



ASX: TVN

Equity Research

3rd February 2024

SPECULATIVE BUY

Share Price \$0.110
Price Target \$0.190

52-Week Range	\$0.045 - \$0.135
TVN Shares Outstanding	1,921.9m
TVNO Listed Options (\$0.30, 30 Jun 2026)	76.6m
TVNOA Listed Options (\$0.12, 30 Jun 27)	113.6m
Unlisted Options (\$0.30, exp. 30 Jun 2026)	10.0m
Unlisted Options (\$0.30, exp. 30 Jun 2026)	6.3m
Unlisted Options (\$0.10, exp. 30 Jun 2027)	28.0m
Unlisted Options (\$0.40, exp. 30 Jun 2027)	10.0m
Unlisted Options (\$0.40, exp. 30 Jun 2027)	6.3m
Unlisted Options (\$0.50, exp. 30 Jun 2028)	10.0m
Unlisted Options (\$0.50, exp. 30 Jun 2028)	6.3m
Convertible Notes	1.0m
Market Capitalisation	\$211.4m
Cash (31 Dec 2024)	~\$2.6m
Enterprise Value	\$208.8m

Board, Technical Advisory Group & Management:

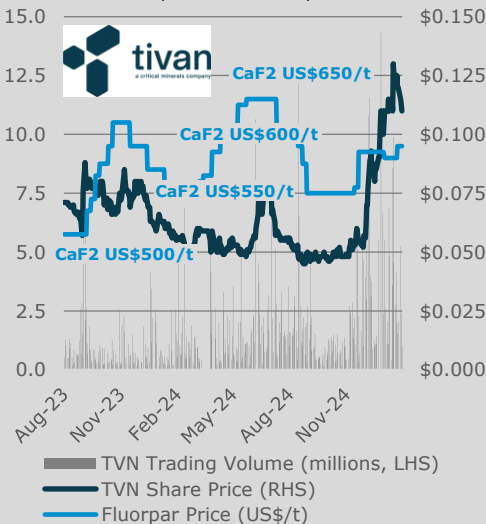
Grant Wilson	Executive Chairman
Christine Charles	Non-Executive Director
Anthony Robinson	Non-Executive Director
Guy Debelle	Non-Executive Director
Stéphane Leblanc	Consultant
Maria Skyllas-Kazacos	

Emeritus Professor, University of NSW

Simon Flowers Consultant

Major Shareholders (as at 6 Jan 2025)

Deutsche Balaton Group	8.67%
VM Salgaocar	5.80%
King River Resources	5.24%
Grant Wilson (Executive Chair)	1.60%



Tivan Limited (ASX: TVN) is a critical minerals company focused on development of fluorite and vanadium projects in Australia, critical minerals that are essential to battery technologies and semiconductors. Tivan owns the Speewah fluorite project in Western Australia (PFS 30 July 2024) and the Sandover fluorite project (exploration stage) in the Northern Territory, as well as the Speewah vanadium titanomagnetite deposit - less than 2km to the northwest of the Speewah fluorite project.

Tivan Limited

Australian First, Highly Critical and Valuable Fluorite Project

Acid-Grade Fluorite: also called acidspar, is the highest purity form of fluorite (also known as fluorspar). Acid-grade fluorite is the primary raw material for producing hydrofluoric acid (HF), which is the cornerstone chemical in many industries. HF is a key ingredient in manufacturing refrigerants used in air conditioning and refrigeration. HF is used in the etching and cleaning of silicon wafers in semiconductor fabrication. HF is also used to produce fluxes in the electrolytic production of aluminium (fluxes lower the melting point of alumina and enhance energy efficiency). HF is used in the production of uranium hexafluoride, a critical compound for the enrichment of uranium in nuclear energy applications. Fluorspar is critical to these industries and in particular underpins the semiconductor manufacturing and the 'battery-F' value chain in EVs. Structural deficits are forecast in fluorspar from 2025, amid rapid resource depletion in China (currently the dominant producer). Fluorine was included on Australia's Critical Mineral List in December 2023.

Speewah Fluorite Project was acquired by TVN in Feb 2023. It hosts Australia's sole high-grade fluorite resource with 37.3 million tonnes at 9.1% CaF₂ (2% cut-off) including 8.6 mt at 22.8% CaF₂ (10% cut-off).

Pre-Feasibility Study: in July 2024, TVN released the results of a PFS on Speewah. Based on a mining inventory of 8.4 mt, Speewah delivers 1.48 mt of fluorspar concentrate at 97% CaF₂ over a 10-year life of mine (LOM). Fluorspar production follows a conventional processing route with low technical risk and low capital intensity. Capex \$236m. NPV_{8%} \$355m. IRR 33%. Project delivery schedule with first production targeted in 1H 2027.

Exploration and Production Upside: considering the Exploration Target supported by drilling and the prospectivity of the tenements, we have considered a doubling of the life of mine in our valuation. Drilling is underway to increase the mineral resource estimate.

Strong Government Support: on 6 Dec 2024 Tivan announced the award of a \$7.4m grant under the International Partnerships in Critical Minerals program and on 9 Dec 2024 Tivan announced the Speewah Fluorite Project had been awarded Major Project Status by the Federal government. This is on top of regular Research & Development refunds received currently.

Native Title: TVN has been engaged with Traditional Owners and Native Title Holders in the East Kimberley and the peak Indigenous body, the Kimberley Land Council (KLC), since the acquisition of Speewah in Feb 2023. TVN has finalised two Heritage Protection Agreements with KLC and a Heads of Agreement with Glen Hill Aboriginal Pastoral Corporation, holder of the pastoral leases at Speewah. Tivan is progressing toward Indigenous Land Use Agreements in support of the Project.

Joint Venture with Sumitomo Corporation (SC): further to a 7-month due diligence and negotiation process, TVN and SC have signed a Memorandum of Understanding describing a range of key commercial and corporate terms for the planned development, financing and operation of the Speewah Fluorite Project. TVN is expected to receive \$60 million by selling 22.5% interest in the project. Completion of the JV agreement is expected in March 2025.

Financial Modelling: using the PFS parameters and after validating our additional assumptions, we have modelled Speewah with a 20-year LOM.

Speewah Fluorite Project Valuation: in a macro context with increasing demand and constrained quality supply, we assumed a pricing model in line with the econometric model defined by TVN and with prices capped at US\$900/t from 2032, even with the extended life of mine.

Other Projects: while currently very modestly valued, the Sandover Fluorite Project and the Speewah Vanadium Titanomagnetite Project could bring the excitement of a significant project for the former and the benefit of applied new processing technology for the latter.

Increased Valuation Catalysts: the news flow over 2025 includes the final JV agreement with SC, \$10m in SC initial payments under the JV, extensional resource drilling results and mineral resource updates.

TVN valuation assumed a modest capital raising of \$12.0 million (120 million shares at \$0.10) some time in FY2025 to assist with exploration and project evaluation. Our TVN valuation amounts to \$389 million or \$0.19 per share.

Tivan Ltd (ASX: TVN) Financial Summary Base Case: Pre-Feasibility Study July 2024

Key metrics

Market Information	Unit	Value
Number of Issued Shares	million	1,921.9
Listed Options (\$0.30, expiry 30 Jun 2026)	million	76.6
Listed Options (\$0.12, expiry 30 Jun 2027)	million	113.6
Unlisted Options (\$0.30, expiry 30 Jun 2026)	million	10.0
Unlisted Options (\$0.30, expiry 30 Jun 2026)	million	6.3
Unlisted Options (\$0.10, expiry 30 Jun 2027)	million	28.0
Unlisted Options (\$0.40, expiry 30 Jun 2027)	million	10.0
Unlisted Options (\$0.40, expiry 30 Jun 2027)	million	6.3
Unlisted Options (\$0.50, expiry 30 Jun 2028)	million	10.0
Unlisted Options (\$0.50, expiry 30 Jun 2028)	million	6.3
Convertible Notes	million	1.0
Fully Diluted	million	2,190.15
Share Price	A\$	0.110
12 month High-Low	A\$	0.045 - 0.135
Market Capitalisation	A\$m	211.4
Cash (31-Dec-24)	A\$m	2.6
Entreprise Value	A\$m	208.8

Financing Assumptions	Unit	Value
7.5% interest to IJV in FY2025	A\$m	5.0
Equity raising in FY2025	120 m @ \$0.100	A\$m 12.0
International Partnerships in Critical Minerals (IPCM)	A\$m	7.4
7.5% DFS + FID in FY2026	A\$m	55.0
Number of shares post FY2025 financing	million	2,041.9
Equity raising in FY2026	150 m @ \$0.180	A\$m 27.0
Debt raising in FY26 (up to \$120m, 2 years grace, \$40m/y repayments, 12% interest rate)		

Speewah Fluorite Mineral Resource Estimate	Tonnage	% CaF2	kt CaF2
2% cut-off Indicated	23,200,000 tonnes	9.7	2,251
Inferred	14,100,000 tonnes	8.1	1,139
Total	37,300,000 tonnes	9.1	3,390
inclusive of			
10% cut-off Indicated	5,800,000 tonnes	23.2	1,345
Inferred	2,800,000 tonnes	21.9	605
Total	8,600,000 tonnes	22.8	1,950
Speewah Fluorite PFS Mining Inventory	8,400,000 tonnes	17.25	1,449

Speewah Fluorite Exploration Target in addition to the MRE	Lower Tonnage	Upper Tonnage	Lower Grade % CaF2	Upper Grade % CaF2
2% cut-off inclusive ...	8,400,000	17,000,000	6%	10%
... of 10% cut-off	1,900,000	3,900,000	16%	26%

Speewah Project Valuation	Acidspar Price	NPV @ 8%	77.5% Risked*	IRR	
Low case	econometric model -20%	\$342m	\$265m	\$185.6m	25%
Medium case	econometric model -10%	\$456m	\$354m	\$247.6m	31%
PFS case	econometric model	\$570m	\$442m	\$309.1m	36%
High case	econometric model +10%	\$683m	\$529m	\$370.5m	41%

Note AUD/USD exchange rate assumed at 0.65 flat. * as a risk multiplication factor (x)

TVN Sum of the Parts Valuation	A\$m	Per Share
Speewah Fluorite Project (77.5% interest, 70% risk factor)	309.1	\$0.151
Sandover Fluorite Project	1.5	\$0.001
Speewah Titano-Magnetite Project	27.5	\$0.013
Exploration and evaluation costs	(20.0)	(\$0.010)
Funding from IJV/SC and IPCM	67.4	\$0.033
Cash + next FY2025 placement	14.6	\$0.007
Corporate costs	(10.8)	(\$0.005)
Base Case Valuation	389.3	\$0.191

Financial Statements

	Financial Year ending 30 June				
Profit & Loss (A\$m)	2024A	2025F	2026F	2027F	2028F
Revenue	0.0	0.0	0.0	17.0	122.0
Operating Costs	(1.0)	(1.6)	(1.7)	(13.0)	(51.9)
Royalties	0.0	0.0	0.0	(0.5)	(3.7)
Overhead Costs	(3.7)	(4.1)	(4.2)	(4.3)	(4.4)
Other Income/Costs	(58.3)	0.0	0.0	0.0	0.0
EBITDA	(63.0)	(5.7)	(5.9)	(0.8)	61.9
Depreciation	0.0	0.0	0.0	(11.6)	(11.6)
Net Interest	0.1	0.1	0.1	(7.2)	(14.4)
Tax and Other	(4.9)	0.0	0.0	0.0	0.0
Profit	(67.8)	(5.6)	(5.9)	(19.7)	35.9
Cash Flow (A\$m)	2024A	2025F	2026F	2027F	2028F
Net Profit	(67.8)	(5.6)	(5.9)	(19.7)	35.9
+/- Adjustments	0.1	(0.1)	(0.1)	18.8	26.0
+/- Working Capital	1.2	0.2	(0.2)	(2.1)	(16.8)
+/- Other	62.3	(13.1)	0.0	(0.8)	(5.2)
Cash Flow from Operations	(4.3)	(18.6)	(6.1)	(3.8)	39.9
Net Capital Expenditure	(0.1)	(7.2)	(66.9)	(116.3)	(0.8)
Cash Flow from Investing	(8.3)	(7.2)	(66.9)	(116.3)	(0.8)
Net proceeds from Debt	3.4	(0.1)	60.1	52.8	(14.4)
Changes in Share Capital	9.0	24.2	27.0	0.0	0.0
Dividends	0.0	0.0	0.0	0.0	0.0
Other Financing Cashflow	(0.7)	3.7	60.8	0.0	0.0
Cash Flow from Financing	11.7	27.9	147.9	52.8	(14.4)
Net Cash Change	(0.9)	2.1	74.9	(67.2)	24.8
Balance Sheet (A\$m)	2024A	2025F	2026F	2027F	2028F
Cash	0.4	2.4	77.3	10.1	34.8
Other Current Assets	0.4	0.1	0.1	5.4	35.4
Total Current Assets	0.8	2.6	77.4	15.5	70.2
Property, Plant & Equipment	0.2	0.2	67.1	171.7	160.9
Exploration, Evaluation & Dev.	26.5	33.7	33.7	33.7	33.7
Non-Current Assets	0.2	0.2	0.2	0.2	0.2
Total Non-Current Assets	26.9	34.1	101.0	205.6	194.7
Total Assets	27.6	36.7	178.4	221.1	265.0
Equity	144.1	172.0	259.8	259.8	259.8
Reserves	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)
Retained Earnings	(129.3)	(135.0)	(140.8)	(160.5)	(124.6)
Total Equity	13.8	36.1	118.1	98.4	134.3
Current Debt	0.0	0.0	0.0	0.0	40.0
Account Payables	0.5	0.5	0.4	2.7	10.7
Other Liabilities	13.2	0.0	0.0	0.0	0.0
Total Current Liabilities	13.7	0.5	0.4	2.7	50.7
Lease Liabilities	0.0	0.0	0.0	0.0	0.0
Non-current Debt	0.1	0.0	60.0	120.0	80.0
Total Non-current Liabilities	0.1	0.0	60.0	120.0	80.0
Total Liabilities	13.8	0.5	60.4	122.7	130.7
Total Equity + Liabilities	27.6	36.7	178.4	221.1	265.0
Profitability indicators	2024A	2025F	2026F	2027F	2028F
EBITDA margin	0.0%	0.0%	0.0%	-4.9%	50.8%
Liquidity					
Quick Ratio	0.8	0.0	0.0	1.6	0.6
Current Ratio	0.8	0.3	0.4	2.0	0.7
Capital structure					
Equity ratio	5.2	4.7	1.5	1.2	1.0
Debt / Assets	0.0	0.0	0.3	0.5	0.5
Debt / EBITDA	0.0	0.0	0.0	-143.8	1.9
DSCR	n/a	n/a	n/a	-0.1	1.1

Source: Evolution Capital estimates

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All currencies are in Australian dollars unless otherwise specified.

1. TVN Valuation

Speewah Fluorite Project Valuation

We have initially modelled the Speewah project based on the July 2024 Pre-Feasibility Study with the following key parameters:

- Ore mined: 8.4 million tonnes
- Head grade: 17.25% CaF₂
- Strip ratio: 3.72
- Processing rate: 800,000 tpa
- Recovery: 90%
- Fluorspar concentrate grade: 97% (moisture 9%)
- Fluorspar concentrate production (LOM): 1.48 million tonnes (wet)
- Life of mine: 10 years (mining), 10.6 years (processing)
- Pre-production capital: A\$236.3 million
- Sustaining capital: A\$24.5 million
- Mining cost: \$5.31/t mined (back calculated from PFS data)
- Processing cost: \$50.70/t milled (back calculated from PFS data)
- Logistics and port handling cost: \$6.46/t milled (back calculated from PFS data)
- Corporate tax rate: 30%
- Tax losses: \$88.2 million
- Royalties: 3.0% State Government and Land Access
- Discount rate: 8%
- Fluorite price increasing from US\$650/t in 2025 to a ceiling of US\$900/t reached in 2032 according to the econometric model developed in the PFS.

Our model results in a post-tax NPV of \$341 million (vs \$355m announced by TVN) and an IRR of 34.7% (vs. 33.2% TVN). Our results are within 5% of the PFS results and adequate to undertake further analysis.

Subsequently, we have modified the key parameters as follows:

- Doubled the Life of Mine to 20 years.
- Varied the fluorspar price assumption as indicated in Table 1.1.

Using various fluorspar prices, Table 1.1 summarises the valuation of the Speewah Fluorite Project.

Table 1.1 – Speewah Fluorite Project NPV Valuation

Fluorspar Price	NPV _{8%}	IRR
Econometric model -20%	\$342m	25%
Econometric model -10%	\$354m	31%
Econometric model	\$570m	36%
Econometric model +10%	\$683m	41%

Source: Evolution Capital estimates

As expected, the valuation is highly leveraged to the fluorspar price. Note that while increasing the life of mine to 20 years, the fluorspar price has been capped at US\$900/t from 2032.

With increasing fluorspar pricing, the IRR goes from good to excellent, thanks to the relatively low initial capital expenditure.

C1 costs are estimated at US\$303/t and All-In Sustaining Costs at US\$340/t generating at average LOM EBITDA margin of 62%.

Sandover Fluorite Project

The Sandover Fluorite Project was purchased for \$1.075 million in November 2024.

On 14 Jan 2025, TVN reported some ultra high-grade assays from surface sampling. While surface samples should be considered with caution, the results are highly encouraging.

At this time, we have assigned a value of \$1.5 million for the project, in consideration of the current exploration expenditure.

Speewah Vanadium Titano-Magnetite Project

The Speewah Vanadium Project has been valued using the current market of peers.

Table 1.2 – ASX-listed Vanadium Market Peers

Company	Code	Market Cap. (30-Jan-25)	Cash (31-Dec-24)	EV	Key Project	M tonnes	% V ₂ O ₅	V ₂ O ₅ Mt
Australian Vanadium	AVL	\$125m	\$23.1m	\$102.1m	AVP	422.9	0.77	3.222
Richmond Vanadium	RVT	\$40m	\$11.4m	\$28.6m	Richmond	1,800.0	0.36	6.700
QEM Limited	QEM	\$13m	\$2.2m	\$11.0m	Julia Creek	2,870.0	0.31	8.897
Vanadium Resources	VR8	\$15m	\$0.9m	\$14.3m	SPD	681.0	0.70	4.740
Venus Metals Corporation	VMC	\$12m	\$0.3m	\$12.1m	Youanmi	134.7	0.34	0.458
			Average	\$33.6m				
			Median	\$21.4m				
				\$27.5m				
Tivan Limited	TVN	\$209m	\$2.6m		Speewah	4,700.0	0.30	6.700

Source: ASX, company announcements

At this time, we have assigned a \$27.5 million value to the Speewah Vanadium Project, which is the average between the average and median of the values of the selected peer group.

TVN Sum of the Parts Valuation

To derive our sum of the parts valuation, we have considered a total number of shares equal to 2,041.9 million including 120 million shares assumed to be issued in FY2025 at \$0.10 for \$12.0 million. We have considered a risk factor of 70% in consideration for the de-risking through the joint venture with Sumitomo Corporation, the market dynamics and the strong support from the government and local communities.

Table 1.3 summarises the sum of the parts valuation for TVN.

Table 1.3 – TVN Sum of the Parts Valuation

Asset	Value Range	Preferred	Per Share
Speewah Fluorite Project (77.5% interest, 70% risked-NPV)	\$205m-\$410m	\$309.1m	\$0.151
Sandover Fluorite Project		\$1.5m	\$0.001
Speewah Vanadium Titano-Magnetite Project		\$27.5m	\$0.013
Exploration and evaluation costs		(\$20.0m)	(\$0.010)
Cash from IJV / Sumitomo Corporation and IPCM		\$67.4m	\$0.033
Cash + next FY2025 placement		\$14.6m	\$0.007
Corporate costs		(\$10.8m)	(\$0.005)
Total		\$389.3	\$0.191

Source: Evolution Capital estimates

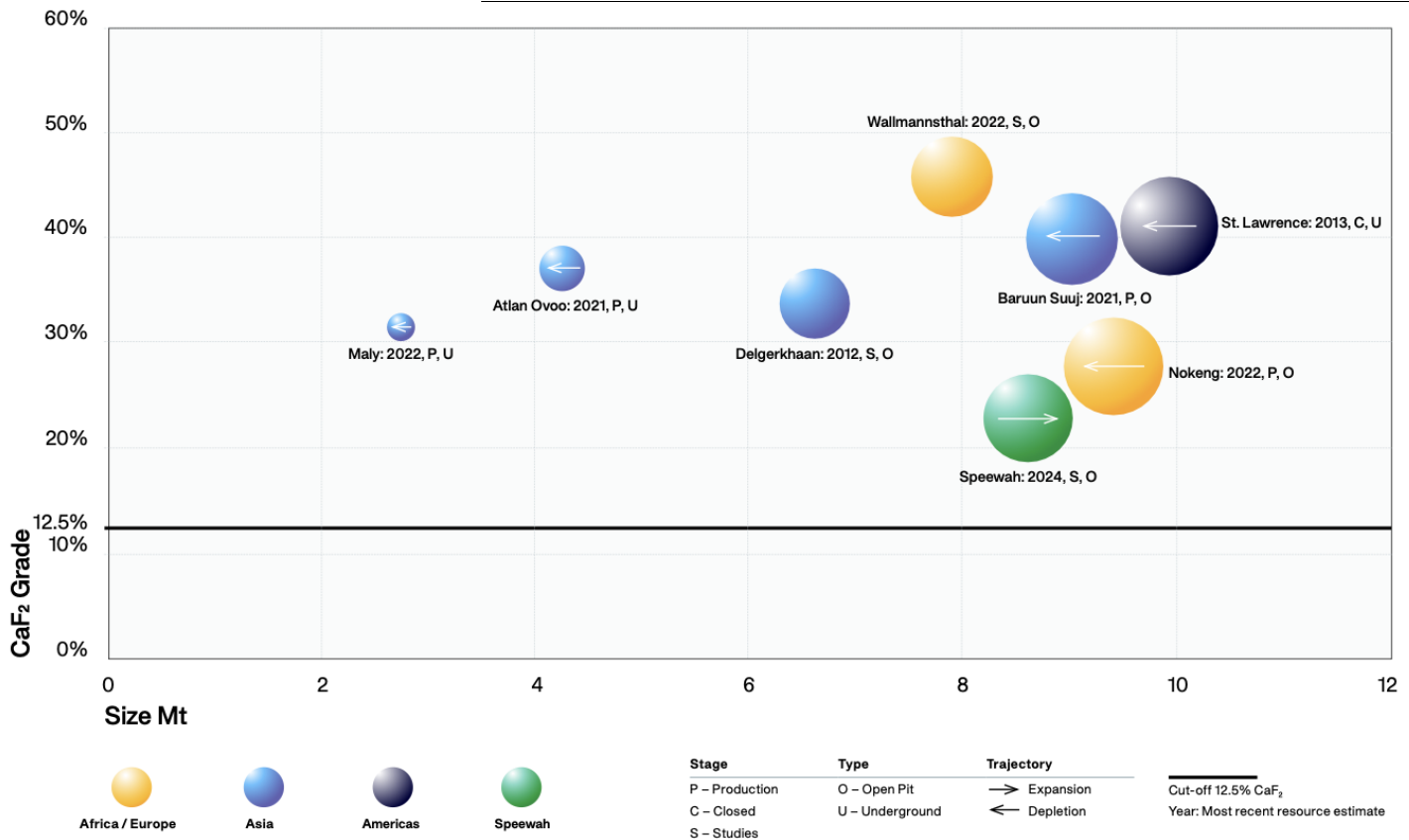
Note all options expiring over FY2026 are out of the money considering our price target and have not been considered at this time. Options expiring in FY2027 and FY2028 have not been considered at this time as our price target is estimated at about 12 months from publication.

2. Project Benchmarking

Mineral Resource

Figure 2.1 highlights the significant size of the Speewah project compared to peers.

Figure 2.1 – Mineral Resource Benchmarking



Source: TVN

Beyond the size and grade, the presence of deleterious elements, in particular arsenic is critical. The Speewah fluorite resource has been measured to have an average composition of 3ppm arsenic, with testwork demonstrating rejection to tailings by the flotation process.

The low incidence of arsenic is a durable competitive advantage for the Project, supporting the production acidgrade fluorspar and the supply chain for electric vehicle batteries and semi-conductor manufacturing.

Proximity to Asian Markets

Speewah's proximity to Asian markets is a durable competitive advantage for the Project. While offtake from the Project will be priced on an Australia, Wyndham, FOB basis, customers in Asia will benefit from lower shipping and logistics costs when compared to exporting countries such as South Africa, Mexico and Canada.

The advantage in terms of proximity suggests that China's exports of fluorspar will be the main competitive source of supply for the Project in Asian markets.

Table 2.1 – Distances of Fluorspar Exporters to Ports in Asia

Destination		Origin						
		Australia	South Africa		Mexico		Canada	
		Wyndham	Durban		Mazatlan		St.John's	
		Port to Port Distance (km)	Port to Port Distance (km)	% Increase compared to Wyndham	Port to Port Distance (km)	% Increase compared to Wyndham	Port to Port Distance (km)	% Increase compared to Wyndham
India	Chennai	6326	7571	20%	18822	198%	16451	160%
	Vizag	6313	8060	28%	18798	198%	16940	168%
	Mumbai	7641	7054	-8%	20394	167%	14616	91%
Japan	Chiba	5913	14229	141%	10721	81%	18589	214%
	Ube	5615	13577	142%	11479	104%	19340	244%
South Korea	Busan	5673	13490	138%	11442	102%	19277	240%
China	Huangdao	5847	13416	129%	12353	111%	20207	246%
	Yingkou	6397	13973	118%	12707	99%	20579	222%
	Shanghai	5336	12992	143%	12342	131%	20198	279%

Source: sea-distances.org, TVN

3. Sumitomo Corporation MoU Terms

Background

In June 2024, Tivan announced it had signed a Strategic Alliance Agreement with Sumitomo Corporation, providing a framework for the parties to negotiate agreements for the development, financing and operation of the Speewah Project.

On 24 Dec 2024, Tivan announced that Tivan and Sumitomo Corporation have signed a Memorandum of Understanding (“MoU”) for the Speewah Fluorite Project. The MoU includes attachments which describe a range of key commercial and corporate terms for the planned development, financing and operation of the Project. The key terms set the basis for the negotiation of a subscription agreement, shareholders’ agreement, management agreement and offtake agreement, comprising a binding incorporated joint venture (IJV).

Sumitomo Corporation is a leading Japanese trading house and Fortune Global 500 company with diversified global business interests including mineral resources and industrial chemicals.

The parties have agreed to commence the drafting of long-form binding agreements referred to above. The parties are targeting March 2025 for the binding agreements to be completed.

Key Terms

The MoU, which replaces the Strategic Alliance Agreement, represents seven months of close collaboration and negotiation between the parties, with material progress achieved in negotiating the planned structure of the IJV. The agreements will be negotiated around the following key non-binding principles:

- Aggregate equity investment of up to A\$60 million via a Sumitomo Special Purpose Vehicle (“SSPV”) for an equity interest of up to 22.5% in the IJV.
- SSPV investments in the IJV will be following completion of the Tivan corporate restructure and the satisfaction of various conditions in the formal agreement. SSPV investment into the IJV will be in 3 instalments being:
 - \$5 million for 7.5% interest, to fund the Feasibility Study
 - \$5 million at SSPV’s election for an additional 7.5% interest to fund the Definitive Feasibility Study; and
 - subject to the completion of the Definitive Feasibility Study and the parties making a final investment decision (FID) to proceed with the Project, \$50 million to provide part of the equity funds required to develop the Project for an additional 7.5% interest.
- SSPV may elect not to proceed with the funding of the second or third tranche of investment.

In our analysis, we have assumed that Sumitomo Corporation will proceed with the funding of the second and third tranches.

4. Fluorspar Market

Industry Trends

Industry trends in the fluorspar market are reported regularly by various companies and by national agencies tasked with reporting on geological resources and critical minerals. Leading market intelligence firms include Benchmark Minerals Intelligence, Project Blue and ChemAnalyst.

Project Blue describes the dominant industry trend in terms of China's role:

“China’s role in global fluorspar markets has shifted from being a low-cost source of fluorspar to the international market to becoming an important supplier of value-added fluorine products as domestic companies have moved down the fluorine value chain. This process is continuing, with China currently trying to lower its reliance on imports for higher-grade products (such as ultra-high purity HF for the semiconductor industry). It is likely that there will be further consolidation in the Chinese industry going forward in line with government policies. In recent years, Chinese fluorspar exports have decreased drastically as domestic demand for fluorspar (mainly acidspars) has increased accordingly, forcing China to become a net fluorspar importer despite being the largest producer globally.”

Long Run Price Trends

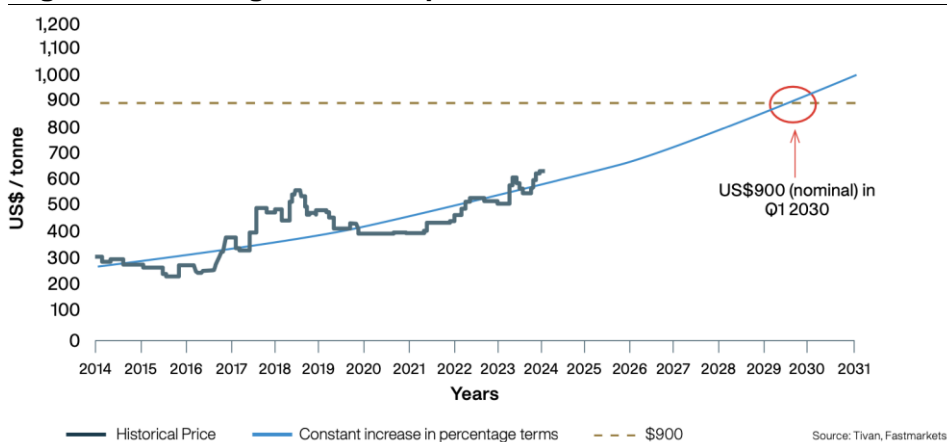
Over the past 30 years the price of acidgrade fluorspar has achieved a compound annual growth rate of approximately 6% in nominal terms. The availability of a continuous, long run time series with high data integrity provides a sound basis for econometric modelling and cross validation with long run trends in balance of payments statistics.

To strengthen robustness, the price forecast is based on the observable trend over the past 10 years. This period includes the multi-year disruption to global demand and industrial supply chains caused by COVID-19. The pandemic provides a useful downside stress test, with the price of acidgrade fluorspar (China, FOB) holding the US\$400/tonne level, providing an operating margin above the Project's C1 Cost estimate of US\$303/tonne.

The compound annual growth rate over the 10 years period is approximately 7%. In developing the price forecast for the Project, a regression model has been used to capture the trend in constant percentage terms. As shown in Figure 4.1, acidgrade fluorspar (China, FOB) has realised prices above the fitted trend in 2024.

For our analysis, we have conservatively capped the acidgrade fluorspar price to US\$900/t, while extending the life-of-mine to 20 years.

Figure 4.1 – Acidgrade Fluorspar: Trend Model

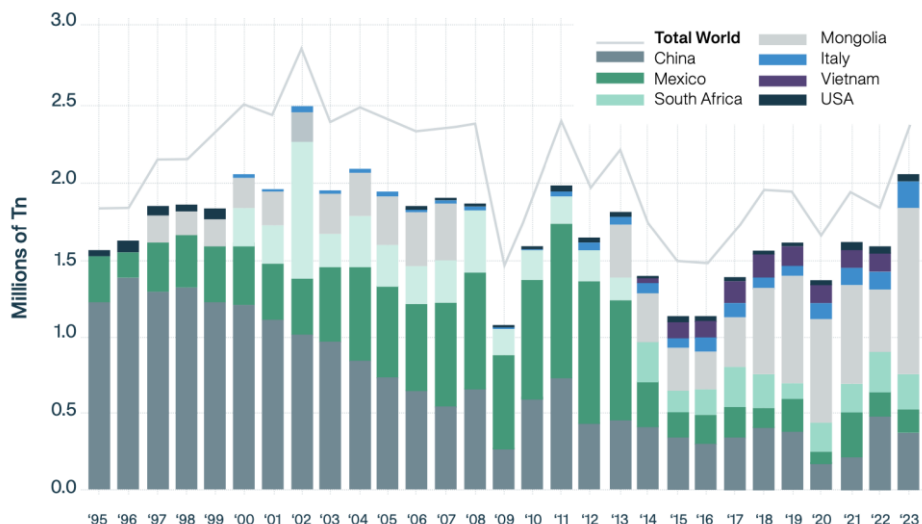


Source: TVN. 97% CaF₂, wet filtercake, FOB China, 10-year trend model

Demand and Supply

The price forecast is supported by demand and supply dynamics. The fluor spar market has historically been close to balance and does not carry inventories or stockpiles. According to Benchmark Minerals Intelligence, the maximum imbalance recorded in 2018, as a supply deficit of 142,000 tonnes of fluor spar (all grades).

Figure 4.2 – Global Exports of Fluorspar

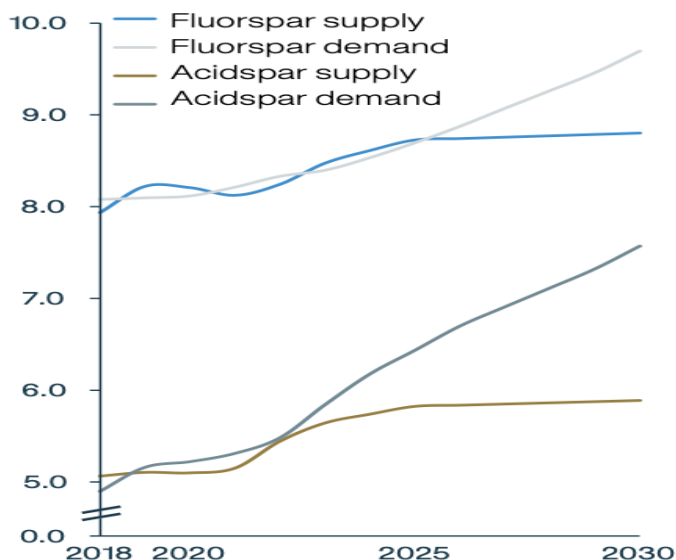


Source: Exante Data, UN ComTrade, TVN

Resource depletion is leading to structural shortages

Fluorspar resources are being depleted on a global basis, most rapidly in China (see Figure 4.2 showing a significant decline in exports from China). Owing to its elemental properties, fluorine cannot be substituted for effectively in important supply chains. Primary production is expected to remain the dominant source of supply. As a result, structural shortage of fluor spar is forecast to emerge from 2026 (Figure 4.3). Benchmark Minerals Intelligence forecasts a supply deficit of 900,000 tonnes in 2030, representing ~10% of expected global demand, principally in the acidgrade fluor spar segment.

Figure 4.3 – Global Fluorspar Supply and Demand

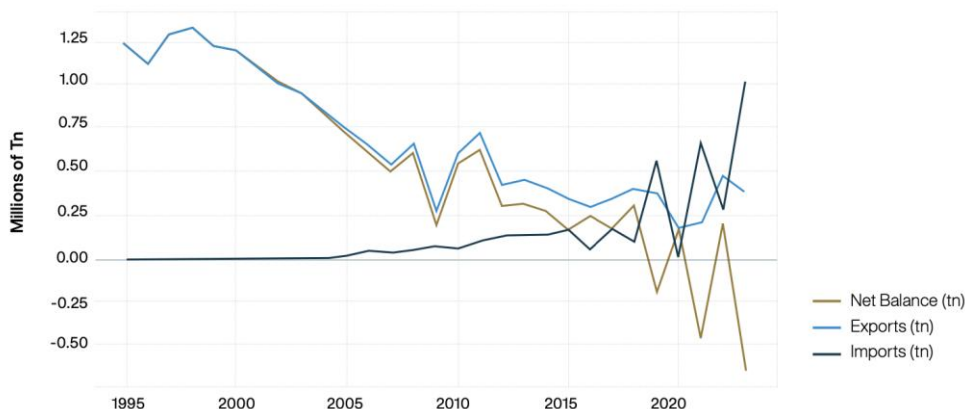


Source: Benchmark Mineral Intelligence, TVN

Lack of greenfield development provides an optimal market entry point

In contrast to the Lithium sector, the forecast supply deficit in fluorspar has not generated a significant supply-side response. The Speewah Fluorite Project is the only major greenfield project expected to be delivered in the west this decade. The principal competitive constraints faced by owners of known fluorspar resources include insufficient size and/or grade, resource depletion, challenging mineralogy (particularly the presence of arsenic), resource location, resource depth (necessitating underground mining), environmental and/or land access restrictions and lack of access to capital. These constraints provide Tivan with an optimal entry point into the fluorspar market.

Figure 4.4 – China: Net Trade Balance in Fluorspar



Source: Exante Data. UN ComTrade, TVN

Shifting trade dynamics underscore the vulnerability of important supply chains

Over the past five years China's mercantile balance in fluorspar has shifted significantly into trade deficit, see Figure 4.4. In 2023 China imported 1 million tonnes of fluorspar, representing ~12% of total global production. Monthly tracking of China's imports suggests this volume will be exceeded in 2024. China reduced import tariffs for low arsenic fluorspar from 3% to zero in early 2024. China's emergence as the world's largest importer of fluorspar underscores the vulnerability of important supply chains in Asia and reinforces the sustained uptrend in global fluorspar prices.

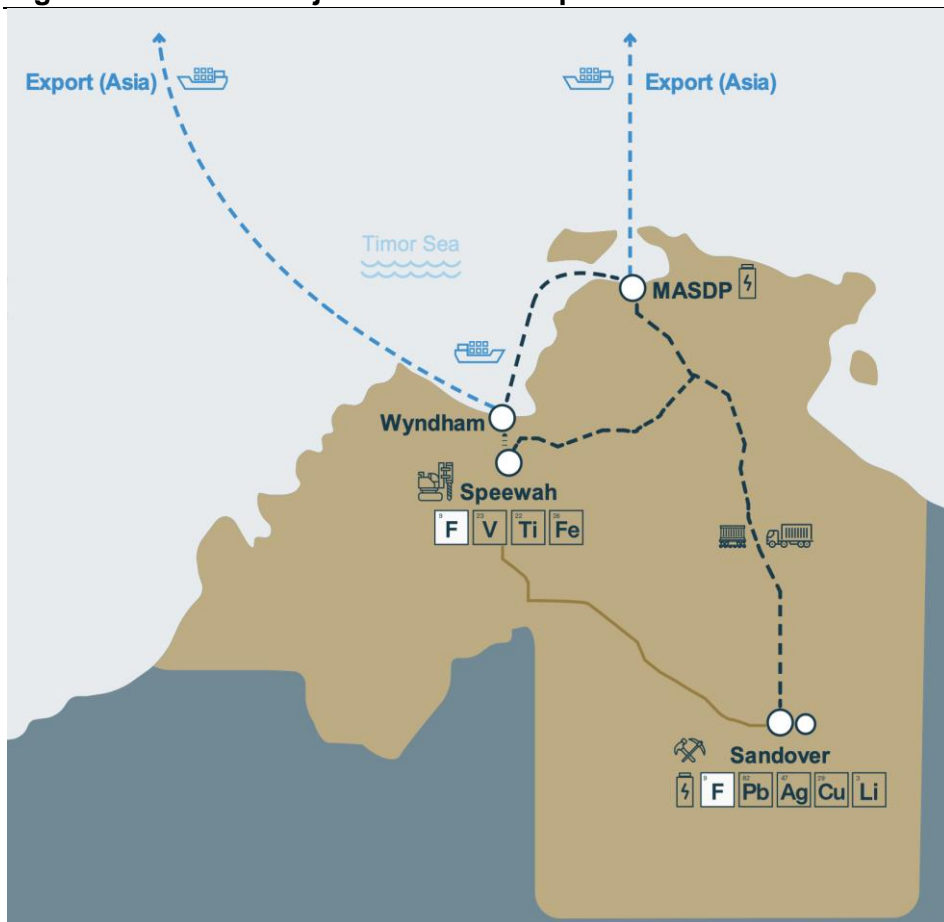
The price forecast for the Project does not reflect the risk of structural scarcity emerging in acidgrade fluorspar beyond 2030, nor attendant the risk of disruption in its supply chains. Those risks can certainly create price spikes.

5. Speewah Fluorspar Project

Tenure and Location

The Speewah Project is owned 100% by Tivan and is located 100km south of the Port of Wyndham and 110km south-west of Kununurra in the Kimberley region of north-east Western Australia.

Figure 5.1 – Tivan Projects Location Map



Source: TVN

Acquisition of the Speewah Project by Tivan

Tivan acquired the Speewah Project from King River Resources in February 2023, for consideration of \$20 million in cash and shares equivalent. Tivan's principal focus in 2023 was to advance the Speewah Vanadium Titanomagnetite Project.

Following the inclusion of fluorine on the Critical Minerals List in December 2023, Tivan announced it was progressing the renamed Speewah Fluorite Project in January 2024.

Geological Setting and Mineralisation

The Speewah fluorite deposit occurs on the western edge of the Halls Creek Mobile Zone and on the southeast side of the Speewah Dome. The King River Fault forms the eastern margin of the Kimberly Block and consists of a series of intersecting faults. Fluorite mineralisation is predominantly hosted by north-northeast and northeast trending faults within the King River Fault, with minor occurrences along north-trending normal faults within the Speewah Dome.

Fluorite veins have been mapped in three areas known as the Main Zone, West Zone and Central Zone. In the Main Zone, at least nine vein sets have been mapped over a strike length of 8 km. These contain the strike-continuous A-B-C veins, and the less understood D-E-F-G veins, Cross and South vein sets.

The predominantly white-fluorite mineralisation occurs mainly within tabular steeply dipping veins showing very good strike continuity. The veins range in thickness from 1 to 10 m, often flanked by lower grade stockwork and stringer veins, forming an envelope up to 50 m wide.

Figure 5.2 – Fluorite Specimens from Diamond Drill Core



Source: TVN

Fluorite is associated with quartz-feldspar veining but is younger. It occurs in the various settings including those listed below:

- Large, persistent veins occupying the main north and northeast trending structures
- Fault breccias and brecciated veins occupying the main structures
- Stockworks and breccias hosted preferentially by the sandstone and to a lesser extent by the dolerites adjacent to the
- main structures
- En echelon vein sets trending northwest between structures
- En echelon vein sets trending northeast (rare)
- Thin, persistent veinlets following jointing mainly in the siltstones (rare)
- Thin, persistent veinlets following bedding planes in the siltstones (rare)

The larger veins range in true thicknesses of up to 15m and are up to 800m long. They have similar persistence occurrence down dip within the faults and have been intersected in several holes as deep as 400m below the surface, but are only approximately 0.5m wide at that depth. The stockworks tend to occur adjacent to the main faults and are predominantly hosted by the brittle sandstone unit, although reasonable stockwork veining sometimes occurs in the dolerites. Best fluorite intersections occur where the main north trending faults contain fluorite in the form of veins and breccias, and the adjoining wall rocks (usually hanging wall) contain sandstone-hosted stockwork veining. The en echelon vein systems usually have a lower density of veining than the stockwork and hence a lower fluorite grade globally.

The fluorite veins are younger and crosscut the earlier quartz-feldspar veins.

The fluorite is predominantly green to white in colour, with less common purple coloured fluorite. In outcrop, it weathers to a grey-white colour. It is generally coarsely crystalline, often with euhedral crystals infilling open spaces. The green-coloured fluorite appears to be younger than the purple variety.

Mineral Resources

Tivan commissioned SRK to complete an updated Mineral Resource Estimate for the Speewah Fluorite Project in 2024.

The successful Mineral Resource estimate update resulted in an Indicated and Inferred Resource of 37.3 million tonnes at 9.1% CaF₂ (2% CaF₂ cut-off grade) containing 3.39 million tonnes CaF₂; with ~62% of the resource tonnage in the Indicated category. This confirms Speewah as one of the largest high grade Fluorite resources globally. The Mineral Resource estimate includes a high-grade component of 8.6 million tonnes at 22.8% CaF₂ (10% CaF₂ cut-off grade) containing 1.95 million tonnes CaF₂.

Table 5.1 – Speewah Fluorite Mineral Resource Estimate

Mineral Resource 2% cut-off		Mt	%CaF ₂	kt CaF ₂	
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 ₂	kt CaF ₂	
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	

Source: TVN

Notes:

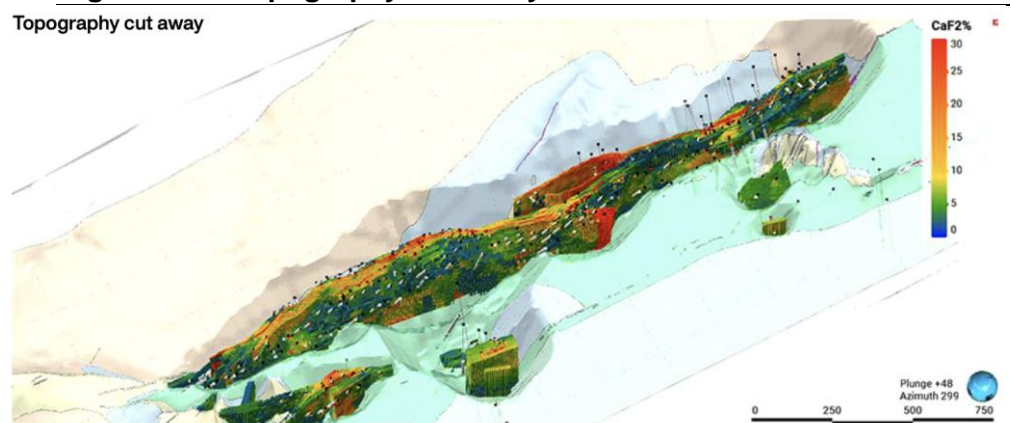
1 Differences in totals may occur to rounding.

2 The 2% cut-off is based on a USD600 fluorite 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

Figure 5.3 – Topography Cut Away



Source: TVN. Lithology; drill collars. All block model (veins and stockwork) coloured by CaF₂%

Exploration Upside

Over the years, substantial drilling campaigns have been conducted over the Speewah Fluorite deposit, reflecting a concerted effort to explore and evaluate its mineral potential. These extensive drilling programs have meticulously mapped the deposit's geological features, leading to a thorough understanding of its mineralization. The culmination of this rigorous exploration activity is the current Mineral Resource estimate, which provides a detailed and accurate assessment of the deposit's size, grade, and economic viability.

A multistage exploration strategy has been developed for the Speewah Fluorite Project to expand and enhance the existing resource as well as explore Exploration Targets within the current exploration leases held by Tivan.

Tivan engaged SRK consultants to complete an Exploration Target* for the Speewah Fluorite Project. SRK reviewed the available drilling, surface sampling, mapping data and historical reports to generate a series of prospective exploration areas to be evaluated for inclusion in the Exploration Target

The Exploration Target* for the Speewah Fluorite Project has a range of 8.4 – 17 Mt grading between 6% CaF₂ and 10% CaF₂. Exploration target ranges shown below in Table 5.2.

Table 5.2 – Total Exploration Target Ranges

Target	Cut-off (%CaF ₂)	Lower Tonnage (Kt)	Upper Tonnage (Kt)	Lower Grade (%CaF ₂)	Upper Grade (CaF ₂)
Total	2%	8400	17000	6%	10%
Inclusive of	10%	1900	3900	16%	26%

Source: TVN

The Exploration Target* outlined by SRK is deemed conservative, as it encompasses only 22% of the total prospective strike length within the project area. This indicates that a significant portion of the project's potential remains unexplored, leaving room for substantial future discoveries and development. Tivan has also identified a number of additional highly prospective areas which will be incorporated into the multistage exploration program.

Metallurgical Testwork

The historic testwork has investigated the following areas:

- Comminution characteristics of the ore
- Gravity concentration
- Flotation

Gravity Separation

Gravity separation testwork from the programs indicated that the fluorite can effectively be upgraded with high recovery while rejecting a large proportion of gangue minerals. There is an opportunity to modify the Study process flowsheet by incorporating a gravity separation step to reduce the load on the mills. This opportunity will be considered in testwork on new diamond drilling samples obtained for Feasibility Study and Definitive Feasibility Study testwork.

Comminution

The data showed that the ore is abrasive with strength and hardness properties that support the amenability to SAG milling. The comminution testwork is the only area which included some deposit variability, however, more variability testing will be conducted for subsequent study phases.

Flotation

Batch flotation testwork has been the major focus of previous testwork campaigns for the preparation of acidgrade fluorspar. Thirty-eight flotation tests have been conducted on the Speewah ore and of these, twenty-five trials also included a cleaner stage.

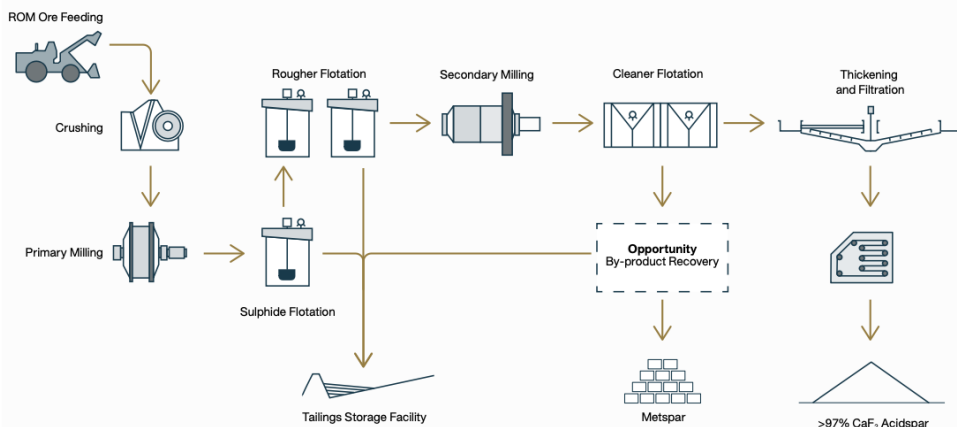
Mineral Processing

Flowsheet Development

It is a flotation flowsheet (see Figure 5.4) with the following processing areas:

- Crushing: ROM ore is fed to a single stage jaw crusher
- Primary Milling: A closed-circuit SAG mill will grind the crushed product for sulphide flotation
- Sulphide Flotation: Flotation to separate the low mass of sulphides present in the feed
- Rougher Flotation: Coarse float on the sulphide flotation tails, maximising fluorite recovery and gangue rejection to reduce the load on the regrind mill
- Secondary Milling and Cleaner Flotation: The rougher concentrate is reground for the cleaner flotation circuit
- Thickening and Filtration: The final cleaner concentrate is thickened and filtered to produce the acidspar product
- Tailings Handling and Disposal
- Water Recovery: Water is recovered from the thickening and filtration circuit and the tailings storage facility

Figure 5.4 – Speewah Process Flowsheet



Source: TVN

Metspar By-Product Opportunity

The cleaner flotation circuit rejects relatively high-grade fluorite which reports directly to the tailing's storage facility. This provides an opportunity to recover a metspar grade product from these tailings to uplift the total fluorite recovery from the ore and increase project revenue.

The focus of the PFS was the recovery of an acid-grade fluorspar product, however, the metspar opportunity was investigated by Lycopodium at a concept level to inform actions for the next study phase. Lycopodium prepared a high-level mass balance, a high-level conceptual flowsheet and estimated mechanical equipment costs. The conceptual circuit will be "bolt-on" and would take the tailings from cleaner flotation as the feed. This feed would be relatively low

tonnage and therefore the equipment will be relatively small compared to the rest of the flowsheet.

The metspar circuit will include the following processing steps:

- Fluorite scavenger flotation
- Concentrate thickening and filtration
- Drying
- Briquetting and bagging

The briquetting is required as metspar is typically a coarse product recovered in dense media separation plants.

The product is mostly utilised as a fluxing agent in steel and aluminium smelting.

Infrastructure

Access Road

Whilst the project is located favourably at approximately 25km direct line measurement from the existing dual lane sealed Great Northern Highway (GNH), the terrain in the region is challenging, in some places culturally sensitive, environmentally differentiated and socially valuable.

An important aspect of the success of the project lies in developing a solution for access to the project site for the purposes of construction, and access from site for the export of products.

As part of the PFS, Tivan has investigated options for constructing the access road and has developed a pathway forward in undertaking additional site investigations and engineering studies to promote an outcome that derives the optimal balance of project economics and operational benefits.

Power

An independent power producer (IPP) model has been assumed for the project. Under this model, the IPP will be responsible for the design, construction, financing, ownership and operation of the asset under a power purchase agreement (PPA) for a fixed term.

Review outcomes from the power supply options study were positive with the major highlights including:

- Hydropower was identified as both a technically viable and cost competitive option
- Hybrid systems offered better economic outcomes than 100% fossil fuel power generation options
- LNG fuelled options had significantly lower costs than diesel supply options.

Conservatively Tivan have selected the hybrid LNG/solar option for the Study while the hydropower option is being developed further. The hybrid LNG/solar option was selected over other options due to the lower costs compared to diesel options. The hybrid LNG/solar option will also benefit from less carbon emissions compared to diesel options.

Water

The full supply of process water, over life of mine, is anticipated to come from groundwater. SRK have nominated the use of one existing, and one additional production bore to act in 'Duty' / 'Standby' operation.

Capital Expenditure

Pre-production capital costs have been included and built-up on the basis of the assumptions and parameters detailed in the PFS; the capital cost estimate was compiled by Lycopodium.

Pre-production capital totals \$236.3 million for design and construction of mine, process and non-process infrastructure (+30/-20% accuracy)

Table 5.3 – Estimated Pre-Production Capital

Item	A\$m
Construction distributables	\$21.4
Processing Plant	\$48.8
Reagents and services	\$20.4
Infrastructure	\$66.3
Mining	\$24.2
Sub-total	\$181.1
Management costs	\$16.9
Owner's costs	\$13.6
Contingency (12.5%)	\$24.8
Total	\$236.3

Source: TVN

Total capital costs of the access road from the Great Northern Highway to the mine site are estimated at \$54.3 million (including contingency); 50% of this is included in the pre-production capital costs. The balance of 50% is assumed to be secured through State and Federal Government sources, consistent with recent resources project development in Western Australia. Should TVN not be able to secure such contributions, this component of the access road will be added to total pre-production capital costs.

Offtake

Tivan has been working in close collaboration with Sumitomo Corporation on offtake strategy for the Project since April 2024. In this phase, Tivan has shared extensive data resources with Sumitomo Corporation regarding production targets, testwork, product specifications, logistics and shipping, and project schedule.

Through its representative offices across Asia, Sumitomo Corporation has commenced marketing offtake from the Project.

These efforts have confirmed strong interest in the Project in various countries across Asia, including China, Japan, India, South Korea and Taiwan, which is also a significant consumer of downstream fluorspar products, given its world leading semiconductor industry.

These marketing activities have cross-validated:

- The structural shortage of supply of acidgrade fluorspar and Metspar in Asian markets, principally driven by the retrenchment of exports from China over recent years. The high cost of shipping and logistics from other geographical regions has confirmed the comparative advantage of Speewah's location as proximate to Asian markets
- The strategic importance to Japan of securing supply of acidgrade Fluorspar. This has been further reflected in meetings between Tivan and key Japanese government agencies, including JOGMEC and the Japan Bank for International Cooperation (JBIC).

- Concerns around the metallurgical properties of alternative fluorspar resources, coupled with the long lead time to project delivery and sovereign risks that may be associated with other fluorspar projects. These factors are conducive for demand for offtake from the Project, with Australia recognised as top tier mining jurisdiction, with strong standards of governance and resource definition.

The demand for offtake from the Project is further reflected by Tivan receiving several proposals from prominent multi-national companies to join the proposed Joint Venture for the Project since the announcement of the Strategic Alliance Agreement with Sumitomo Corporation. These proposals have been respectfully declined by Tivan.

6. Other Projects

Sandover Fluorite Projects

On 21 November 2024, TVN announced the acquisition of a second fluorite project, located north-east of Alice Springs in the Northern Territory.

The project area is considered highly prospective for high-grade fluorite (CaF₂) with fluorite mineralisation previously identified in two extensive belts of quartz-fluorite-barite veins.

Consideration for the acquisition totals \$1.075 million, comprised of up-front cash payments and contingent cash payments subject to JORC Resource definition and mineral production.

Total consideration payable by Tivan for the acquisition is A\$1.075 million, comprising four separate cash payments:

1. \$450,000 upon execution of the Binding Term Sheet and the process of sub-division of a tenement being initiated.
2. \$100,000 upon the issue of the new sub-divided tenement and subsequent transfer to Tivan.
3. \$300,000 upon a JORC-compliant fluorite resource being defined by Tivan.
4. \$225,000 upon commencement of commercial production of fluorite by Tivan.

The acquisition strengthens Tivan's upstream fluorite exposure in Australia and has strong commercial synergies with the Speewah Fluorite Project that is being progressed in collaboration with Sumitomo Corporation.

On 14 January 2024, Tivan announced that outstanding assays had been returned from the Sandover Fluorite Project. The assays are consistent with the presence of a world-class fluorite deposit, characterised by extensive surface calcium fluorite (CaF₂) mineralisation at ultra high-grade of up to 94% CaF₂. The mineralogy is favourable for the production of acidgrade fluorspar, with no indication of typical deleterious elements, including arsenic and phosphorus.

The results are an early validation of Tivan's acquisition of the Sandover Fluorite Project and provide the Company with an optimal pathway to a second fluorite project.

Speewah Vanadium Titano-Magnetite Project

The Project hosts the largest reported vanadium in titanomagnetite ("VTM") resources in Australia, and one of the largest globally, containing JORC compliant Measured, Indicated and Inferred Resources of 4.7 billion tonnes at 0.30% V₂O₅, 14.7% Fe and 3.3% TiO₂ (0.23% V₂O₅ cut-off grade). See Section 1 – TVN Valuation.

TVN has been focused on evaluating the preferred development and technology pathway for production of vanadium products - between the TIVAN+ minerals processing technology with CSIRO and a conventional salt roast processing operation. The project is also planned to comprise a separate vanadium electrolyte production facility ("VE Facility") proposed to be located at the Middle Arm Sustainable Development Precinct ("MASDP") in Darwin. Vanadium is used, as vanadium electrolyte, to store energy for long duration in vanadium redox flow batteries ("VRFB").

Following completion of the PFS for the Speewah Fluorite Project, Tivan will undertake a comprehensive review of its strategy and planning for the Speewah Vanadium Project.

7. Directors, Technical Advisory Group & Management Team

Grant Wilson, Executive Chairman



Grant led the nationally prominent campaign to change management from TNG Limited to Tivan Limited through the second half of 2022.

His 25-year career includes extensive experience in global finance, government, technology, media and law. He previously held senior roles for the Government of Singapore Investment Corporation (GIC), and he founded and led Civic Capital, a New York based hedge fund, from 2010-18.

Grant sits on the Advisory Board of Exante Data, Inc, based in New York, where he was earlier Head of Asia-Pacific.

He holds BComm/LLB (1st) from the Australian National University and MScIPE from the London School of Economics and Political Science.

Christine Charles, Non-Executive Director



Christine is an experienced executive and strategic advisor. Currently the Managing Director of professional services firm D4G, she provides strategic and practical advice to a range of clients, covering social and political risk management, social and community investment, regional economic development, leadership and business strategy.

Christine has extensive experience in the mining and energy sectors, having spent several years in an executive role with Newmont Mining. She is currently Chair of the Centre for Social Responsibility in Mining, University of Queensland, where she is also an Adjunct Professor, and Chair of the South Australian Government's Resources and Engineering Skills Alliance Board. Christine is a member of the CSIRO Resources Sector Advisory Council and also sits on the Board of Territory Generation.

Anthony Robinson, Non-Executive Director



Anthony has 24 years' experience in Business Consulting and 18 years' experience on Boards. Since 2005 his focus as a consultant has been helping major and minor engineering firms to deliver and review capital projects, and to deliver innovation programs and operational improvements.

He started his consulting career with GEM Consulting in Perth, was then a co-owner of Momentum Partners, before joining Deloitte as a Partner in 2010. In 2013 he retired as a Partner to focus on working directly on mining projects and on his Board roles, including as Chairman of Artrage for more than a decade.

Anthony holds bachelor's degree in commerce and in Engineering, and a PhD in Engineering, all from the University of Melbourne.

Dr Guy Debelle, Non-Executive Director



Guy is an adviser to the Investment Committee of Australian Retirement Trust and a Board member of the Clean Energy Finance Corporation. He is also co-chair of the ASFI Taxonomy Technical Experts Group, developing the Sustainable Finance Taxonomy for the Australian economy.

He was the Deputy Governor of the Reserve Bank of Australia from 2016 until 2022 and, prior to this was Assistant Governor (Financial Markets) from 2007-2016. After leaving the RBA, Guy worked at Fortescue Future Industries as CFO and non-executive director.

Guy has previously held roles at the International Monetary Fund, Bank for International Settlements and the Australian Treasury. He has been a visiting Professor of Economics at the Massachusetts Institute of Technology (MIT) and is currently an honorary Professor of Economics at the University of Adelaide.

Guy graduated with a Bachelor of Economics (Honours) from the University of Adelaide and gained a PhD in Economics from MIT.

Stéphane Leblanc, Consultant



Stéphane is a Canadian senior executive with extensive global operations and functional leadership experience within diverse mining sectors. An influential, innovative and safety award winning leader with a track record of delivering transformational change and cultivating HSE and ESG as values.

Stéphane formerly served as Managing Director, Rio Tinto Iron & Titanium (RTIT) with operational, commercial and marketing responsibility for RTIT. Based in Montreal, Canada, he additionally led a broad range of innovative demonstration plants, most recently including decarbonisation of ilmenite, production of lithium concentrate and recovery of scandium oxides.

Stéphane attended the University of Sherbrooke in Quebec where he graduated with a Bachelor of Science degree in Mechanical Engineering.

Professor Maria Skyllas-Kazacos, Emeritus Professor, University of NSW

After graduating with 1st Class Honours and the University Medal in Industrial Chemistry at UNSW Sydney, Maria Skyllas-Kazacos completed her PhD at the same university in 1979 in the area of High Temperature Molten Salt Electrochemistry under the supervision of Professor Barry Welch.

After filing the first patent on the vanadium redox flow battery in 1986, Maria expanded her research team's efforts into all areas of the vanadium battery technology, from electrolyte production to stack materials, design and manufacture, sensors and control system development, while also completing several field trials. Over the next 30 years, her group's work led to more than 40 new patents which currently form the basis of the vanadium flow battery technology that is being commercialised around the world.

In addition to these patents, Maria has published over 200 refereed papers in international journals, has written 8 book chapters and has edited or co-edited more than 12 books and conference proceedings. Her pioneering work on the vanadium battery has been recognised through many honours and awards, including the Chemeca, Wiffen, R.K Murphy and Castner Medals.

In 1999 she was made Member of the Order of Australia and in 2009, was Invested as Grand Lady of the Byzantine Order of St Eugene of Trebizond. Maria is a Fellow of the Australian Academy of Technological Sciences and Engineering, of the Royal Australian Chemical Institute and of the Institution of Engineers Australia.

Simon Flowers, Consultant



Simon is a chartered engineer and project delivery professional specialising in the development and delivery of sustainable solutions for the industrial sector. Simon spent seven years in the United Kingdom advising and delivering ERP projects on large infrastructure developments. He led an international team for twelve years with a US energy firm ConocoPhillips where he was responsible for delivering strategic business change initiatives.

Simon is a born and bred Territorian and in his recent role he led the NT Government's team that was accountable for the strategic direction, design and delivery of land and marine infrastructure and Northern Australia's first Strategic Environmental Assessment of the Middle Arm Sustainable Development Precinct (MASDP).

Simon is currently the Director and Principle of Sustainergy Consulting Pty Ltd specialising in improving environmental, social and economic outcomes for industry and he is currently finalising a Masters of Sustainable Energy Development (MSE) at the University of Queensland. He serves as the deputy president of Engineers Australia Northern Division and serves on Engineers Australia National Congress.

Jason Giltay, Chief Financial Officer



Jason has more than 20 years' experience in the areas of corporate finance, commercial management, business strategy and investor relations, with a strong understanding of equity capital markets and ASX company life. He has specialised in managing, developing and financing emerging companies in the Australian mining industry.

His mining company experience extends to exploration and resource definition, pre-development engineering and feasibility, construction, commissioning, operations and mining services.

Jason holds a Bachelor of Commerce and Postgraduate Diploma in HRM, both from the University of Western Australia.

Michael Christ, Project Manager



Michael commenced at Tivan in Q1 2023. He is a degree qualified and chartered professional engineer, with extensive experience in the Northern Territory.

Michael spent the previous 12 years working for Clough, one of Australia's oldest engineering-lead, multi-disciplinary, construction and commissioning contractors. In addition to working with Tivan as a client, he has been involved in the delivery of multiple world class projects across various industries, including resources, oil & gas, and water & power generation

Michael holds a Bachelor's degree in Civil Engineering from the University of Western Australia.

Brendon Nicol, Project Manager



Brendon is an experienced process engineer who has worked on projects involving a broad range of minerals and commodities, including vanadium, titanium, high purity alumina, nickel, cobalt, iron ore and gold.

Brendon was previously a consultant at METS Engineering Group where he contributed to various scopes of work, before joining Tivan in December 2019. His prior experience includes process development and metallurgical testwork management various research and development projects.

He holds a Bachelor of Engineering (Chemical and Process Engineering) and Bachelor of Science (Chemistry) from the University of Western Australia.

Dr Ellin Lede, Head of Northern Australia



Dr Ellin Lede brings extensive international and Northern Australian experience (+15 years) in Net Zero industries and climate resilience (United Kingdom; Europe; Southeast Asia; and Australia).

Ellin previously served as a Director at Deloitte's National Climate and Sustainability Team and the Global Investment and Innovation Incentives Team. She also led Fortescue Future Industries' Office of Northern Australia and served as Policy Director and Adviser to two Northern Territory Chief Ministers.

Ellin holds a PhD from the Tyndall Centre for Climate Change Research in the United Kingdom and a Master of Science from Wageningen University in the Netherlands. Ellin was born and raised in the Northern Territory.

Stephen Walsh, Chief Geologist



Steve is an experienced geologist with exploration and mining experience across multiple commodities including Lithium, Manganese, Zinc and Gold.

He has extensive experience in the Northern Territory and Western Australia and has worked at the forefront of the critical minerals sector including Glencore, Mineral Resources and OM Manganese.

He holds a Bachelor of Science (Geology) from the University of Newcastle.

Michael Fuss, Senior Geologist



Michael is a senior Geologist with over 10 years field and mine site experience, having previously worked at Tanami (Granites) for Newmont and Mount Isa Mines for Glencore.

Michael brings vital learnings and knowhow in maximising a mineral resource's potential through drilling and modelling solutions.

A geologist who is a passionate advocate for the resource endowment of northern Australia, Michael holds a Bachelor of Commerce / Bachelor of Business Management from University of Queensland and a Bachelor of Geology (Honours) from James Cook University.

Alex Botterill, Process Engineer



Alex is a process engineer with experience working on iron ore, copper, gold, titanium and vanadium projects.

Previously a consultant at METS Engineering, he contributed to multiple projects including the development of the TIVAN® processing technology. Alex has extensive experience designing and managing metallurgical testwork programs and is well versed in various mineral processing techniques.

He holds a Bachelor of Engineering (Chemical) (Hons) from Curtin University.

Tammie Dixon, General Manager Finance



Tammie is a Certified Practising Accountant with over 20 years of experience in financial management, primarily in the resources sector. She held senior roles at several ASX-listed companies, including Capricorn Metals Ltd, Regis Resources Ltd and Catalyst Metals Ltd.

Tammie holds Bachelor of Business (Accounting) from Edith Cowan University.

Nicholas Ong, Company Secretary



Nicholas brings 20 years of experience in listing rules compliance and corporate governance.

He is a non-executive director and company secretary of several ASX listed companies and has extensive experience in mining project financing as well as mining and offtake contract negotiations.

Nicholas is a fellow member of the Governance Institute of Australia and holds a Bachelor of Commerce and a Master of Business Administration from the University of Western Australia.

8. Investment Risks

TVN is exposed to a number of risks including:

- **Geological risk:** the actual characteristics of an ore deposit may differ significantly from initial interpretations.
- **Resource risk:** all resource estimates are expressions of judgement based on knowledge, experience and industry practice. Estimates, which were valid when originally calculated may alter significantly when new information or techniques become available. In addition, by their very nature, resource estimates are imprecise and depend to some extent on interpretations, which may prove to be inaccurate.
- **Commodity price risk:** the revenues TVN will derive mainly through the sale of fluor spar concentrate exposing the potential income to fluor spar price risk. The fluor spar price fluctuates and is affected by many factors beyond the control of TVN. Such factors include supply and demand fluctuations, technological advancements and macro-economic factors.
- **Exchange Rate risk:** The revenue TVN derives from the sale of fluor spar concentrate exposes the potential income to exchange rate risk. International prices of fluor spar are denominated in United States dollars, whereas the financial reporting currency of TVN is the Australian dollar, exposing the company to the fluctuations and volatility of the rate of exchange between the USD and the AUD as determined by international markets.
- **Mining risk:** A reduction in mine production would result in reduced revenue.
- **Processing risks:** A reduction in plant throughput would result in reduced revenue. In all processing plants, some proportion is lost rather than reporting to the valuable product. If the recovery is less than forecast, then revenue will be reduced.
- **Operational cost risk:** an increase in operating costs will reduce the profitability and free cash generation of the project.
- **Management and labour risk:** an experienced and skilled management team is essential to the successful development and operation of mining projects.

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