6 March 2024

# EXCELLENT ROCK CHIP ASSAYS PEAKING AT 4.67% Li<sub>2</sub>O

# MULTIPLE ASSAY RESULTS > 1% Li<sub>2</sub>O

## **NEW ZONE – OSBORNE EAST - IDENTIFIED**

# COARSE SPODUMENE CRYSTAL SIZE UP TO 30CM LENGTH

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## **Highlights:**

- Ground reconnaissance sampling from 100% owned Artemis Resources tenement E47/1746 delivers excellent assay results from the Mt Marie prospect including:
  - o 24AR01-14 **4.67% Li<sub>2</sub>O**
  - o 24AR01-15 **2.11% Li<sub>2</sub>O**
  - o 24AR01-02 **1.74% Li<sub>2</sub>O**
  - o 24AR01-06 **1.68% Li<sub>2</sub>O**
  - 24AR01-11 1.46% Li<sub>2</sub>O
- Coarse spodumene crystals observed up to 30cm in length.
- Multiple rock chip assays >0.50% Li<sub>2</sub>O from new zone at Osborne East
- Further reconnaissance and follow-up sampling to be undertaken across E47/1746

**Artemis Resources Limited** ('**Artemis**' or the '**Company**') (ASX/AIM: **ARV**) is pleased to provide this update to shareholders on its recent lithium focused ground reconnaissance program.



**Executive Director George Ventouras** commented "This second round of rock chip assay results provides further evidence of the potential scale and grade of the Artemis lithium discovery. These results from the Mt Marie prospect and the new zone identified at Osborne East, are opening up the lithium mineralised region considerably and suggests that **a greater portion of the tenement area** is now prospective for lithium mineralisation.

It's very early in the reconnaissance program, however given the results to date and the outcropping pegmatites already delineated, we are confident that we have only just scratched the surface of lithium mineralisation potential across the tenement portfolio. With more than 150km<sup>2</sup> of 100% owned tenure and only around 25km<sup>2</sup> covered in the ground reconnaissance program to date, the pathway of prospectivity is becoming exciting".

## Mt Marie Lithium Prospect

A second program of strategic ground reconnaissance was completed in February which aimed to expand on the results achieved previously, where rock chip assays peaked at **1.82% Li<sub>2</sub>O** at the **Mt Marie Prospect**<sup>1</sup> (Figure 2). The location of the first outcropping pegmatite was used as a starting point. The ground crew extended this beyond 200m of outcropping strike length and further sampled this trend and general area, in addition to other locations identified through technical review.

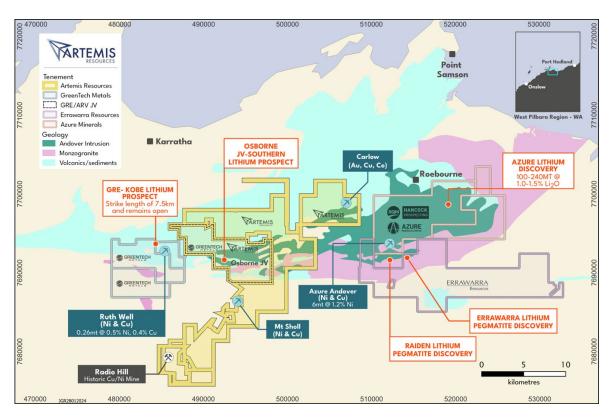


Figure 1. Artemis Resources West Pilbara tenements



#### Osborne East Lithium Prospect

A first program of ground reconnaissance was completed in February and covered part of the area to the east of the Osborne JV (ARV:49%, GRE: 51%). This area was recognised via drone survey and identified as a priority target. Several rock chips were subsequently sampled from this new region.

## **Results from Rock Chip Sampling**

In total, 36 rock chip samples were collected from the Mt Marie and Osborne East prospects and dispatched to the lab for multi-element analysis.

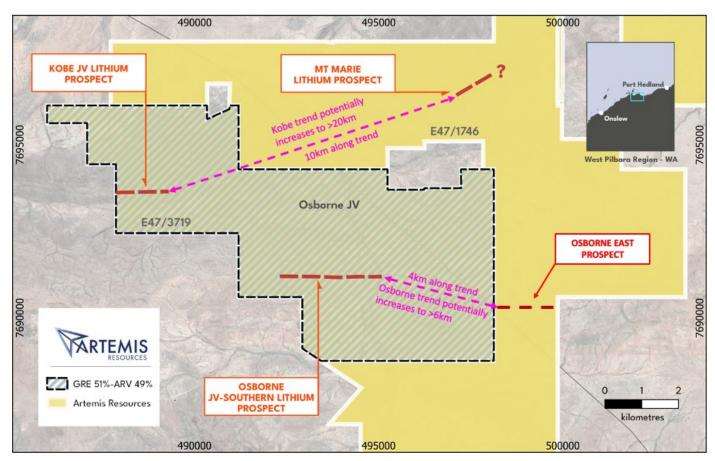


Figure 2 Mt Marie and Osborne East Lithium Prospects



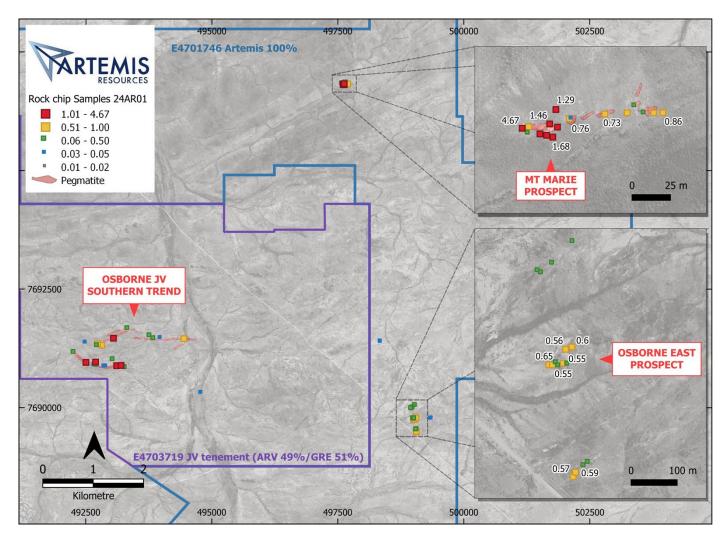


Figure 3. Rock chip sample locations at the Mt Marie and Osborne East Lithium Prospects

The rock chip assays have delivered excellent results which include the following;

#### **Mt Marie Prospect**

- 24AR01-14 **4.67% Li<sub>2</sub>O**
- 24AR01-15 **2.11% Li<sub>2</sub>O**
- 24AR01-02 **1.74% Li<sub>2</sub>O**
- 24AR01-06 **1.68% Li<sub>2</sub>O**
- 24AR01-11 1.46% Li<sub>2</sub>O
- 24AR01-04 1.45% Li<sub>2</sub>O
- 24AR01-12 1.29% Li<sub>2</sub>O
- 24AR01-01 **1.06% Li<sub>2</sub>O**
- 24AR01-03 **1.05% Li<sub>2</sub>O**



#### Osborne East Prospect

- 24AR01-021 0.65% Li<sub>2</sub>O
- 24AR01-027 0.60% Li<sub>2</sub>O
- 24AR01-036 **0.59% Li<sub>2</sub>O**
- 24AR01-035 0.57% Li<sub>2</sub>O

Rock chip samples from the Mt Marie prospect were previously tested for mineralogy type at Curtin University and the analysis confirmed that the host mineral for the lithium is **spodumene**<sup>2</sup>. The follow up exploration program uncovered even **larger and coarser spodumene crystals** than previously identified (Figure 4) which provides a level of confidence as to the grade and scale of this discovery. Samples from Osborne East will be sent to the university in due course for testing and to ascertain mineralogy.

This level of Li<sub>2</sub>O result is unparalleled in the region and is on par with the results achieved at the Andover project of Azure Minerals Ltd where they recorded a peak rock chip assay result of **4.87% Li<sub>2</sub>O**<sup>3</sup> and have reported an exploration target of **100-240mt@1.00-1.5% Li<sub>2</sub>O**<sup>4</sup> (Azure Minerals is currently subject to a takeover proposal via a joint bid from Sociedad Quimica y Minera de Chile SA (SQM) and Hancock Prospecting Pty Ltd).

The lithium bearing pegmatite at the Mt Marie prospect occurs along a mirrored or similar NE structural trend to pegmatites discovered by Azure Minerals only 20km to the east. Given the location of the Artemis tenements in relation to the Azure discovery and the proximity to Karratha and its logistical advantages, the potential pathway for the Mt Marie lithium prospect is becoming clearer and more compelling.

<sup>&</sup>lt;sup>3</sup>ASX Announcement, Azure Minerals Ltd, 20 January 2023

<sup>&</sup>lt;sup>4</sup>ASX Announcement, Azure Minerals Ltd, 7 August 2023



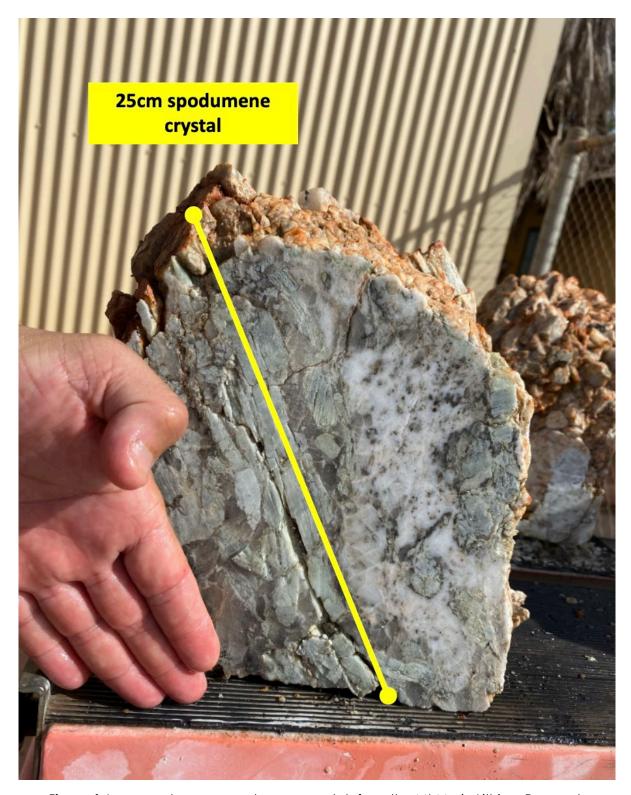


Figure 4. Large and coarse spodumene crystals from the Mt Marie Lithium Prospect.





**Figure 5**. Executive Director George Ventouras with spodumene bearing pegmatite sample from the Mt Marie Lithium Prospect

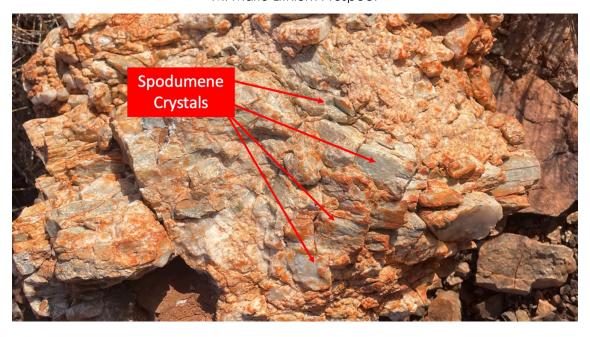


Figure 6. Pegmatite with abundant spodumene, sample from the Mt Marie Prospect



The pegmatites intrude mafic units similar to the type of host rocks observed at the Azure lithium discovery. The majority of recently sampled pegmatites are characterised by quartz-feldspar-mica mineralisation with **visible spodumene** commonly observed in outcrops at the newly discovered Mt Marie prospect. In this area the spodumene crystals may represent up to 40% of the bulk rock fabric and range between **3cm to 10cm in length**. However, the maximum spodumene crystal length is reported **up to 30cm**. The latest assay results, reporting up to **4.67% Li<sub>2</sub>O**, are very compelling and support these observations.

The newly discovered pegmatite trend at Osborne East has returned some very promising assay results of up to  $0.65 \% \text{Li}_2\text{O}$ . These pegmatites broadly occur to the east of the high-grade Osborne lithium pegmatite zone<sup>5</sup> which is located on the Company's JV ground. Importantly, these new results now form an emerging and prospective  $\sim 6 \text{km}$  east-west trend.

Further work on the tenements across the major structural zones will follow on from exploration already conducted including drone surveying, rock chip sampling, soil sampling and other appropriate ground reconnaissance, where appropriate. The aim of the technical team will be to cover all priority areas identified through previous review and to build on the results to date. Program of works (PoW's) and heritage clearance applications are also in process.



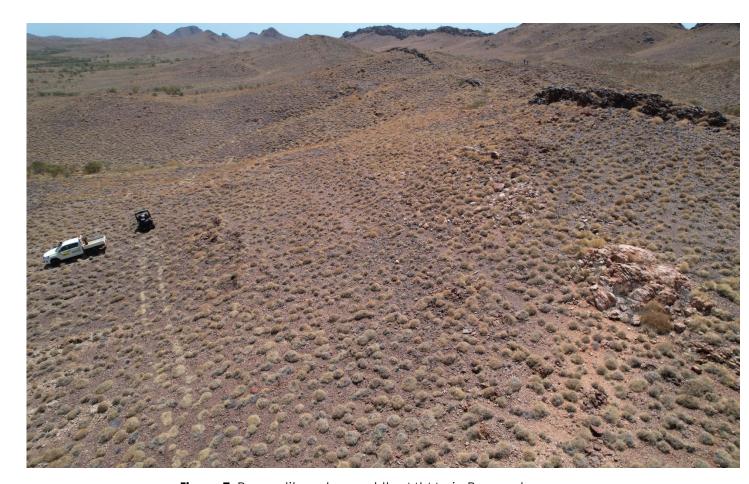


Figure 7. Pegmatite outcrop at the Mt Marie Prospect

Further work is also being planned on the **Osborne Lithium Project** which is a joint venture with Greentech Metals (ASX:GRE) (ARV:49%-GRE:51%).

This announcement was approved for release by the Board.

For Further information contact Mr George Ventouras / Executive Director

info@artemisresources.com.au

#### **About Artemis Resources**

Artemis Resources (ASX/AIM: ARV; FRA: ATY) is a gold, copper and lithium focused resources company with projects in Western Australia. The Mt Marie Lithium Prospect, the Osborne Lithium JV (Artemis 49%; GreenTech Metals (ASX:GRE) 51%) and the Carlow Castle gold-copper-cobalt project in the West Pilbara; and the Paterson Central Gold/Copper project in the Paterson Province (located adjacent to Greatland Gold / Newmont's recent gold-copper discovery at Havieron and only ~42km from the Newmont Telfer gold mine).

Artemis also owns the Radio Hill processing plant, located only 35km from Karratha.

For more information, please visit <u>www.artemisresources.com.au</u>



#### **Competent Person Statement**

Adrian Hell, BSc (Hons), an advisor and consultant to the Company, is a Member of the AUSIMM, and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration 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'. Adrian Hell consents to the inclusion in the report of the information in the form and context in which it appears.

Dr Martin Wells (PhD). The sample testing was carried out in the John de Laeter Centre at Curtin University. Spodumene was identified using a proprietary automated mineralogy technique and confirmed using x-ray diffraction (XRD) analysis by Dr Martin Wells (PhD). Dr Wells is a Research Fellow (Mineralogy/Petrology) and an authority in lithium ore deposits as evidenced by his authorship of the 2023 Geological Survey of Western Australia Report 228 (The geology, mineralogy and Geometallurgy of EV materials deposits in Western Australia; <a href="https://dmpbookshop.eruditetechnologies.com.au/product/mriwa-report-m532-geology-mineralogy-and-metallurgy-of-ematerial-resources-in-wa.do">https://dmpbookshop.eruditetechnologies.com.au/product/mriwa-report-m532-geology-mineralogy-and-metallurgy-of-ematerial-resources-in-wa.do</a>). Dr Martin Wells consents to the inclusion in the report of the information pertaining to sample analyses undertaken at the John De Laeter Centre in the form and context in which it appears.

#### Significant Results > 0.5% Li<sub>2</sub>O

Sample No	Easting	Northing	Li ppm	Li2O_wt%	Cs ppm	Nb ppm	Rb ppm	Ta ppm
24AR01-001	497760	7696974	4940	1.06	48.9	94.4	1480	90.6
24AR01-002	497761	7696974	8080	1.74	39.5	47.1	904	55.3
24AR01-003	497758	7696967	4860	1.05	39.2	60.1	1275	61.7
24AR01-004	497759	7696973	6740	1.45	70.5	61.8	1920	76.2
24AR01-006	497757	7696968	7810	1.68	36.8	116	740	115
24AR01-007	497790	7696983	3380	0.73	55.3	63.4	2150	129
24AR01-008	497826	7696984	4010	0.86	59.7	69.4	1240	98.2
24AR01-010	497768	7696980	3510	0.76	55.1	63.9	1655	65.3
24AR01-011	497756	7696976	6800	1.46	84.1	45.5	2400	68.3
24AR01-012	497760	7696986	6000	1.29	90.9	40.3	2610	60.3
24AR01-014	497739	7696973	21700	4.67	61.8	37.2	523	53.4
24AR01-015	497754	7696968	9780	2.11	18.3	86.1	775	105.5
24AR01-018	499139	7689901	2550	0.55	727	76.8	9430	30.1
24AR01-021	499152	7689902	3010	0.65	643	70.1	9520	29.7
24AR01-023	499170	7689906	2560	0.55	847	42.5	8880	46.2
24AR01-027	499188	7689943	2780	0.60	1230	97.5	10150	60.5
24AR01-028	499175	7689937	2610	0.56	1170	33.5	11350	51.4
24AR01-035	499196	7689653	2670	0.57	1220	63.9	9520	46.1
24AR01-036	499192	7689643	2720	0.59	1120	87.9	9770	66.7



# JORC Code, 2012 Edition - Table 1 report template

# **Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>Reconnaissance style rock chip sampling taken opportunistically from pegmatite outcrop.</li> <li>This announcement discusses the findings of a reconnaissance site visit with a view to determining the lithium potential of the Company's tenements and which included the collection of rock chip samples.</li> <li>Pegmatite was identified in outcrop.</li> <li>The rock chip samples were restricted to outcrop of pegmatite rocks.</li> <li>Samples were dispatched to ALS Global Laboratories in Perth for analysis.</li> </ul>
Drilling	<ul> <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</li> </ul>	<ul> <li>Not applicable.</li> <li>This announcement does not relate to drilling carried out by Artemis Resources Ltd.</li> </ul>



techniques	diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>No mention is made in this announcement of exploration results including drilling conducted by other companies on nearby tenements.</li> </ul>
Drill sample recovery	<ul> <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>	Not applicable as no details on any drilling carried out by Artemis Resources are included in this announcement.
Logging	<ul> <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>	Not applicable due to the reconnaissance nature of the sampling.
Sub-sampling techniques and sample preparation	<ul> <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 maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.</li> </ul>	<ul> <li>Rock chip samples were dispatched to ALS Global Laboratories in Perth for analysis using their ME_MS89L (52 elements) plus B-MS89L technique. 53 elements in total. Sample decomposition by Sodium Peroxide Fusion, HCl leach (FUS-PER02) is considered complete.</li> <li>The laboratory reported the use of standards and blanks as part of the analyses for QA/QC. In addition to the lab standards and blanks, three lab pulp duplicates were also reported.</li> <li>The samples were opportunistic in nature and taken from insitu outcrop.</li> <li>Samples were approximately 0.5kg to 1kg in weight.</li> <li>The samples were considered generally representative of the outcrop being sampled.</li> </ul>



,	RESOL		
		<ul> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	
Qua	•	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the	Rock chip samples were dis in Perth for analysis using the      RMS80L technique, 53 along
assa	y data and	technique is considered partial or total.	B-MS89L technique. 53 ele
labo	ratory	<ul> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the</li> </ul>	<ul> <li>The laboratory reported the of the analyses for QA/QC.</li> </ul>
tests	•	<ul> <li>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>	<ul> <li>No standards or blanks were</li> <li>The mineralogy of two lithium by XRD analysis undertaken</li> <li>XRD: Diffraction patterns were Discover diffractometer using mA) and scanning from 4 to for 1.08 s/step for a total scale.</li> <li>Samples were prepared for front loading of pulverised modification patterns displayed presented over the 5–60° and standards.</li> </ul>

# **Verification** of The verification of significant intersections by either independent or alternative company personnel.

- sampling and The use of twinned holes.
- assaying
- Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.

- Rock chip samples were dispatched to ALS Global Laboratories in Perth for analysis using their ME\_MS89L (52 elements) plus B-MS89L technique. 53 elements in total.
- The laboratory reported the use of standards and blanks as part of the analyses for QA/QC.
- No standards or blanks were submitted by the company.
- The mineralogy of two lithium bearing samples was determined by XRD analysis undertaken at Curtin University.
- XRD: Diffraction patterns were obtained using a Bruker D8
   Discover diffractometer using CuKα radiation (40 kV and 40 mA) and scanning from 4 to 90° 2θ in 0.015° 2θ steps, counting for 1.08 s/step for a total scan time of ≈100 minutes/scan
- Samples were prepared for random-powder XRD analysis by front loading of pulverised material into a plastic mount • Diffraction patterns displayed in the following slides are presented over the 5–60° and 10°33° 2θ angle-range to better display some of the less intense peaks • To correct for 2θ shifts in the diffraction patterns was shifted using quartz as the internal standard.
- TIMA automated mineralogy: Mineral and element distribution maps of two polished round mounts (25 mm diameter) were obtained using the TIMA (Tescan Integrated Mineral Analyser), automated mineralogy system at the John De Lataeur Centre.
- Duplicate samples of the lithium bearing pegmatite from earlier sampling program have been submitted to Curtin University in Perth for XRD analysis.
- The results of these verification analyses have been received.



	•	Discuss any adjustment to assay data.		
Location of	•	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings	•	Sample points were determined by hand held GPS which is considered appropriate for the reconnaissance nature of the
data points		and other locations used in Mineral Resource estimation.		sampling.
-	•	Specification of the grid system used.		
	•	Quality and adequacy of topographic control.		
Data spacing	•	Data spacing for reporting of Exploration Results.  Whether the data spacing and distribution is sufficient to	•	Not applicable due to the reconnaissance nature of the sampling.
and		establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve	•	No attempt has been made to demonstrate geological or grac continuity between sample points.
distribution		estimation procedure(s) and classifications applied.		continuity between sample points.
	•	Whether sample compositing has been applied.		
Orientation of	•	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which	•	Not applicable
data in relation		this is known, considering the deposit type.		
to geological	•	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to		
structure		have introduced a sampling bias, this should be assessed and reported if material.		
Sample	•	The measures taken to ensure sample security.	•	Sample security is by way of chain of custody.
security				
Audits or	•	The results of any audits or reviews of sampling techniques and data.	•	No review of the sampling techniques has been undertaken.
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# **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> <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> <li>The Mt Marie project tenement covers an area of 126km² and comprises granted tenement: E47/1746</li> <li>The tenement is 100% owned by Artemis Resources subsidiary company KML No 2 Pty Ltd</li> <li>The tenement is in good standing with DMIRS and there are no known impediments for exploration on these tenements.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Numerous exploration parties have held the area covered by the current Artemis Resources tenure previously. There is no reported previous exploration for lithium bearing pegmatites on the tenements.</li> <li>No other exploration companies generated data which was used in this release.</li> <li>Regional RTP aeromagnetics and geology from Geological Survey of WA.</li> <li>The area was previously explored by Fox Resources Ltd and was focussed on nickel and gold exploration.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The lithium bearing pegmatite zone is hosted in proximity to the Regal., Cleaverville Formations and the Andover Intrusion.</li> <li>The lithium pegmatites appear as coarse crystalline with primary feldspar quartz mica composition. Albite-silica alteration is common with foliated textures.</li> </ul>



Drill hole Information	<ul> <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> <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>	Not applicable as no drilling has been undertaken
Data aggregation methods	<ul> <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>	Not applicable, no weighting average applied to assay data.
Relationship between mineralisation	<ul> <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> </ul>	Not applicable as surface sampling is reconnaissance in nature.



widths and intercept lengths	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').
Diagrams	<ul> <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> <li>All the appropriate maps are provided in the body of this announcement.</li> </ul>
Balanced reporting	<ul> <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> <li>This announcement discusses the findings of recent         reconnaissance sampling and associated assays.</li> </ul>
Other substantive	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical</li> <li>All the meaningful exploration data has been included in the body of this announcement.</li> </ul>
exploration data	survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> <li>Artemis Resources plans to conduct further ground reconnaissance and sampling in the short term to determine the surface extent both laterally and along strike and also the economic potential of the prospect. Trenching and drilling will also be undertaken if warranted.</li> </ul>