

19 March 2025

## Speewah Fluorite Project delivers excellent testwork results

- Tivan has successfully completed flotation optimisation testwork for the Speewah Fluorite Project in Western Australia with ALS Metallurgy in Perth.
- The testwork program achieved excellent results, delivering an improvement in both fluorite grades and recoveries to acidspars product relative to historic flotation testwork.
- Grades of up to 98.8% CaF<sub>2</sub> were achieved from fourteen cleaner flotation trials.
- Testwork also demonstrated potential to improve fluorite recoveries from 90% to up to 95% at the 97% calcium fluorite (CaF<sub>2</sub>) acidspars product specification.
- Tivan is now progressing with a comminution and beneficiation testwork program in support of engineering design of the process plant as part of the Feasibility Study.
- An opportunity to produce a metspar by-product for the Speewah Fluorite Project is also being evaluated through a concept study initiated with Lycopodium.

The Board of Tivan Limited (ASX: TVN) (“Tivan” or the “Company”) is pleased to advise that Tivan has successfully completed the current phase of flotation optimisation testwork for the Speewah Fluorite Project (“Project”) in Western Australia, delivering excellent results including grades of up to 98.8% calcium fluorite (CaF<sub>2</sub>) and improved fluorite recoveries relative to historical testwork, from 90% up to 95% at the minimum 97% CaF<sub>2</sub> acidspars product specification. The results demonstrate that the 97% CaF<sub>2</sub> acidspars product specification can be achieved, and support engineering design of the process plant and further testwork being undertaken as part of the Feasibility Study being progressed.

Tivan is progressing development planning for the Speewah Fluorite Project for a mining and processing operation of fluorite ore to produce acidgrade fluorspar. In December 2024, the Company announced that it had signed a non-binding Memorandum of Understanding with Sumitomo Corporation, recording the key commercial and corporate terms for a planned incorporated joint venture for the Project to facilitate proposed negotiation of binding joint venture agreements (see ASX announcement of 24 December 2024).

### Testwork Program Overview

Flotation is a physical beneficiation process used extensively in industry to upgrade ore to saleable products, and is a standard technology utilised for recovery of acidgrade fluorspar products around the world. The Speewah Fluorite Project utilises a flotation flowsheet with rougher flotation, regrinding and cleaner flotation. The final acidspars product is the flotation concentrate recovered from cleaner flotation.

Flotation testwork is required to support engineering design of the process plant. Tivan previously completed initial flotation testwork in 2024 to validate historic results (see ASX announcement 30 July 2024). Following the positive outcomes from this initial Tivan testwork, the Company commissioned a further testwork program to optimise flotation conditions. The flotation optimisation testwork program included the following:

- Rougher and cleaner flotation stage testwork.
- Grind size, reagent selection and reagent dose optimisation.
- Flotation condition optimisation.
- Product specification and product recovery optimisation.



Remaining testwork composite material from 2004 (18.9% CaF<sub>2</sub>) was used for this testwork.

The program has delivered excellent outcomes, with the highlight being improvements in both overall fluorite recovery and fluorite grade in the final acidspar concentrate relative to both the previous Tivan and historic results. The outcomes from this testwork are important for the Feasibility Study testwork program which recently commenced (see below).

## Testwork Program Results

### ***Rougher Flotation***

Twenty bench-scale rougher trials were performed to investigate commercial fluorite collectors, fluorite collector dose, flotation grind size, depressant selection and depressant dose. The results from the rougher trials are presented in *Appendix 1, Table 1*.

The key outcomes from the rougher flotation optimisation trials included:

- Rougher flotation was robust, achieving high recoveries for almost all tested conditions.
- The program identified multiple options for commercial collectors.
- Depressant addition was reduced.
- Coarsened grind size for rougher flotation by ~40%, which will reduce power consumption for milling.

Utilising preferred flotation parameters selected from the bench-scale rougher trials, a bulk rougher float was performed to prepare a concentrate sample for cleaner optimisation trials. The bulk rougher trials were performed in a 40L vessel, the testwork setup can be seen in *Figure 1*. Two repeated trials validated conditions selected from the optimisation tests, achieving 69.5% CaF<sub>2</sub> at 98.0% recovery.



**Figure 1: Bulk rougher flotation trial at ALS Metallurgy**



### **Cleaner Flotation**

Fourteen cleaner flotation trials were performed to investigate and optimise multiple variables in the flowsheet including cleaner flotation grind size, depressant selection, depressant dose and flotation pH. The results from the cleaner trials are presented in *Appendix 1, Tables 2 and 3*.

The key outcomes from the cleaner flotation trials included:

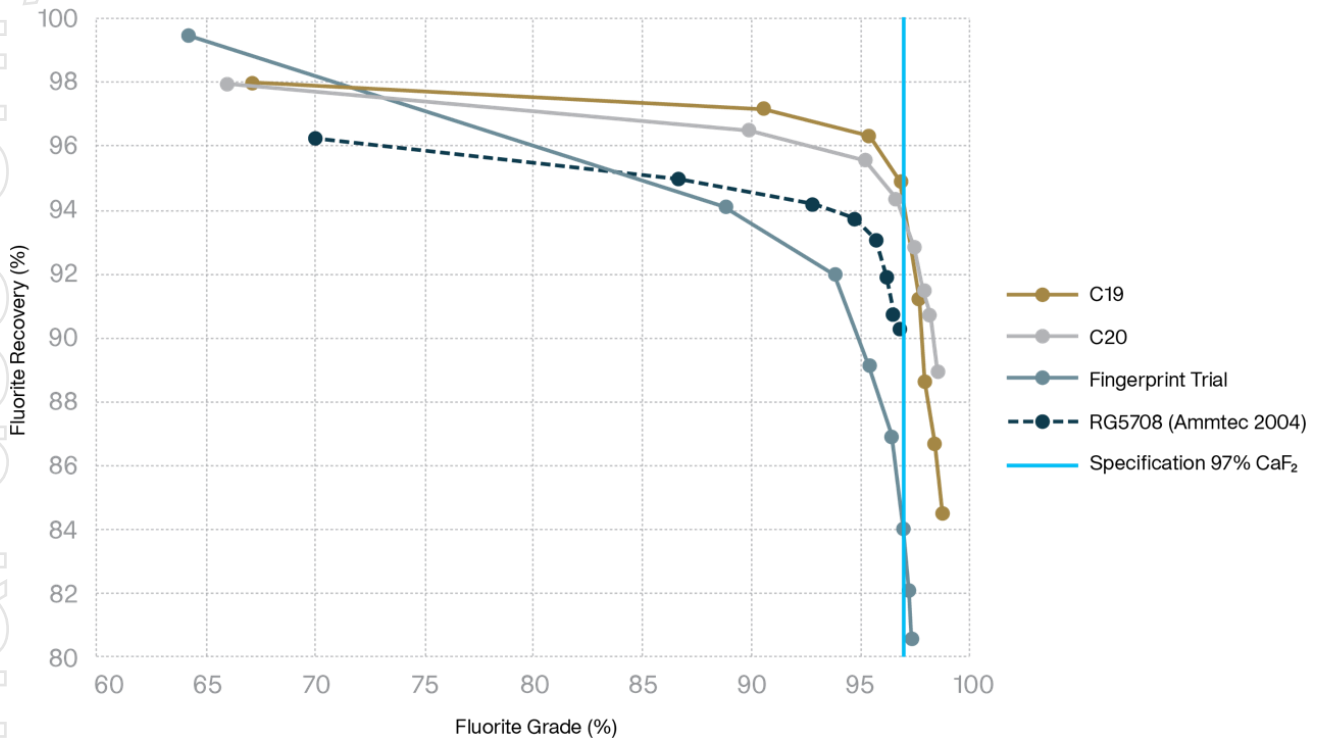
- Multiple reagent schemes successfully rejected key impurities.
- Defined options for alternative reagents suites, improving flexibility for reagent selection for the Feasibility Study.
- Kinetics for gangue rejection were improved.
- Fluorite recovery improved.
- Fluorite cleaner tailings are indicatively suitable for scavenging a metspar grade product.



**Figure 2: Cleaner flotation trial at ALS Metallurgy**

The grade-recovery curves from optimised trial condition sets are presented in *Figure 3*. The historic results from 2004 are included for comparison. The graph highlights the significant improvement in flotation kinetics and fluorite recoveries achieved in this program.

The testwork outcomes demonstrated that 97% CaF<sub>2</sub> products can be met with ore feed grades that are close to the mine plan feed grade. Indicatively, key impurities arsenic, baryte, sulphides, phosphorous and calcite can be rejected with the tested flowsheet. Due to the relatively high SiO<sub>2</sub> content of the ore, the SiO<sub>2</sub> specification and product grind size specification require further consideration and testwork. As part of the proposed joint venture with Sumitomo Corporation, Tivan will progress engagement with end-users to assess product demand and establish the final product specification for the Speewah Fluorite Project.



**Figure 3: Comparison of grade-recovery curves**

The presented data in *Figure 3* compares the optimised trial outcomes from this testwork program to comparable historical testwork (RG5708, conducted by Ammtec Ltd in 2004) and Tivan's testwork from 2024 (fingerprint trial). In physical separation processes such as flotation, grade and recovery are generally inversely related, as seen in *Figure 3*. The grade-recovery curve presents the trade-off between grade and recovery, when targeting a higher grade acidspars product, there will be an associated loss in total fluorite recovery. In this testwork program the grade-recovery curves have been shifted up and to the right. The interpretation for this outcome is as follows:

1. The achievable fluorite recovery for any given target grade has been improved
2. This testwork demonstrates that higher CaF<sub>2</sub> grades can be achieved if required.

**Cautionary statement:** The above results in *Figure 3* for trial RG5708 are historical (2004) metallurgical results and are not reported in accordance with the 2012 Edition of the Joint Ore Reserves Committee Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code"). A competent person has not done sufficient work to classify the historical results in accordance with the current JORC Code. It is uncertain that following evaluation and/or further exploration work that the results will be able to be reported in accordance with the JORC Code 2012.

- The historical results were summarised in a metallurgical testwork report prepared in 2004 by Ammtec Ltd.
- The reporting of the testwork results appears robust with no reason to doubt the reliability of the results reported.
- The current results from the testwork program described in this announcement supersede any previous results including the historic results; therefore there is no reliance on the historic results data for future work programs.



- The historic results are of historical relevance and provide a comparison point for progress made in the development of the process flowsheet and current testwork results; however, they are not considered material to the Company under current JORC Code guidelines.
- Other items listed in ASX Rule 5.12 have been considered but are not applicable to these historical results.

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), confirms that the information in this market announcement is an accurate representation of the available data and studies on the Speewah Fluorite Project.

*Refer to JORC Table 1 for further information. Note no drilling results have been reported in this release and the JORC Table 1 is provided for general information purposes only.*

### **Next Steps**

#### ***Metallurgical grade fluorite (metspar)***

An opportunity to produce a metspar by-product was identified by Tivan and announced in the Speewah Fluorite Project Pre-Feasibility Study (see ASX announcement of 30 July 2024). Tivan recently engaged Lycopodium to prepare a concept study comparing the CAPEX and OPEX for three process configurations with potential to recover metspar as a lower tonnage co-product. The metspar concept study is expected to be completed within six weeks and the results will inform the Feasibility Study being progressed.

In parallel, Tivan has planned a sighter metallurgical testwork scope to investigate the recovery of a metspar grade product from cleaner tailings generated from the completed flotation optimisation testwork program.

#### ***Feasibility Study Testwork***

Drill core (PQ) from the recent drilling program completed by the Company for the Speewah Fluorite Project (see ASX announcement of 8 November 2024) is now at the ALS Laboratory in Perth. A new testwork program using this core has commenced, and includes comminution and beneficiation testwork to support engineering design of the process plant as part of the Feasibility Study.

The primary targets for this testwork program are as follows:

- Variability testwork to test different deposit lithologies and locations in support of Feasibility Study engineering.
- Optimisation testwork to investigate the impact of alternative plant feed grades.
- Ore sorting testwork with a vendor to assess potential for upgrading the ore feeding the process plant.

Tivan is also planning a further metallurgical sample drilling campaign to obtain additional core to support testwork through to piloting of the flowsheet.



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**Tivan Executive Chairman Mr Grant Wilson commented:**

*“We are very pleased to have achieved this important technical milestone. The testwork results represent major de-risking of the Speewah Fluorite Project and open multiple pathways for design optimisation and revenue enhancement going forward.*

*In fast-tracking the Pre-Feasibility Study last year, we made strong assumptions as to historical testwork and expected fluorite recovery. Our team have worked systematically since, utilising modern flotation reagents. They have achieved a substantial improvement on all historical results and have demonstrated that the 97% CaF<sub>2</sub> acidspar threshold can be achieved without a material diminution in fluorite recovery.*

*Given the low levels of intrinsic impurities at Speewah, most notably arsenic, Tivan is now in a great position to optimise the Project further into Feasibility Study. The results also enable us to further support the marketing and distribution campaign of our proposed JV partner, Sumitomo Corporation, in the period ahead.*

*Reflecting Tivan’s broader strategy, the learnings from this program will be applied at the Sandover Fluorite Project later this year.”*

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

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### **Competent Person's Statement**

Tivan's exploration activities for the Speewah Fluorite Project are being overseen by Mr Stephen Walsh (BSc). The information that relates to historic results in this announcement 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, Mineral Resources and Ore Reserves. 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.

Regarding the information in this announcement concerning historical results, Mr Walsh confirms the information is an accurate representation of the available data.

### **Speewah Fluorite Exploration Results**

The information in this report that relates to exploration results for the Speewah Fluorite Project has been extracted from the Company's previous ASX announcement entitled "Pre-Feasibility Study for Speewah Fluorite Project" dated 30 July 2024. 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 it is not aware of any new information or data that materially affects the information included in that announcement. Tivan confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from that announcement.

### **Forward looking statement**

This announcement contains certain "forward-looking statements" and comments about future matters. Forward-looking statements can generally be identified by the use of forward-looking words such as, "expect", "anticipate", "likely", "intend", "should", "estimate", "target", "outlook", and other similar expressions and include, but are not limited to, the timing, outcome and effects of the future studies, plans, programs, budgets, project development and other work. Indications of, and guidance or outlook on, future exploration and development, earnings, financial position, performance of the Company or global markets for relevant commodities are also forward-looking statements. You are cautioned not to place undue reliance on forward-looking statements. Any such statements, opinions and estimates in this announcement speak only as of the date hereof, are preliminary views and are based on assumptions and contingencies subject to change without notice. Forward-looking statements are provided as a general guide only. There can be no assurance that actual outcomes will not differ materially from these forward-looking statements. Any such forward looking statement also inherently involves known and unknown risks, uncertainties and other factors and may involve significant elements of subjective judgement and assumptions that may cause actual results, performance and achievements to differ. Except as required by law the Company undertakes no obligation to finalise, check, supplement, revise or update forward-looking statements in the future, regardless of whether new information, future events or results or other factors affect the information contained in this announcement.

**Appendix 1 – Metallurgical Testwork Results**

Trial ID	CaF <sub>2</sub> Grade %	CaF <sub>2</sub> Recovery %	SiO <sub>2</sub> Grade %	BaSO <sub>4</sub> Grade %	S Grade %	P <sub>2</sub> O <sub>5</sub> Grade %
R0	68.5	97.9	23.0	1.6	0.3	0.08
R1	67.3	97.3	23.9	1.7	0.3	0.08
R2	70.6	97.8	21.2	1.8	0.3	0.08
R3	71.0	98.1	21.4	1.7	0.3	0.08
R4	69.3	97.8	20.6	2.3	0.3	0.09
R5	62.6	97.9	24.3	2.1	0.3	0.09
R6	62.8	98.3	23.1	1.7	0.3	0.10
R7a	69.2	98.1	23.1	1.7	0.3	0.08
R7b	70.7	98.0	23.7	1.6	0.3	0.06
R8a	69.4	96.1	24.2	1.8	0.3	0.07
R8b	75.1	95.1	20.4	1.8	0.3	0.07
R9	55.1	28.6	28.4	3.2	0.5	0.12
R10	70.1	96.2	22.0	1.7	0.3	0.07
R11	69.0	96.2	22.4	1.8	0.3	0.07
R12	73.7	96.5	21.0	1.7	0.3	0.07
R13	76.9	95.0	19.0	1.8	0.3	0.07
R14	70.0	96.8	22.4	1.7	0.3	0.07
R15	72.4	96.4	18.7	1.9	0.3	0.08
R16	71.2	95.9	19.1	1.8	0.3	0.08
R17	78.8	95.6	14.0	2.5	0.4	0.07
Bulk	69.5	98.0	23.4	2.2	0.3	0.08

**Table 1: Bench-scale rougher trial results summary**

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Trial ID	CaF <sub>2</sub> * Grade (%)	CaF <sub>2</sub> Recovery (%)	SiO <sub>2</sub> Grade (%)	BaSO <sub>4</sub> Grade (%)	S Grade (%)	P <sub>2</sub> O <sub>5</sub> Grade (%)	CaCO <sub>3</sub> Grade (%)
C21	96.7	95.2	2.64	0.31	0.09	0.05	Below LOD
C22	96.8	94.8	2.74	0.29	0.06	0.05	Below LOD
C23	96.0	93.7	3.17	0.08	0.11	0.05	Below LOD
C24	97.5	93.3	2.20	0.17	0.03	0.02	Below LOD
C25	97.8	92.7	1.99	0.12	0.02	0.05	Below LOD
C26	97.9	93.9	1.87	0.08	0.02	0.02	Below LOD
C27	96.1	92.4	3.28	0.12	0.03	0.05	0.25
C28	96.9	95.8	2.64	0.27	0.04	0.05	Below LOD
C29	96.6	90.8	2.93	0.10	0.03	0.02	0.25
C30	97.3	90.1	2.37	0.19	0.03	0.02	Below LOD

**Table 2: Four stage cleaner testwork results summary**

LOD – Limit of detection

Four stage cleaner trials were performed under various conditions and were not optimised to maximise grades or recovery

\* Fluorite grades and recoveries calculated based on impurities (Refer to JORC Table for details)

Trial ID	CaF <sub>2</sub> * Grade	CaF <sub>2</sub> Recovery	SiO <sub>2</sub> Grade (%)	BaSO <sub>4</sub> Grade (%)	S Grade (%)	P <sub>2</sub> O <sub>5</sub> Grade (%)	CaCO <sub>3</sub> Grade (%)
C19	98.8	84.5	1.08	0.03	0.01	0.01	Below LOD
C20	98.6	88.9	1.30	0.05	0.01	0.01	Below LOD
C31**	98.5***	84.6	1.35	0.05	0.01	0.01	TBD
C32	97.8***	78.3	2.04	0.07	0.01	0.02	TBD

**Table 3: Seven stage cleaner testwork results summary**

\* Fluorite grades and recoveries calculated based on impurities (Refer to JORC Table for details)

\*\* C31 was performed with the same conditions as C19

\*\*\* Carbon assay not yet received, for the CaF<sub>2</sub> calculation it is assumed that the inorganic carbon is below LOD, in line with other trials

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**JORC Code, 2012 Edition - Table 1 Report**

<b>SECTION 1 SAMPLING TECHNIQUES AND DATA</b>		
<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Testwork was performed on composited diamond core from the 2003 diamond drilling program</li> <li>The 2003 diamond drilling program was based on conventional reverse circulation precollars in conjunction with HQ triple tube diamond tails. Drilling was conducted by Mt Magnet Drilling of Perth utilising a Hydco SD 1000 drill rig. Triple tube coring was used in order to minimise core rotation in the barrel and maximise core recovery. All holes were designed to intersect the orebody at depth on systematic 200 metre spacings. This would provide both geological and grade information over the 2km strike length. On completion of core orientation, logging and photography, drill core was systematically sampled every metre. Core was cut using a brick saw with half core being bagged in calico bags. The remaining half core trays were then stored in racks at the Speewah core yard.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling was completed in preparation for the testwork reported in this announcement.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core, noted in geological logs; infrequent losses noted.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Geological logging has been performed for core within or close to mineralisation.</li> <li>Drill core photography is available.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core full core used for metallurgical samples.</li> </ul>



	<ul style="list-style-type: none"> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<p>For the testwork program reported in this announcement:</p> <ul style="list-style-type: none"> <li>Sample analyses in the program were conducted by X-Ray Fluorescence ("XRF") at ALS Global</li> <li>Select samples were also analysed for total carbon, organic carbon and sulphide S with a CS2000</li> <li>Standards, blanks and duplicates were utilised as per the laboratories standard QAQC procedures.</li> </ul>
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Assays are received in digital format and stored on a server.</li> <li>Presented fluorite grades for "fingerprint trial" in figure 3 were adjusted to remove traceable impurity introduced through laboratory procedure.</li> <li>CaF<sub>2</sub> grades calculated by <math>F (\%) \times 2.055</math></li> <li>CaCO<sub>3</sub> grades calculated by <math>\text{inorganic C} (\%) \times 8.33</math></li> <li>CaCO<sub>3</sub> assumed to be 0% where inorganic C is below LOD (0.03%)</li> <li>Where noted and/or for final cleaner fluorite concentrate products, CaF<sub>2</sub> grade presented on basis of <math>[\text{CaF}_2 (\%) = 100\% - \text{impurities} (\%)]</math> where, the impurities are SiO<sub>2</sub>, BaSO<sub>4</sub>, Fe<sub>2</sub>O<sub>3</sub>, CaCO<sub>3</sub>, Cu, K<sub>2</sub>O, MgO, MnO and S<sub>sulphide</sub></li> </ul>
<p>Location of data points</p>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling was completed in preparation for the testwork reported in this announcement.</li> </ul>
<p>Data spacing and distribution</p>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling was completed in preparation for the testwork reported in this announcement.</li> <li>Testwork was performed on composited diamond core from the 2003 diamond drilling program</li> </ul>
<p>Orientation of data in relation to geological structure</p>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling was completed in preparation for the testwork reported in this announcement.</li> </ul>
<p>Sample security</p>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>The historical measures taken to ensure sample security are unknown.</li> </ul>
<p>Audits or reviews</p>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No external audits have been completed.</li> </ul>

**SECTION 2 REPORTING OF EXPLORATION RESULTS**



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Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Speewah Fluorite Resource is encompassed by tenement M80/269 with an expiry date of 21/05/2031 owned by "Speewah Mining Pty Ltd" which is a 100% owned subsidiary of Tivan.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The deposit has been explored by numerous parties from 1970 to the present. A comprehensive record of this exploration is contained in the Western Australian department of Energy, Mines, Industrial regulation and Safety – online systems Mineral exploration reports (WAMEX) at <a href="https://www.dmp.wa.gov.au/WAMEX-Minerals-Exploration-1476.aspx">https://www.dmp.wa.gov.au/WAMEX-Minerals-Exploration-1476.aspx</a></li> <li>The most significant of these companies are:               <ul style="list-style-type: none"> <li>➢ Great Bounder Mines / North Kalgurie Mines</li> <li>➢ Elmina N.L.</li> <li>➢ Speewah Resources</li> <li>➢ Doral Resources</li> <li>➢ NiPlats</li> <li>➢ King River Copper</li> </ul> </li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting, and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Greenvale Fault forms the eastern margin of the Kimberley Block and consists of a series of intersecting faults. Fluorite mineralisation is mainly hosted by north northeast and north trending faults within the Greenvale Fault, with minor occurrences along north trending normal faults within the Speewah Dome. The Early Proterozoic, Valentine Siltstone and Lansdowne Arkose of the Speewah Group host most of the mineralisation and outcrop as linear north northeast trending ridges. These sediments dip 10° to 20° to the SE. The other major unit exposed in the core of the dome is the Hart Dolerite (1703Ma), which was emplaced as a sill predominantly within the Valentine Siltstone.</li> <li>The predominantly white fluorite mineralisation occurs mainly within tabular steeply dipping veins showing very good strike continuity often over several hundred metres in length. The veins range in thickness from less than 1m to 15m, often flanked by lower grade stockwork and stringer veins, forming an overall envelope up to 50m wide.</li> <li>The fluorite veins have been mapped in three prospect areas known as Main</li> </ul>



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- Zone, West Zone and Central Zone over an area of approximately 160km<sup>2</sup>. Potential also exists under soil covered areas and in steep topographical areas within the district. In the Main Zone, at least nine fluorite vein sets have been mapped over a strike length of 8km.
- The following description is after Crossing 2004 and SRK's observations concur with the various mineralisation settings described.
  - Fluorite is associated with quartz-feldspar veining but is younger. It occurs in the various settings previously discussed:
  - Large, persistent veins occupying the main northerly and northeasterly 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 northwesterly between structures.
  - En-echelon vein set 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 thickness up to 15 metres and are up to 800m long. They have similar persistence down-dip within the faults and have been intersected in several holes as deep as 400m below surface, albeit it only in the order of 0.5m wide at that depth.
  - The stockworks tend to occur adjacent to the main faults and are dominantly hosted by the brittle sandstone unit, although reasonable stockwork veining sometimes occurs in the dolerites. Best fluorite intersections occur where the main northerly 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, as seen in the photo above. They also often form co-axially in the center of the quartz-feldspar veins, and as



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	<p>vugh fill within them and in the matrix of quartz-feldspar vein breccia. Later carbonate veins crosscut all earlier features. Carbonate and quartz also infills voids in the fluorite veins, and occasionally quartz veinlets cut across fluorite veins. The fluorite is dominantly green to whitish in colour with less common purplish fluorite. In outcrop it weathers to grayish-white. It is generally coarsely crystalline often with euhedral crystals infilling open-spaces. The greenish fluorite appears to be younger than the purple variety.</p>	
<p><i>Drill hole Information</i></p>	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:             <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </li> <li>• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• No new drilling is reported in this release.</li> <li>• The hole data is not presented in this announcement. This information is not considered material as the concentrate was prepared from several holes across the deposit. Therefore, the testwork results for the concentrate can only show the generalised response of the orebody, and not variability due to location throughout the orebody.</li> </ul>
<p><i>Data aggregation methods</i></p>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• See previous releases</li> </ul>
<p><i>Relationship between mineralisation widths and intercept lengths</i></p>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• See previous releases</li> </ul>
<p><i>Diagrams</i></p>	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>• See previous releases</li> </ul>
<p><i>Balanced reporting</i></p>	<ul style="list-style-type: none"> <li>• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>• See previous releases</li> </ul>
<p><i>Other substantive exploration data</i></p>	<ul style="list-style-type: none"> <li>• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock</li> </ul>	<ul style="list-style-type: none"> <li>• See previous releases</li> </ul>



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	<i>characteristics; potential deleterious or contaminating substances.</i>	
<i>Further work</i>	<ul style="list-style-type: none"><li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li><li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li></ul>	<ul style="list-style-type: none"><li><i>See body of announcement.</i></li></ul>