



ASX Announcement

4th April 2023

Positive Lepidolite Processing Test Results Thailand Lithium

HIGHLIGHTS

- Excellent lithium recoveries at above 95% have been achieved by Yongxing Special Materials Co., Ltd, on Matsa's lepidolite samples from western Thailand
- Results of the test work demonstrated:
 - Both Pink Panther and Rose Panther lepidolite (lithium mica) samples can be processed as a DSO product without the need for beneficiation
 - The lepidolite samples can be treated using Yongxing's existing lepidolite processes at their Jiangxi facility
 - Excellent **lithium recoveries** from lepidolite at **above 95%**
 - Excellent **concentrate grades of 4.04%** (Pink Panther) and **5.91%** (Rose Panther) **Li₂O**, which was then roasted and leached to extract a final lithium product
 - Matsa's lepidolite can produce a high quality battery grade lithium carbonate
 - Yongxing have indicated the results are impressive and confirmed their interest in progressing talks to a MOU
- Test work on Polyolithionite (Black Panther and Spotted Panther), another form of lithium mica, also demonstrated that lithium extraction is possible using existing technology
- Discussions regarding potential ongoing arrangements and cooperative exploration and development of Matsa's Thailand lithium project continue with both Yongxing and other parties

CORPORATE SUMMARY

Executive Chairman

Paul Poli

Directors

Pascal Blampain

Andrew Chapman

Shares on Issue

412.00 million

Listed Options

49.22 million @ \$0.17

Unlisted Options

27.15 million @ \$0.08 - \$0.21

Top 20 shareholders

Hold 58.31%

Share Price on 3rd April 2023

4 cents

Market Capitalisation

A\$16.48 million

Matsa Resources Limited (“Matsa”, “Company”) is pleased to report that testwork on lithium extraction and recovery from Matsa’s lepidolite and polyolithionite samples¹ has been completed with results achieving a minimum 94.8% lithium recovery from the lepidolite concentrate and a minimum 91% recovery from the lepidolite DSO samples, using Yongxing’s sulphate roasting technology. Importantly, the lepidolite processing results has confirmed a battery grade lithium carbonate product can be produced from Matsa’s Thailand lithium project at Yongxing’s lepidolite processing facilities.

Four samples (2 lepidolite and 2 polyolithionite) were selected for the testwork from Matsa’s Pink Panther and Rose Panther (lepidolite), Black Panther and Spotted Panther (polyolithionite) prospects, where Matsa has lodged the necessary paperwork to progress granting of SPLs (Special Prospecting Licences) to enable drilling to commence.

Discussions regarding potential ongoing arrangements and cooperative exploration and development continue with both Yongxing and other Thai and Chinese parties.



Photo: At Yongxing’s head office in Huzhou (from left to right Yongxing’s Chairman Mr Xingjiang Gao, Matsa’s Executive Chairman Paul Poli and Executive Director Pascal Blampain)

Matsa Executive Chairman Mr Paul Poli commented:

“It is really pleasing to have Yongxing confirm that Matsa’s lepidolite and polyolithionite samples were successfully processed using conventional techniques to extract lithium and are capable of producing battery grade lithium carbonate. In the case of the samples from Pink Panther and Rose Panther, it is particularly pleasing that the lithium recoveries were in excess of 94.8% from the lepidolite.”

¹ ASX Announcement 15 February 2023, Lithium Testing Agreement with Yongxing - Thailand Lithium

Whilst the results of the lepidolite testwork are not a surprise to Matsa, we were less certain as to how polyolithionite, also a lithium mica, would behave in Yongxing's lepidolite processing plant. The testwork has in fact demonstrated that polyolithionite is also processable through the existing lepidolite processing plant.

China has been at the forefront of processing lepidolite for a number of years now, which is why we intentionally sought out an industry leader to test Matsa's lithium samples. Now that we've established lithium samples from our project can be processed, we'll cast our mind to planning a number of initial drilling campaigns, whilst advancing discussions with Yongxing and other parties for the exploration and development of our Thai lithium project."



Photo: Presenting Matsa's Thailand lithium project at Yongxing's Jiangxi office in Yifeng (from left to right Yongxing New Energy General Manager Mr Weimin Zou and Matsa's Paul Poli)

Sampling and testwork

Matsa provided four samples of 20kg each from key prospects (Figure 1) that would enable Yongxing to test both lepidolite and polyolithionite raw materials for lithium extraction. The samples were delivered to Yongxing's Jiangxi lepidolite processing plant in late February with testwork completed during March 2023.

The following is a translated summary from Yongxing's report on the testwork completed in March on the four samples provided by Matsa.

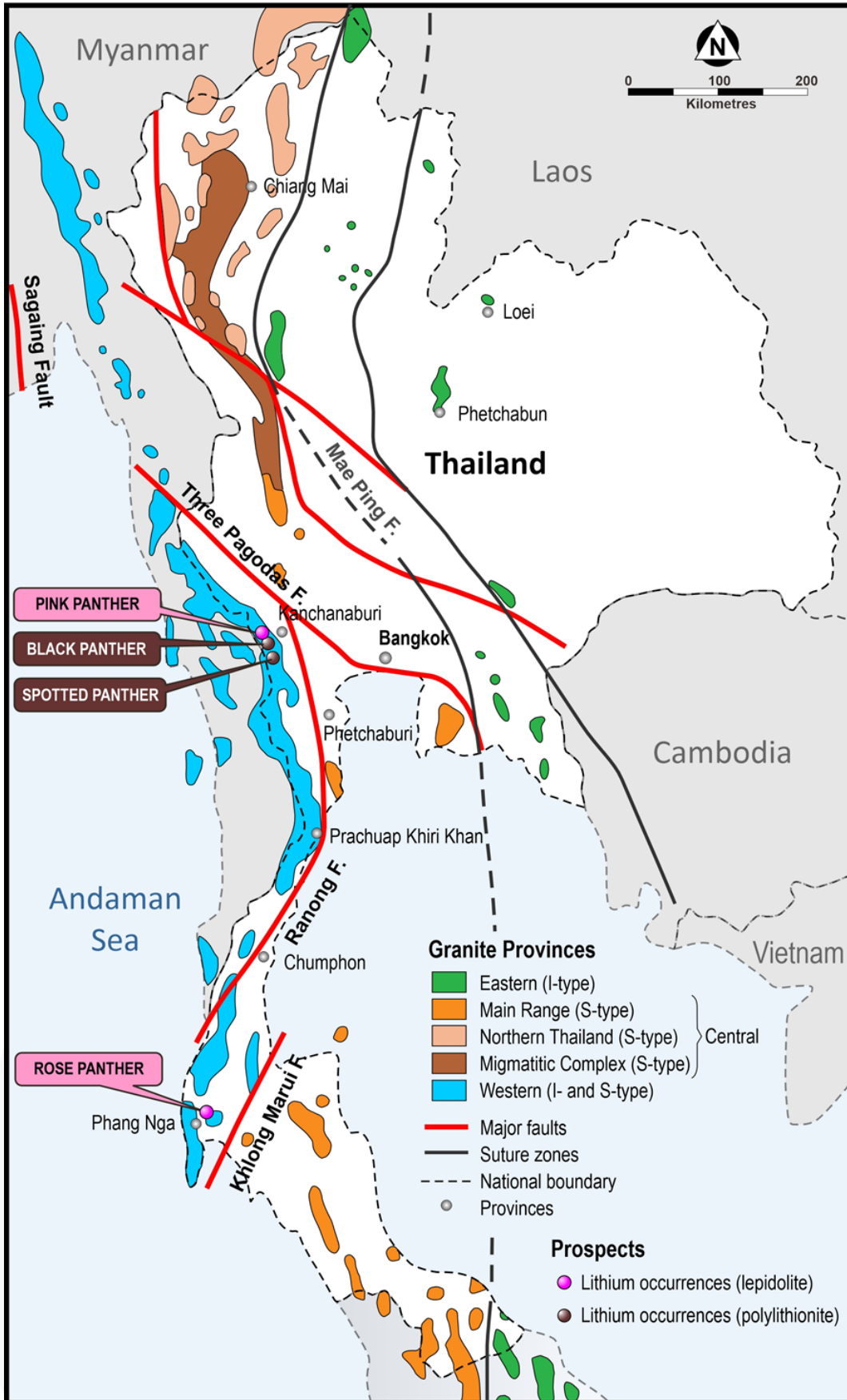


Figure 1: Matsa’s lithium prospects in western Thailand – location of sampling (collar details can be found in Appendix 1)

The samples all underwent rapid grinding, grading and floatation before undergoing beneficiation and chemical analysis as outlined below.

The lithium samples (Photo set 1 and 2) were crushed, put through an 8-mesh sieve (2.5mm), prepared into sample weights of 200g, 100ml of water added then subjected to 15 minutes of ball milling and drying. After drying, the sample was put through a 200-mesh sieve (0.075mm) and underwent gravimetric, volumetric, spectrophotometric, flame photometry and atomic absorption spectrometry methods, in order to analyse chemical components of the sample. The process included weighing, molten samples, leaching, colour development, measurement and analysis.

Roasting

The lithium oxide content of samples 1# & 4# is greater than 1.5% and these were directly crushed and milled separately (0.2mm pass rate $\geq 80\%$), and pressed into $\Phi 50$ m brick cake and placed in a muffle furnace for roasting experiments.

All 4 concentrates are lithium mica concentrates obtained after flotation (Photo set 3) of the corresponding raw ore. Key ingredients mixed with the samples for roasting purposes and their ratio is shown in Table 1 below:

Numbering	Lithium-containing sample Li_2O	Fluoride fixation	Sulfate	Remark
Raw ore 1#	1.65%	0-10%	20%-30%	Ore
Raw ore 4#	2.44%	0-10%	20%-30%	Ore
1# Concentrate	4.04%	0-10%	20%-40%	Post-flotation concentrate
2# Concentrate	0.68%	0-10%	20%-40%	Post-flotation concentrate
3# Concentrate	2.06%	0-10%	20%-40%	Post-flotation concentrate
4# Concentrate	5.91%	0-10%	20%-40%	Post-flotation concentrate

Table 1: Raw ore (DSO) and sample concentrate lithium testwork results

Roasted clinker results

Following roasting, the clinker is taken out and cooled naturally to below 100 °C. The sample was then manually crushed through a 20 mesh screen. The liquid-solid ratio is set to 1:1 (using pure water) for leaching, stirring 3-5 minutes, and then filtered to obtain the leachate, and the leachate was sampled for lithium oxide.

Conclusion of the experiment

The lithium oxide content of DSO raw ore 1# & 4# is $\geq 1.65\%$, which can be directly crushed and milled without using the flotation process with leaching rates of lithium above 90%.

After flotation of the raw ores, lithium oxide content of lepidolite concentrate 1# & 4# was very high being 4.04% and 5.91% respectively, whilst 2# and 3# were lower, being 0.68% and 2.06% respectively.

According to the ratio of mixture roasting, the leaching rates of 1#, 2#, 3# and 4# lithium were 94.78%, 55.30%, 85.64% and 97.32% respectively, indicating that the higher the lithium oxide content in the concentrate, the higher the leaching rate of lithium after roasting, and the colour of clinker and leaching slag is white; Conversely, the lower the leaching rate, the clinker and leaching residue are yellow-brown.

The final results of the testwork are presented in Table 2 below:

Sample	Grade Li ₂ O%	Leaching solution Li ₂ O(g/L)	Recovery rate (%)	Remark	Mica type
Raw 1 (DSO)	1.65	9.82	94.5	Roasting is feasible	Lepidolite
Raw 4 (DSO)	2.44	12.34	91.06	Roasting is feasible	Lepidolite
Concentrate 1	4.04	16.4	94.8	Roasting is feasible	Lepidolite
Concentrate 2	0.68	1.98	55.3	Grade too low	Polyolithionite
Concentrate 3	2.06	8.49	85.6	Roasting is feasible	Polyolithionite
Concentrate 4	5.91	23.58	97.3	Roasting is feasible	Lepidolite

Table 2: Raw sample is the original sample (DSO), concentrate reflects a flotation concentrate produced from the raw sample

About Yongxing Special Materials Co., Ltd

Yongxing Special Materials Co. Ltd (Yongxing) has been producing lithium carbonate from lepidolite since 2019. The plant has been processing 1.2Mtpa of locally sourced lepidolite ore running at 0.6% lithium oxide and for the 2022 calendar year, generated sales of almost A\$3.26B and a net profit of almost A\$1.33B.

Yongxing are upgrading the processing facilities to lift output to above 30ktpa of lithium carbonate. This upgrade will require a feed rate of 3.6Mtpa of lepidolite ore.

Yongxing Materials has developed its own low-temperature roasting technology using composite salts, together with advanced fluorine fixation technology, to greatly reduce equipment corrosion as well as reduce costs. The company also created a “one-step” battery-grade lithium carbonate production line, instead of upgrading industrial grade carbonates, as most smelters would do. This has shortened the production period and further reduced costs. Current carbonate production costs from lepidolite are around RMB35,000/t, which is competitive with the average cost of producing lithium carbonate from spodumene².

² <https://www.crugroup.com/knowledge-and-insights/insights/2022/scrutinising-the-lithium-technology-boom-part-3/> 11 March 2022



The Yongxing processing plant located in Jiangxi Province of China, produces a battery grade lithium carbonate



Photo set 1 - (from left to right and top to bottom) lepidolite sample from Pink Panther, polyolithionite sample from Black Panther, polyolithionite sample from Spotted Panther & lepidolite sample from Rose Panther



Photo set 2 - (testwork samples - from left to right and top to bottom) lepidolite sample from Pink Panther, polyolithionite sample from Black Panther, polyolithionite sample from Spotted Panther & lepidolite sample from Rose Panther



Photo set 3 - (concentrate samples - from left to right and top to bottom) lepidolite concentrate from Pink Panther, polyolithionite concentrate from Black Panther, polyolithionite concentrate from Spotted Panther & lepidolite concentrate from Rose Panther

MINERAL RESOURCES

The global Mineral Resource Estimate for the Lake Carey Gold Project remains at **886,000oz @ 2.4g/t Au** as outlined in Table 2 below. At the date of this report, there are no reportable lithium resources within the Matsa Group.

	Cutoff	Measured		Indicated		Inferred		Total Resource		
	g/t Au	('000t)	g/t Au	('000t)	g/t Au	('000t)	g/t Au	('000t)	g/t Au	('000 oz)
Red October										
Red October UG	2.0	105	8	483	5.7	411	6.3	999	6.2	199
Red October Subtotal		105	8.4	483	5.7	411	6.3	999	6.2	199
Devon										
Devon Pit (OP)	1.0	-	-	341	4.8	102	3.6	443	4.6	65
Olympic (OP)	1.0	-	-	-	-	171	2.8	171	2.8	15
Hill East (OP)	1.0	-	-	-	-	748	2.0	748	2.0	48
Devon Subtotal		-	-	341	4.8	1021	2.3	1362	2.9	128
Fortitude										
Fortitude	1.0	127	2.2	2,979	1.9	4,943	1.9	8,048	1.9	489
Gallant (OP)	1.0	-	-	-	-	341	2.1	341	2.1	23
Bindah (OP)	1.0	-	-	43	3.3	483	2.3	526	2.4	40
Fortitude Subtotal		127	2.2	3021	2.0	5,767	1.9	8,915	1.9	553
Stockpiles		-	-	-	-	191	1.0	191	1.0	6
Total		232	5.0	3,845	2.7	7,199	2.2	11,467	2.4	886

Table 2: Lake Carey Resource*

*Matsa confirms that it is not aware of any new information or data that materially affects the Resource as stated. All material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply and have not changed since the last release.

***Special note:** The Resources of the Devon Pit project, representing 65koz, are subject to the Profit Share Joint Venture Agreement announced on 23 December 2022³.

This ASX announcement is authorised for release by the Board of Matsa Resources Limited.

For further information please contact:

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Competent Person Statement

Exploration results

The information in this report that relates to Exploration results is based on information and compiled by Pascal Blampain, who is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Blampain serves on the Board and is a full time employee, of Matsa Resources Limited. Mr Blampain has sufficient experience which is relevant to the style of mineralisation and the type of ore deposit under consideration and the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Blampain consents to the inclusion in the report of the matters based on his information in the form and context in which it appears

³ ASX Announcement 23rd December 2022-Settlement of Devon Pit JVA With Linden - Devon Gold Project

Appendix 1: Collar Details

Province	Prospect	Orig_Grid_ID	North	East	RL
Phang Nga	Rose Panther	WGS84	950904	439255	172
Ratchaburi	Spotted Panther	WGS84	1507042	522881	301
Kanchanaburi	Black Panther	WGS84	1533202	515110	177
Kanchanaburi	Pink Panther	WGS84	1537067	514159	178

Appendix 2 - Matsa Resources Limited

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. Measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information 	<p>Rock chipping – 2.5 – 3.5 kg samples taken from outcrop Float sampling – 2.5 – 3.5 kg lag sample collected from float. Float largely reflects subcrop material loosened during tilling of earth by farming operations.</p> <p>Rock chip samples were selected based on visual inspection for representivity and assessment of indicative target mineralogy, Float sampled on broad grid pattern where available.</p> <p>Samples prepared, tested and assayed by Yongxing Special Materials Co., Ltd at their commercial lepidolite processing facilities using their proprietary lepidolite processing technology.</p>
Drilling techniques	<ul style="list-style-type: none"> 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.). 	N/A, no drilling.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	N/A, no drilling.
Logging	<ul style="list-style-type: none"> 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. 	N/A, no drilling.

	<ul style="list-style-type: none"> • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. • The total length and percentage of the relevant intersections logged. 	
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling • Whether sample sizes are appropriate to the grain size of the material being sampled. 	<p>Samples were taken on outcrop or subcropping pegmatites and lag where samples of lepidolite or polyolithionite were collected from limited outcrop.</p> <p>Matsa does not suggest these samples are representative of the broader geological package at depth in terms of lithium grade, however the technical results of processing these lepidolite and polyolithionite to extract the lithium is thought to be representative of the wider nature of the style of lithium mineralisation.</p>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie. Lack of bias) and precision have been established. 	<p>The testwork was conducted by Yongxing technical staff at the commercially operating Yongxing lepidolite processing facilities.</p>
Verification of sampling and assaying	<ul style="list-style-type: none"> • The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data. 	<p>The results of the testwork were provided to Matsa in a word version document.</p>
Location of data points	<ul style="list-style-type: none"> • Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control. 	<p>Rock chip locations were recorded with a handheld GPS with +/- 3m accuracy. The grid used was WGS84, z47. Collar cords can be found in Appendix 1.</p>

Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>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.</i> • <i>Whether sample compositing has been applied.</i> 	<p>Data spacing was dependent on outcrop and lag location. There is insufficient data to determine any economic parameters or mineral resources.</p>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> • <i>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.</i> 	<p>Rock chip sampling is limited to outcrop and lag and may not be representative of mineralisation at depth.</p>
Sample security	<ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> 	<p>Matsa staff delivered samples from the field directly to Yongxing’s commercial lepidolite processing facility in Jiangxi province to conduct the testwork.</p>
Audits or reviews	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> 	<p>No audits or reviews have been completed.</p>

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area. 	Exploration works were conducted under Prospecting Licenses issued by each of the relevant sub province associated with the application area. The applications are progressing through regulatory processes with ongoing discussions with the Thai regulators to provide Matsa with legal and exclusive access to the tenements. These are not yet granted nor has an application been approved nor registered (process has been discussed in the body of the report).
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	Limited mapping at the regional scale was conducted by the British Geological Survey in the 1970s. REE potential has been investigated over part of the project. Historical tin mining has taken place in the region. No modern exploration has taken place.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	The deposit types being sought are lithium bearing pegmatites associated with the Three Pagodas Fault zone structure and similar to the geological setting of the Khao Po pegmatite swarm and Ranong Fault setting at Phang Nga associated within Thailand's Western Granite Province.
Drill hole Information	<ul style="list-style-type: none"> 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"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	N/A, no drilling.
Data aggregation methods	<ul style="list-style-type: none"> 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. 	No metal equivalents have been used, no top cuts were applied.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	Samples are selected rock chips and float taken from surface and are not necessarily representative of the entire pegmatite unit.
Diagrams	<ul style="list-style-type: none"> 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. 	Maps have been provided in body of report.
Balanced reporting	<ul style="list-style-type: none"> 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. 	A description of results, including major analytes if available, is provided in the body of the report.
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	All material information has been reported in the body of the report.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	Rock chip and float sampling are early stage exploration tools. Further mapping, sampling and potential drilling is planned to progress the project.