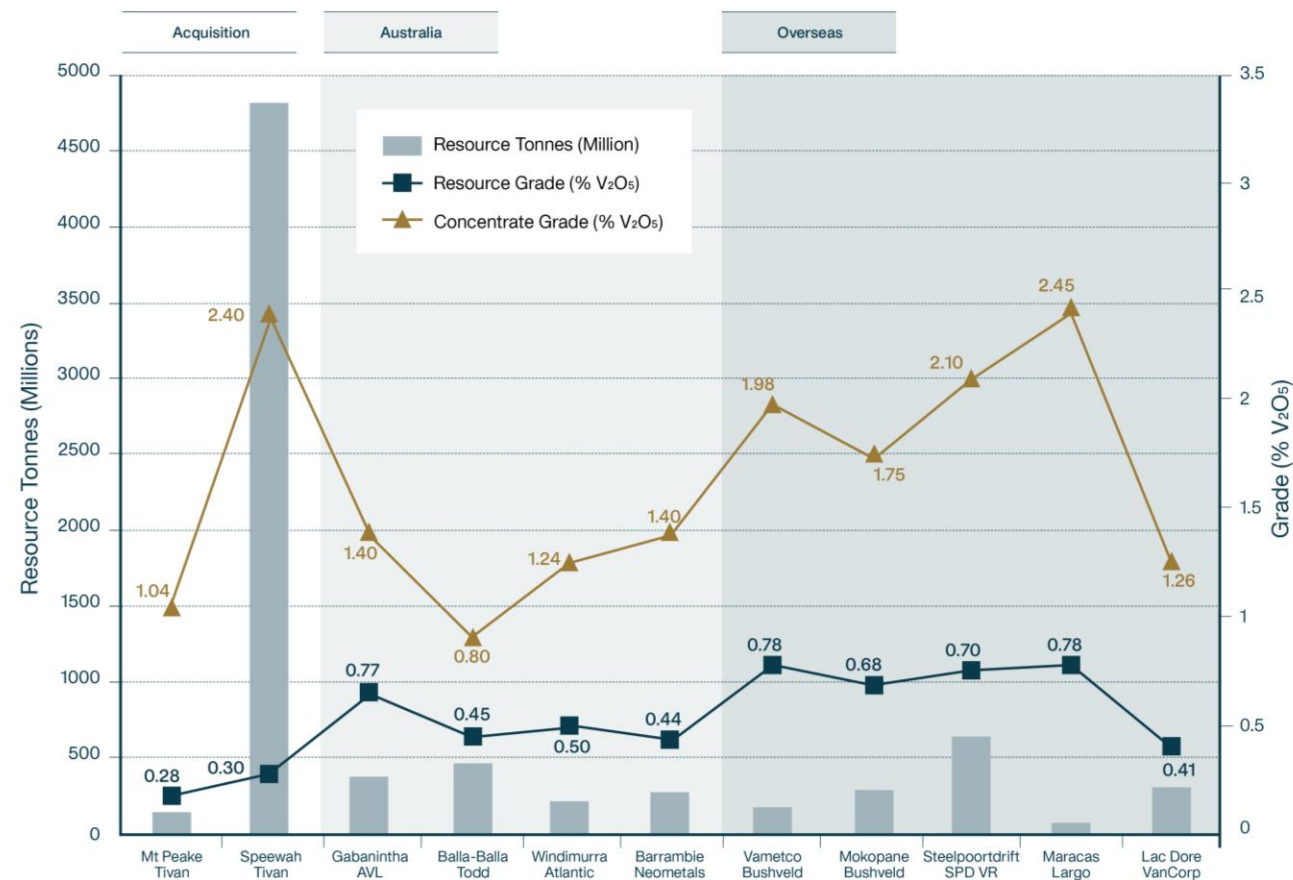
**Attributes:**

- Largest drilled vanadium titanomagnetite resource globally
- Very high vanadium concentrate grade & recovery
- Ultra long-life resource, with low strip ratio (0.4)
- Proximity to the Port of Wyndham & MASDP
- Proximity to large-scale hydro and solar resources

**Staged Development Project:**

- The Speewah Fluorite Project will introduce critical infrastructure and facilitate the Speewah VTM Project.

**Figure 26:** Vanadium in titanomagnetite resources, peer comparison. Prepared in accordance with ASX Compliance Update,19 September 2018. Update No 08/18, Section 3. [Link](#) is available here. The full dataset with relevant sources and notes is included in Appendix 3.



# Tivan: Major proponent at MASDP

**Background:**

Tivan was awarded a 'Do Not Deal' commitment from NT Government at the Middle Arm Sustainability Development Precinct (MASDP) in Q1 2023.

**Development Pathway:**

Tivan has progressed scoping studies for the TIVAN+ critical minerals processing facility at MASDP, and contributed to NT Government studies. Tivan announced a planned Vanadium Electrolyte Facility at MASDP in October 2023.

**Attributes:**

- MASDP shapes as a major hub for long duration energy storage & large-scale project development
- Tivan is an active participant in Precinct planning with NT Government, including the Strategic Environment Assessment
- Tivan is working in close collaboration with large-scale solar, hydrogen and gas projects, and with Larrakia Development Corporation
- MASDP is supported by \$1.5bn investment budgeted by the Federal Government.

**Figure 27:** The TIVAN+ Processing Facility is planned at Southern Lode, Wirraway Estate



# Tivan: Strategic R&D Partnership with CSIRO on TIVAN+ Technology

## Background:

Tivan & CSIRO agreed a long-term strategic partnership to develop and commercialise the TIVAN+ technology in November 2023. TIVAN+ aims to produce three commercial grade products in Vanadium, Titanium and Iron from VTM resources, commencing at Speewah

## Agreements:

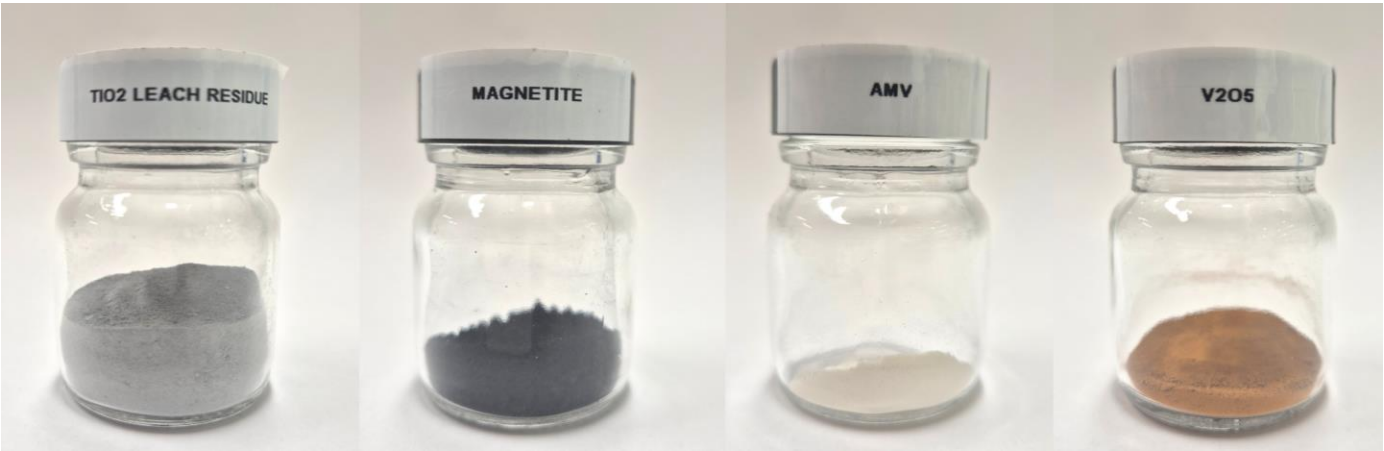
Technology Licence Agreement (20 years)  
Research Services Agreement

## Attributes:

- Industry leading R&D collaboration with Tivan & CSIRO pooling developmental resources
- Testwork program using Speewah ore completed in May 2024, with high grade results achieved in vanadium precursor and magnetite
- Well defined project pathway to achieve FID on TIVAN+ Pilot Plant over 18 months
- Third party interest in TIVAN+ Pilot, including in Australia

**Figure 28:** Samples – titanium dioxide (leach trials), magnetite (iron recovery trials), “AMV” (ammonium metavanadate is a pre-cursor to  $V_2O_5$  preparation) and vanadium pentoxide (vanadium recovery trials).

(Source: CSIRO, May 2024)



# Tivan: Strategic R&D Partnership with Sumitomo Electric Industries

**Background:**

Tivan is completing a testwork program to achieve VRFB specifications provided by Sumitomo Electric Industries (SEI) using on Speewah ore.

**Testwork Interim Results:**

Testwork results for salt roasting have exceeded expectations, demonstrating that the Speewah ore has high amenability to salt roasting

- Vanadium extractions up to 98.3%, a large uplift (~6%) on previous results
- Vanadium extractions greater than 97% demonstrated as repeatable outcome in testwork with industrially relevant processing parameters
- Very low impurity dissolution for Fe, Ti, Al, Cr, Mn and Mg
- Purification and vanadium precipitation testwork program in progress at ALS

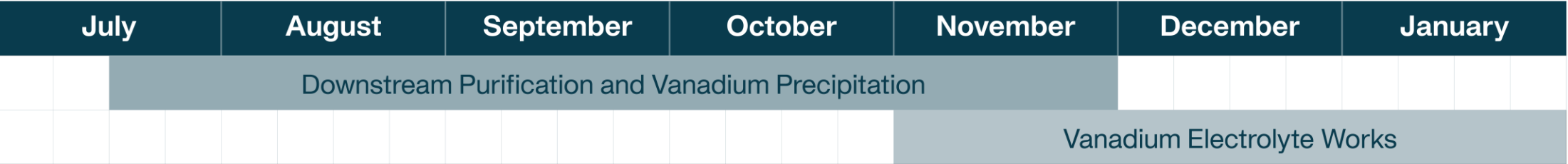


**Figure 29:** Salt roasting and vanadium electrolyte production testwork program. Schedule is indicative only and subject to risk of delay.

# Company Overview



# Tivan: Organisation Chart

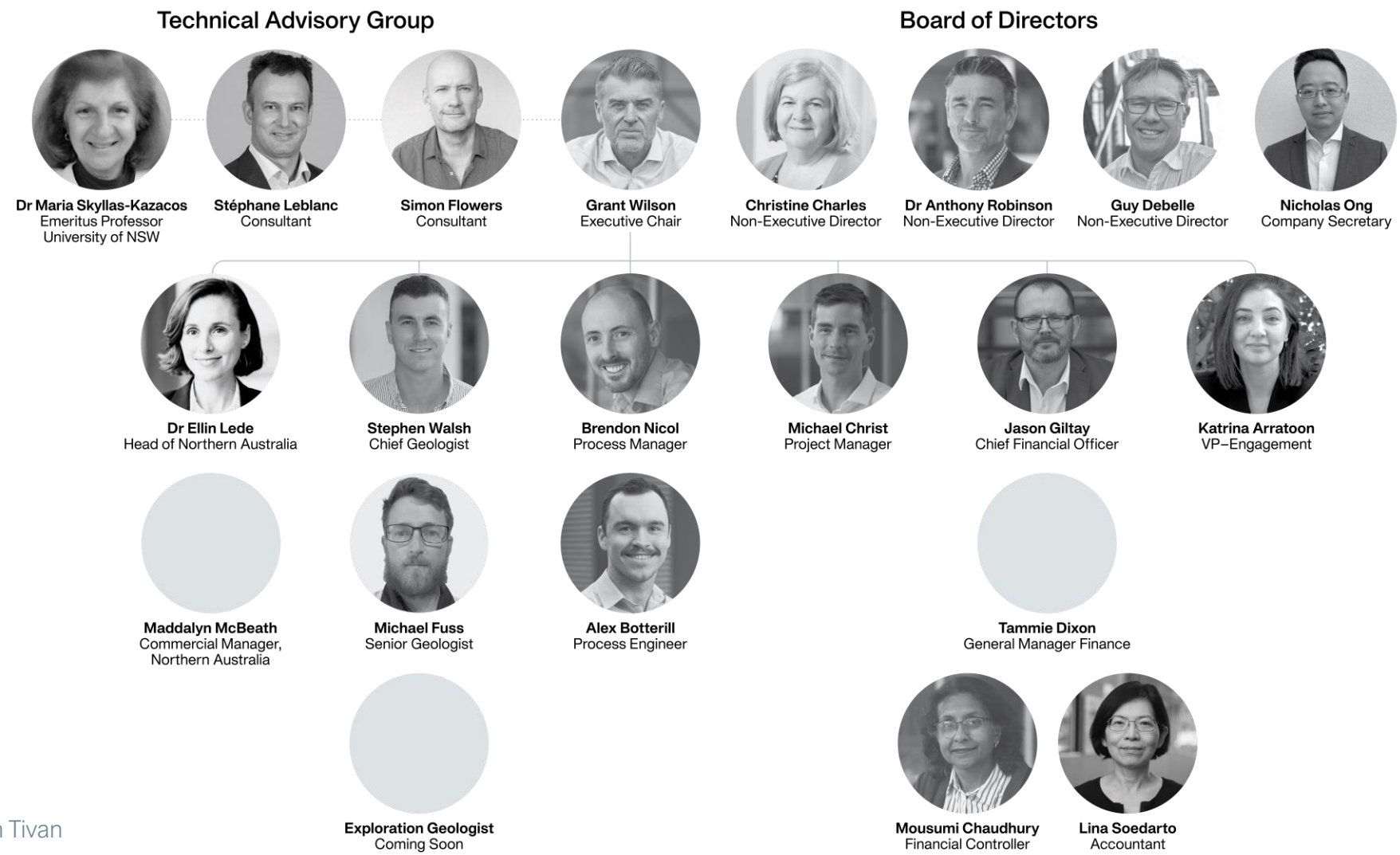


Figure 30: Team Tivan

# Tivan: Partners

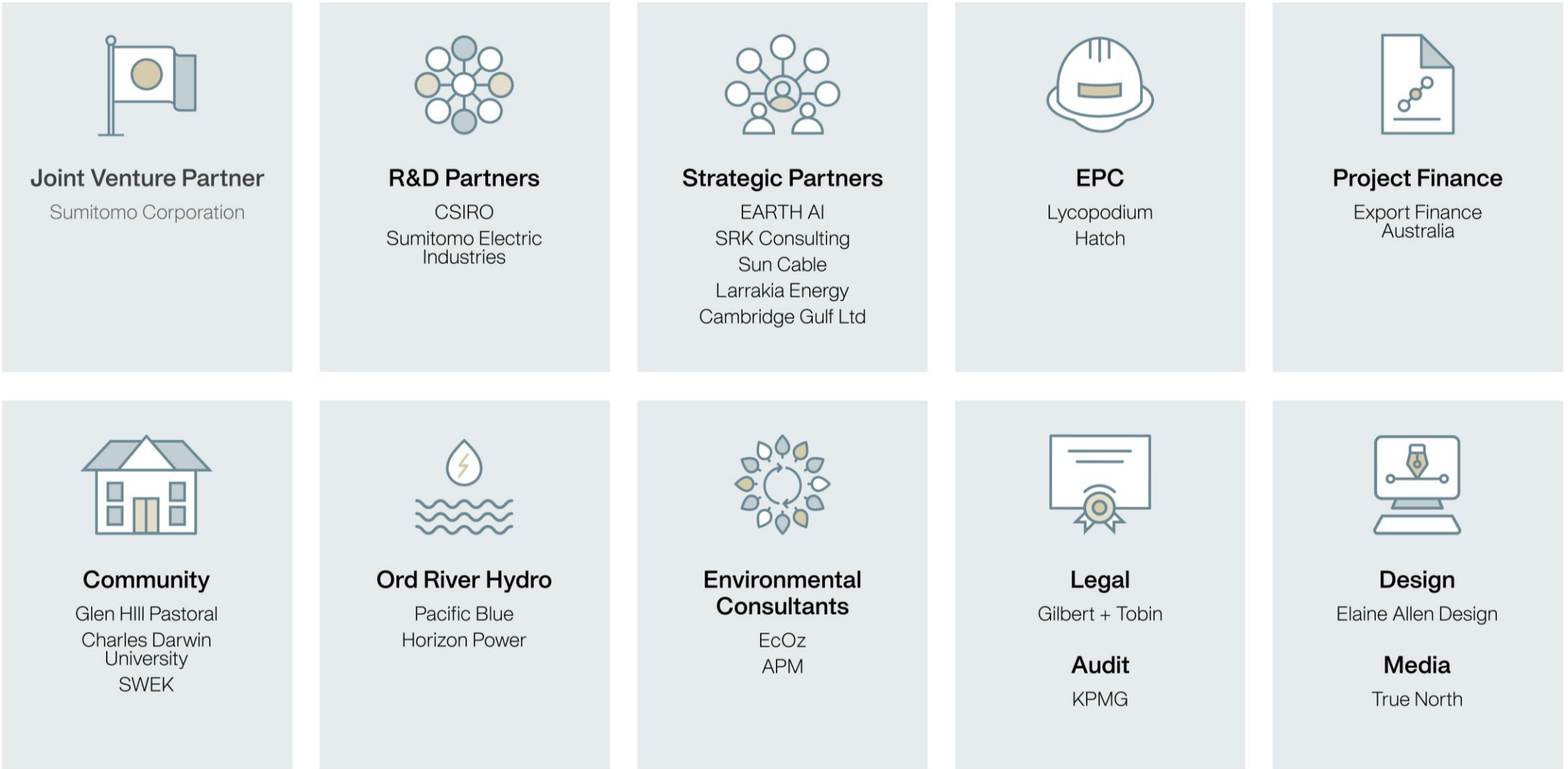


Figure 31: Tivan's partners

# Tivan: Corporate Overview

| Capital Structure*        |               |
|---------------------------|---------------|
| Ordinary shares on issue  | 1,909,963,142 |
| Shareholders              | 5,963         |
| Share price (06 Jan 2025) | \$0.110       |
| Market cap (undiluted)    | \$210m        |

\*Excludes listed options, unlisted options & unlisted convertible notes on issue

| Major Shareholders**           |       |
|--------------------------------|-------|
| Deutsche Balaton Group         | 8.67% |
| VM Salgaocar                   | 5.80% |
| King River Resources           | 5.24% |
| Grant Wilson (Executive Chair) | 1.60% |

\*\*Grouped holdings; current as at 06 Jan 2025

Tivan was formerly known as TNG Limited. Following a change of control event in late 2022, Tivan's new management team renamed the company in January 2023, and adopted a new ASX ticker: TVN.

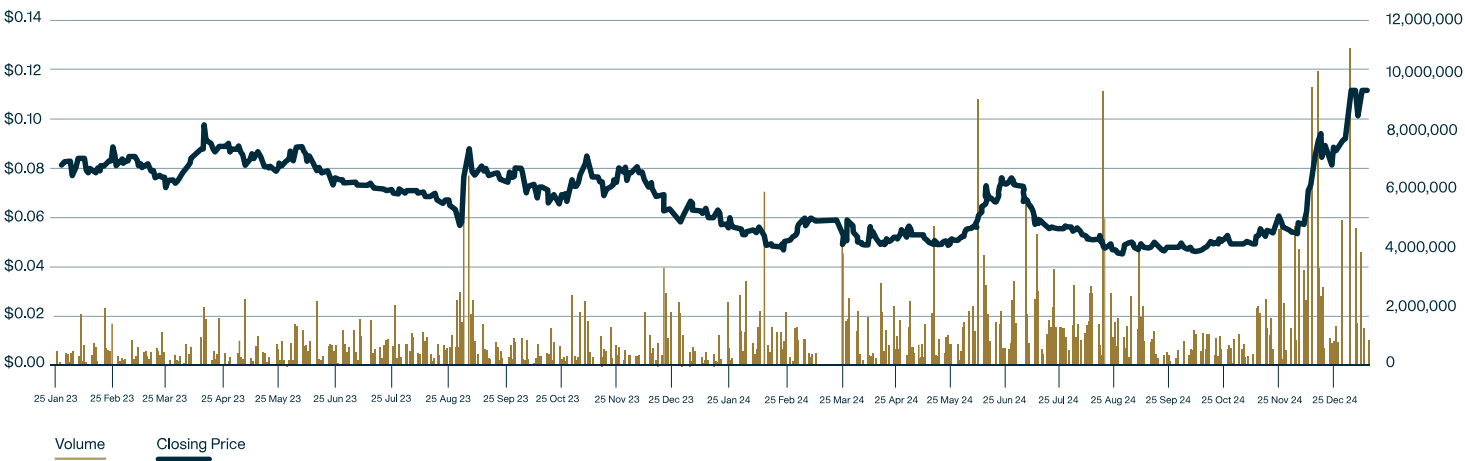


Figure 32: TVN/ASX Closing Share Price & Volume 06 January 2025



# Appendices



# Tivan: Appendix 1: Global Fluorspar Peer Comparison

For live links: [Read here](#) Pre-Feasibility Study 30 July 2024

| Country      | Mine Type   | Asset         | Operator           | Stage     | Measured (Mt) | Indicated (Mt) | Inferred (Mt) | Size (Mt) | Grade (%) | Year | Resource Category           | Standard       | Trajectory | Data Source                                                                                               |
|--------------|-------------|---------------|--------------------|-----------|---------------|----------------|---------------|-----------|-----------|------|-----------------------------|----------------|------------|-----------------------------------------------------------------------------------------------------------|
| Australia    | Open Pit    | Speewah       | Tivan              | Studies   | 0.0           | 23.2           | 14.1          | 37.3      | 9.1%      | 2024 | Mineral Resource            | JORC           | Expansion  | 61203568.pdf (tivan.com.au)                                                                               |
| Australia    | Open Pit    | Speewah       | Tivan              | Studies   | 0.0           | 5.8            | 2.8           | 8.6       | 22.8%     | 2024 | High Grade Mineral Resource | JORC           | Expansion  | 61203568.pdf (tivan.com.au)                                                                               |
| Canada       | Underground | St. Lawrence  | Canada Fluorspar   | Closed    | 0.0           | 9.1            | 1.0           | 10.04     | 41.0%     | 2013 | Mineral Resource            | CIM/NI 43- 101 | Depletion  | Canada Fluorspar (NL) Inc_ St. Lawrence Project                                                           |
| Canada       | Open Pit    | Ashram        | Commerce Resources | Studies   | 0.0           | 73.2           | 131.1         | 204.3     | 4.9%      | 2024 | Mineral Resource            | CIM/NI 43- 101 | Depletion  | Commerce Resources Files NI 43-101 Technical Report                                                       |
| Mongolia     | Underground | Atlan Ovoo    | Arcus Holdings     | Operating | 0.0           | 1.3            | 3.0           | 4.3       | 37.0%     | 2021 | Mineral Resource            | Not stated     | Depletion  | <a href="http://arcusholdings.com/3-mines-in-mongolia/">http://arcusholdings.com/3-mines-in-mongolia/</a> |
| Mongolia     | Open Pit    | Delgerkhaan   | Wayo Fluorite      | Studies   | 0.0           | 6.6            | 0.0           | 6.6       | 33.7%     | 2012 | Mineral Resource            | Not stated     | n/a        | <a href="https://wayo-fluorite.com/operation/">https://wayo-fluorite.com/operation/</a>                   |
| Mongolia     | Open Pit    | Baruun Suuj   | KHD Fluorite       | Operating | 0.0           | 6.3            | 2.7           | 9.0       | 39.7%     | 2021 | Mineral Resource            | Not stated     | Depletion  | <a href="https://imformed.com/fluorspar-new-sources">https://imformed.com/fluorspar-new-sources</a>       |
| Mongolia     | Underground | Maly          | KHD Fluorite       | Operating | 0.0           | 2.5            | 0.1           | 2.6       | 31.5%     | 2022 | Mineral Resource            | Not stated     | Depletion  | <a href="https://imformed.com/fluorspar-new-sources">https://imformed.com/fluorspar-new-sources</a>       |
| South Africa | Open Pit    | Nokeng        | Sepfluor           | Operating | 6.7           | 2.4            | 0.3           | 9.4       | 27.8%     | 2022 | Mineral Reserve             | SAMREC         | Depletion  | Nokeng Fluorspar mine – Sepfluor                                                                          |
| South Africa | Open Pit    | Wallmannsthal | Sepfluor           | Studies   | 4.3           | 3.0            | 0.7           | 7.9       | 45.8%     | 2022 | Mineral Resource            | SAMREC         | n/a        | Wallmannsthal Fluorspar desposit – Sepfluor                                                               |
| Sweden       | Underground | Storuman      | Tertiary Minerals  | Studies   | 0.0           | 25.0           | 2.7           | 27.7      | 10.2%     | 2011 | Mineral Resource            | JORC           | n/a        | <a href="https://www.tertiaryminerals.com/storuman">https://www.tertiaryminerals.com/storuman</a>         |

# Tivan: Appendix 2: Global Fluorspar – Projects & Deposits

For live links: [Read here](#) Pre-Feasibility Study 30 July 2024

| Country        | Mine Type   | Asset                  | Operator                 | Owner                       | Stage     | Size (Mt) | Grade (%) | Year | Trajectory | Data Source                                                                                                                                   |
|----------------|-------------|------------------------|--------------------------|-----------------------------|-----------|-----------|-----------|------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Australia      | Underground | Moina                  | Mazel Resources          | Mazel Resources             | Deposit   | 28.0      | 16.0%     | 2023 | n/a        | (28) Post  LinkedIn                                                                                                                           |
| China          | Undergound  | Yangshan, Madiu        | Luoyang Fengrui          | Luoyang Fengrui             | Operating | 14.5      | 44.2%     | n/a  | Depletion  | <a href="http://www.frfluorine.com/aboutus/">http://www.frfluorine.com/aboutus/</a>                                                           |
| China          | Undergound  | Bayan Noel, Bayan Tara | Chifeng City Sky-Horse   | Chifeng City Sky-Horse      | Operating | 8.8       | n/a       | n/a  | Depletion  | <a href="https://www.made-in-china.com/showroom/tianma0476">https://www.made-in-china.com/showroom/tianma0476</a>                             |
| China          | Undergound  | Various assets         | Subsidiary Companies     | China Kings Resources       | Operating | 27.0      | n/a       | n/a  | Depletion  | <a href="http://www.chinesekings.com/about_en.html">http://www.chinesekings.com/about_en.html</a>                                             |
| Germany        | Underground | Kafersteige            | Deutsche Flussspat       | Deutsche Flussspat          | Studies   | n/a       | n/a       | n/a  | n/a        | New Analysis (projectblue.com)                                                                                                                |
| Germany        | Underground | Niederschlag           | Erzgebirgische           | Erzgebirgische              | Operating | 1.15      | n/a       | n/a  | Depletion  | <a href="https://link.springer.com/article/10.1007/s00126-020-01035-y">https://link.springer.com/article/10.1007/s00126-020-01035-y</a>       |
| India          | Open Pit    | Kadipani               | Gujarat Mineral Corp     | Gujarat Mineral Corp        | Operating | 7.5       | 17.0%     | n/a  | Depletion  | <a href="https://www.gmdcltd.com/minerals_mines/kadipani/">https://www.gmdcltd.com/minerals_mines/kadipani/</a>                               |
| Italy          | Open Pit    | Silius                 | Mineraria Gerrai         | Mineraria Gerrai            | Operating | 2.2       | n/a       | n/a  | Depletion  | <a href="https://www.minerariagerrei.com/">https://www.minerariagerrei.com/</a>                                                               |
| Russia         | Underground | Yaroslavsk             | Yaroslavsk Mining        | Yaroslavsk Mining           | Closed    | 22        | 30.9%     | n/a  | n/a        | <a href="https://rusal.ru/en/press-center/press-releases">https://rusal.ru/en/press-center/press-releases</a>                                 |
| Mexico         | Underground | Las Cuevas             | Koura                    | Koura                       | Operating | 30.0      | 84.0%     | 2008 | Depletion  | <a href="https://www.mdpi.com/2075-163X/9/1/35">https://www.mdpi.com/2075-163X/9/1/35</a>                                                     |
| Mexico         | Open Pit    | La Sabina              | Koura                    | Koura                       | Operating | n/a       | n/a       | n/a  | Depletion  | Koura Global  Global Leader  Largest Fluorspar Manufacturer                                                                                   |
| Mongolia       | Underground | Bor Under              | Mongolrostsvetmet        | Mongolrostsvetmet           | Operating | 3.4       | 34.9%     | 2018 | Depletion  | <a href="https://www.mongolros.mn/a/29">https://www.mongolros.mn/a/29</a>                                                                     |
| Mongolia       | Underground | Zuun Tsagaan Del       | Mongolrostsvetmet        | Mongolrostsvetmet           | Operating | 4.5       | 33.3%     | 2018 | Depletion  | <a href="https://www.mongolros.mn/a/29">https://www.mongolros.mn/a/29</a>                                                                     |
| Mongolia       | Open pit    | Khukh-Dei              | Mongolczechmetall        | Mongolczechmetall           | Operating | 1.0       | 39.3%     | 2018 | Depletion  | <a href="https://www.mongolros.mn/a/29">https://www.mongolros.mn/a/29</a>                                                                     |
| Mongolia       | Open pit    | Urgen                  | Mongolczechmetall        | Mongolczechmetall           | Operating | 3.9       | 42.7%     | 2018 | Depletion  | <a href="https://www.mongolros.mn/a/29">https://www.mongolros.mn/a/29</a>                                                                     |
| Mongolia       | Underground | Oosmonslogo 1          | Arcus Holdings           | Arcus Holdings              | Operating | n/a       | n/a       | n/a  | Depletion  | <a href="http://arcusholdings.com/3-mines-in-mongolia/">http://arcusholdings.com/3-mines-in-mongolia/</a>                                     |
| Morocco        | Open pit    | Jebel Tirremi          | Gujarat Fluorochemicals  | Gujarat Fluorochemicals     | Operating | 4.8       | 28.0%     | 2023 | Depletion  | <a href="https://link.springer.com/article/10.1007">https://link.springer.com/article/10.1007</a>                                             |
| South Africa   | Open pit    | Kruidfontein           | Sepfluor                 | Sepfluor                    | Deposit   | 2.8       | 28.0%     | 2022 | Expansion  | <a href="https://www.sepfluor.co.za/prospects/">https://www.sepfluor.co.za/prospects/</a>                                                     |
| South Africa   | Open Pit    | Vergenoeg              | Vergenoeg Mining Company | Minersa                     | Operating | n/a       | n/a       | n/a  | Depletion  | <a href="https://www.minersa.com/eng/vergenoeg_mining.php">https://www.minersa.com/eng/vergenoeg_mining.php</a>                               |
| South Africa   | Open pit    | Doomhoek               | SA Fluorite              | Eurasian Resources Group    | Deposit   | n/a       | 13.8%     | n/a  | n/a        | <a href="https://sahris.sahra.org.za/sites/default/files/additionaldocs/">https://sahris.sahra.org.za/sites/default/files/additionaldocs/</a> |
| South Africa   | Open pit    | Witkop                 | Witkop Fluorspar Mine    | Sallies Industrial Minerals | Closed    | n/a       | n/a       | n/a  | n/a        | <a href="https://www.mindat.org/loc-16405.html">https://www.mindat.org/loc-16405.html</a>                                                     |
| Spain          | Underground | Emilio                 | Minersa                  | Minersa                     | Operating | n/a       | n/a       | n/a  | Depletion  | Emilio Mine, Loroño, Obdulia vein, Colunga, Asturias, Spain (mindat.org)                                                                      |
| Spain          | Underground | Lujar                  | Minera De Orgive         | Minera De Orgive            | Operating | n/a       | n/a       | n/a  | Depletion  | Sierra De Lújar Mines Spain - Mine Explorer Society                                                                                           |
| Thailand       | Deposit     | Mae Hong Son           | Asian Mineral Resources  | Asian Mineral Resources     | Operating | n/a       | n/a       | n/a  | Depletion  | The Mineral Industry of Thailand in 2019 (usgs.gov)                                                                                           |
| United Kingdom | Open pit    | Weardale               | Fluorspar Ventures       | Fluorspar Ventures          | Studies   | n/a       | n/a       | n/a  | n/a        | Fluorite Mines in the North Pennines - Weardale proper (fluor-spar.com)                                                                       |
| USA            | Open pit    | Lost Sheep             | Ares Strategic Mining    | Ares Strategic Mining       | Studies   | n/a       | n/a       | n/a  | Expansion  | Lost Sheep Mine  ARES Strategic Mining  Returning Fluorspar                                                                                   |
| Vietnam        | Open pit    | Nui Phao               | Nui Phao Mining Company  | Masan High Tech Materials   | Operating | n/a       | n/a       | n/a  | Depletion  | <a href="https://www.srk.com/en/publications/nui-phao-project-review">https://www.srk.com/en/publications/nui-phao-project-review</a>         |

# Tivan: Appendix 3: Vanadium Titanomagnetite Peer Comparison

For live links [Read here](#) ASX Announcement dated 20th February 2023

| Acquisition     |                       |                 | Australia    |             | Overseas          |               |                        |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|-----------------|-----------------------|-----------------|--------------|-------------|-------------------|---------------|------------------------|-----------------------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Company         | Code                  | Deposit         | Location     | Stage       | Resource Category | Resource (Mt) | Resource Grade (V2O5%) | Total Resource (Mt V2O5%)               | Concentrate Grade | Sources and Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Tivan           | ASX: TVN              | Mount Peake     | NT           | Development | Measured          | 118.0         | 0.29                   | 160Mt @0.28% (Cutoff V2O5% 0.10%)       | 1.04              | ASX announcement 24 January 2023 Quarterly Activities Report, TNG investor presentation<br><a href="https://tivan.com.au/wp-content/uploads/2023/02/61329%5-l.pdf">https://tivan.com.au/wp-content/uploads/2023/02/61329%5-l.pdf</a><br><a href="https://www.asx.com.au/asxpdf/20190604/pdf/4451qv6ky90gf.pdf">https://www.asx.com.au/asxpdf/20190604/pdf/4451qv6ky90gf.pdf</a>                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Indicated         | 20.0          | 0.28                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 22.0          | 0.22                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| KRR             | ASX: KRR              | Speewah         | WA           | Development | Measured          | 322.0         | 0.33                   | 4712Mt @0.30% (Cutoff V2O5% 0.23%)      | 2.40              | ASX announcement 1 April 2019, 10 May 2022, 22 September 2022<br><a href="https://app.sharelinktechnologies.com/announcement/asx/4fd202b164aafb93bc7350413f16d283">https://app.sharelinktechnologies.com/announcement/asx/4fd202b164aafb93bc7350413f16d283</a><br><a href="https://app.sharelinktechnologies.com/announcement/asx/5f6090d1a01816a20d24a633a15ecb20">https://app.sharelinktechnologies.com/announcement/asx/5f6090d1a01816a20d24a633a15ecb20</a><br><a href="https://app.sharelinktechnologies.com/announcement/asx/41ad6aa2b6c9b0c09cb45d6b2046327d">https://app.sharelinktechnologies.com/announcement/asx/41ad6aa2b6c9b0c09cb45d6b2046327d</a> |  |  |
|                 |                       |                 |              |             | Indicated         | 1,054.0       | 0.30                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 3,335.0       | 0.29                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| AVL             | ASX: AVL              | Gabanintha      | WA           | Development | Measured          | 11.3          | 1.14                   | 239Mt @ 0.73% (various cutoffs)         | 1.40              | ASX announcement 6 April 2022 Bankable Feasibility Study.<br>73.6Mt of the Indicated and 88.5Mt of the Inferred tonnes use 0.40% V2O5 cutoff.<br>All other tonnages (95.6Mt) are at 0.70% V2O5 cutoff.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |
|                 |                       |                 |              |             | Indicated         | 82.4          | 0.70                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 145.3         | 0.71                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| TMT             | ASX: TMT              | Gabanintha      | WA           | Development | Measured          | 12.1          | 1.00                   | 154Mt @0.85% (Cutoff V2O5% 0.40%)       | 1.40              | ASX announcement 23 November 2022<br>RUI Resurgence Conference 23 November 2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Indicated         | 51.2          | 0.90                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 90.5          | 0.80                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| Todd Resources  | Private               | Balla Balla     | WA           | Development | Measured          | 219.0         | 0.64                   | 456Mt @0.64% (Cutoff V2O5% 0.30%)       | 0.80              | Integrated feasibility study December 2009. ASX disclosure 16 December 2011.<br><a href="https://www.asx.com.au/asxpdf/201112/6/pdf/4239v45c02k79t.pdf">https://www.asx.com.au/asxpdf/201112/6/pdf/4239v45c02k79t.pdf</a><br><a href="https://drive.google.com/file/d/1wGS4cibLxmYmTnnktz39T_n5uoU1W0LH/view">https://drive.google.com/file/d/1wGS4cibLxmYmTnnktz39T_n5uoU1W0LH/view</a>                                                                                                                                                                                                                                                                         |  |  |
|                 |                       |                 |              |             | Indicated         | 86.7          | 0.63                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 150.2         | 0.64                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| Atlantic        | Private               | Windimurra      | WA           | Development | Measured          | 34.6          | 0.49                   | 210Mt @ 0.50% (Cutoff V2O5% 0.28%)      | 1.24              | 2019 Mineral Resource Estimate<br><a href="https://atlantictytd.com.au/projects/windimurra/geology-reserves-resources">https://atlantictytd.com.au/projects/windimurra/geology-reserves-resources</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |
|                 |                       |                 |              |             | Indicated         | 123.5         | 0.50                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 51.6          | 0.50                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| Neometals       | ASX: NMT              | Barambie        | WA           | Development | Measured          | n/a           | n/a                    | 280Mt @0.44% (Cutoff V2O5% 0.20%)       | 1.40              | ASX announcement 17 April 2018 Updated Barambie Mineral Resource Estimate<br><a href="https://wcsecure.weblink.com.au/pdf/NMT/01971759.pdf">https://wcsecure.weblink.com.au/pdf/NMT/01971759.pdf</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |
|                 |                       |                 |              |             | Indicated         | 187.0         | 0.46                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 93.0          | 0.40                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| Bushveld        | LSE: BMN              | Vametco         | South Africa | Production  | Measured          | n/a           | n/a                    | 183Mt @0.78% (Cutoff = 0.20% magnetite) | 1.98              | Vametco Inferred & Indicated Mineral Resource and Ore Reserve Update for Annual Reporting<br><a href="https://www.bushveldminerals.com/wp-content/uploads/2022/04/J4590-Vametco-Mineral-Resources-and-Ore-Reserves-31-December-2021-Dated-30-Mar-2022.pdf">https://www.bushveldminerals.com/wp-content/uploads/2022/04/J4590-Vametco-Mineral-Resources-and-Ore-Reserves-31-December-2021-Dated-30-Mar-2022.pdf</a>                                                                                                                                                                                                                                               |  |  |
|                 |                       |                 |              |             | Indicated         | 140.1         | 0.74                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 42.6          | 0.90                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| Bushveld        | LSE: BMN              | Mokopane        | South Africa | Development | Measured          | n/a           | n/a                    | 297Mt @0.68% (Cutoff V2O5 = 0.30%)      | 1.75              | Mokopane Vanadium project Pre-Feasibility Study 30%/016<br><a href="http://bushveldminerals.com/wp-content/uploads/2017/08/201602040458050.pdf">http://bushveldminerals.com/wp-content/uploads/2017/08/201602040458050.pdf</a>                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
|                 |                       |                 |              |             | Indicated         | 63.2          | 1.32                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 234.0         | 0.51                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| SPD VR          | ASX: VR8              | Steelpoortdrift | South Africa | Development | Measured          | 145.5         | 0.72                   | 680Mt @0.70% (Cutoff V2O5 = 0.45%)      | 2.10              | ASX announcement 17 November 2022. Investor Presentation May 2022.<br><a href="https://vr8.global/sites/default/files/2022%2005%2009%20Vanadium%20Resources%20Investor%20Presentation%20.pdf">https://vr8.global/sites/default/files/2022%2005%2009%20Vanadium%20Resources%20Investor%20Presentation%20.pdf</a>                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Indicated         | 327.3         | 0.70                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 207.4         | 0.68                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| Largo Resources | NASD: LGO<br>TSX: LGO | Maracas         | Brazil       | Production  | Measured          | 45.9          | 0.83                   | 79Mt @ 0.78% (Cutoff V2O5 = 0.30%)      | 2.45              | 43- 101 Technical Report 10 October 2021<br><a href="https://s29.q4cdn.com/56228672/files/doc_downloads/technical_report/marac%C3%A1s_menchen_mine/TR_GE21_Largo_43101_16122021_Final-Version-Conformed-for-Filing.pdf">https://s29.q4cdn.com/56228672/files/doc_downloads/technical_report/marac%C3%A1s_menchen_mine/TR_GE21_Largo_43101_16122021_Final-Version-Conformed-for-Filing.pdf</a>                                                                                                                                                                                                                                                                    |  |  |
|                 |                       |                 |              |             | Indicated         | 17.7          | 0.70                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 15.5          | 0.74                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| Lac Dore        | TSX: VRB              | VanCorp         | Canada       | Development | Measured          | 24.0          | 0.50                   | 304.9Mt @ 0.41% (Cutoff V2O5 = 0.30%)   | 1.26              | Lac Dore Mineral Resource Estimate 29 October 2020<br><a href="https://www.vanadiumcorp.com/releases/vanadiumcorp-reports-the-lac-dore-mineral-resource-estimate-mre-2/">https://www.vanadiumcorp.com/releases/vanadiumcorp-reports-the-lac-dore-mineral-resource-estimate-mre-2/</a>                                                                                                                                                                                                                                                                                                                                                                            |  |  |
|                 |                       |                 |              |             | Indicated         | 191.0         | 0.40                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
|                 |                       |                 |              |             | Inferred          | 89.9          | 0.40                   |                                         |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |

# Disclaimers

## Reliance and Forward Looking Statements

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# Competent Person's Statement

## Exploration Results

Tivan’s exploration activities are being overseen by Mr Stephen Walsh (BSc). The information that relates to exploration results in this presentation is based on and fairly represents information and supporting documentation prepared and compiled by Mr Walsh, a Competent Person, who is the Chief Geologist and an employee of Tivan, and a member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Walsh has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results. Mr Walsh consents to the inclusion in this announcement of the matters based on information compiled by him in the form and context which it appears.

## Speewah Fluorite Project – Production Target and Forecast Financial Information

This presentation includes information extracted from the Company’s ASX announcement entitled “Pre-Feasibility Study for Speewah Fluorite Project” dated 30 July 2024 in relation to a production target and forecast financial information disclosed in the Pre-Feasibility Study (“PFS”) for the Speewah Fluorite Project. A copy of this announcement is available at [www.asx.com.au](http://www.asx.com.au) or [www.tivan.com.au/investors/asx-announcements/](http://www.tivan.com.au/investors/asx-announcements/). The Company confirms that all the material assumptions underpinning the production target and forecast financial information derived from the production target disclosed in the announcement dated 30 July 2024 and titled “Pre-Feasibility Study for Speewah Fluorite Project” continue to apply and have not materially changed.

## Speewah Fluorite Mineral Resource

The information in this presentation related to the Speewah Fluorite Mineral Resource estimate is extracted from an ASX announcement entitled “Tivan Upgrades Resource Estimate - Speewah Fluorite Project” and is dated 22 April 2024, and is available to view at [www.tivan.com.au/investors/asx-announcements](http://www.tivan.com.au/investors/asx-announcements) and [www.asx.com.au](http://www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement, and, in the case of the estimate of the Mineral Resource, that all material assumptions and technical parameters underpinning the Mineral Resource estimate in the relevant announcement continue to apply and have not materially changed. The Company 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.

## Speewah Fluorite Exploration Target

The information in this presentation related to the Speewah Fluorite Exploration Target estimate is extracted from an ASX announcement entitled “Tivan Announces Exploration Target for Speewah Fluorite Project” and is dated 7 May 2024, and is available to view at [www.tivan.com.au/investors/asx-announcements](http://www.tivan.com.au/investors/asx-announcements) and [www.asx.com.au](http://www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement, and, in the case of the estimate of the Exploration Target, that all material assumptions and technical parameters underpinning the Exploration Target estimate in the relevant announcement continue to apply and have not materially changed. The Company 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.

# Competent Person's Statement continued

## Sandover Exploration Results

The information in this presentation that relates to exploration results for the Sandover Project has been extracted from the Company's previous ASX announcements entitled "Copper & Lithium Targets Identified at Sandover Project" dated 27 October 2023, "High-Grade Lead Identified at Tivan's Sandover Project" dated 4 March 2024, "High Grade Silver Discovered at Tivan's Sandover Project" dated 16 April 2024 and "Lead-Silver Mineralisation Extended at Sandover Project" dated 23 April 2024. Copies of these announcements are available to view at [www.tivan.com.au/investors/asx-announcements](http://www.tivan.com.au/investors/asx-announcements) and [www.asx.com.au](http://www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in those announcements. Tivan confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from those announcements.

## Sandover Fluorite Exploration Results

The information in this presentation that relates to exploration results for the Sandover Fluorite Project has been extracted from the Company's previous ASX announcements entitled "Replacement Announcement – Tivan Acquires Second Fluorite Project" dated 22 November 2024. A copy of the announcement is available to view at [www.tivan.com.au/investors/asx-announcements](http://www.tivan.com.au/investors/asx-announcements) and [www.asx.com.au](http://www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in those announcements. Tivan confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from those announcements.

## Speewah Vanadium Mineral Resource

The information in this presentation related to the Speewah Vanadium Mineral Resource estimate is extracted from an ASX announcement of King River Resources Limited (ASX: KRR) entitled "Vanadium Resource Amendment" dated 1 April 2019 and is available to view on [www.kingriverresources.com.au](http://www.kingriverresources.com.au) and [www.asx.com.au](http://www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement, and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant announcement continue to apply and have not materially changed. The Company 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.

The information in the KRR ASX announcement "Vanadium Resource Amendment" dated 1 April 2019 on pages 1 to 4 is based on information compiled by Ken Rogers (BSc Hons) and fairly represents this information. Mr. Rogers is the Chief Geologist and an employee of King River Resources Ltd, and a Member of both the Australian Institute of Geoscientists (AIG) and The Institute of Materials Minerals and Mining (IMMM), and a Chartered Engineer of the IMMM. Mr. Rogers has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Rogers consents to the inclusion of the information in the KRR announcement "Vanadium Resource Amendment" dated 1 April 2019 on pages 1 to 4 of the matters based on information in the form and context in which it appears.

## Speewah Vanadium Exploration Results

The information in this presentation that relates to exploration results for the Speewah Vanadium Project has been extracted from the Company's previous ASX announcements entitled "Tivan & CSIRO successfully complete TIVAN+ Testwork Program" dated 30 May 2024 and "Update on Vanadium Electrolyte Testwork Program" dated 19 June 2024. Copies of these announcements are available to view at [www.tivan.com.au/investors/asx-announcements](http://www.tivan.com.au/investors/asx-announcements) and [www.asx.com.au](http://www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in those announcements. Tivan confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from those announcements.



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