ASX ANNOUNCEMENT
11 September 2023

Detailed Airborne Hyperspectral Survey Completed at North Fork Rare Earth Project, Idaho, USA.

HIGHLIGHTS

- **A detailed airborne hyperspectral survey (VNIR-SWIR 320 bands at 1.5m resolution) has been completed at the North Fork Rare Earth Project (ca. 50km^2).**
- **TheiaX, who were commissioned to undertake the survey, have proprietary algorithms capable of characterising carbonatites and REE mineralisation from hyperspectral data.**
- **Data processing is underway, and Megado anticipates a final report in coming weeks.**
- **New targets identified from the hyperspectral survey will be ground-truthed and sampled for REE mineralisation.**
- **Megado is excited to test the upside potential at the project and are well advanced in progressing drill permitting at the Silver King prospect.**

Megado Minerals Limited (ASX: MEG) (**Megado** or the **Company**) has completed an airborne hyperspectral survey over its North Fork Rare Earth Element Project (see Figures 1 & 2; and Appendix A).

Megado engaged independent geological remote sensing consulting group, TheiaX GmbH[1], to map carbonatites and REE mineralisation utilising hyperspectral data via airborne survey. TheiaX have specific expertise in identifying carbonatites and REE mineralisation from hyperspectral surveys[2].

Hyperspectral data was acquired in July 2023 using fixed wing aircraft (Cessna 206). Approximately 160-line km were surveyed at an average altitude of 6,890ft (lowest safely available due to terrain constraints), resulting in resolution of ca. 1.5m per pixel. Hyperspectral data acquisition was 320 bands in the VNIR to SWIR wavelengths. The USA-based FAA approved acquisition partner was required to pre-process the raw data in order to account for flight corrections, daily weather changes and topographic fluctuations.

TheiaX is currently processing the data using its proprietary algorithms for REE mineralisation and carbonatite determination. The results from this data processing are anticipated to be received in the coming weeks with fieldwork follow-up planned for completion shortly thereafter.

[1] TheiaX GmbH is a spin-off of the Helmholtz Institute Freiberg for Resource Technology (HIF) part of the Helmholtz-Zentrum Dresden - Rossendorf e. V. (HZDR). From science and R&D through to commercial applications, TheiaX's expertise combines hyperspectral imaging and machine learning technics providing the exploration and mining sectors with bespoke solutions.

[2] Booysen R, Jackisch R, Lorenz S, Zimmermann R, Kirsch M, Nex PAM, Gloaguen R. Detection of REEs with lightweight UAV-based hyperspectral imaging. Sci Rep. 2020 Oct 15;10(1).

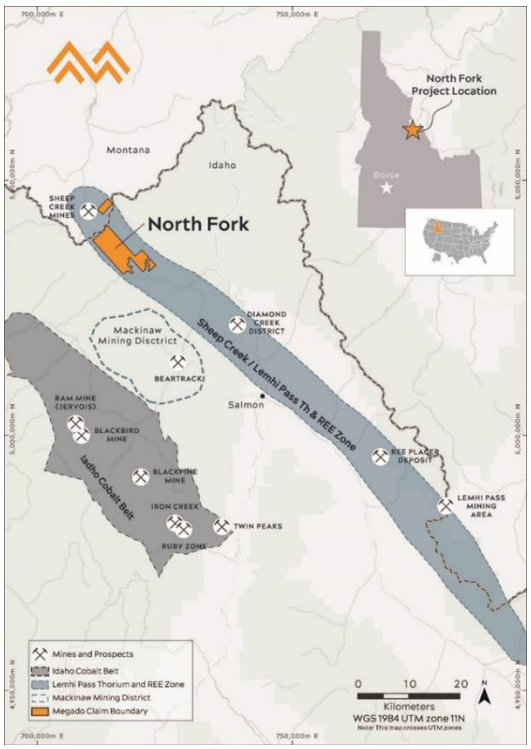

Figure 1: North Fork Rare Earth Project, located within the highly prospective REE belt in Idaho.

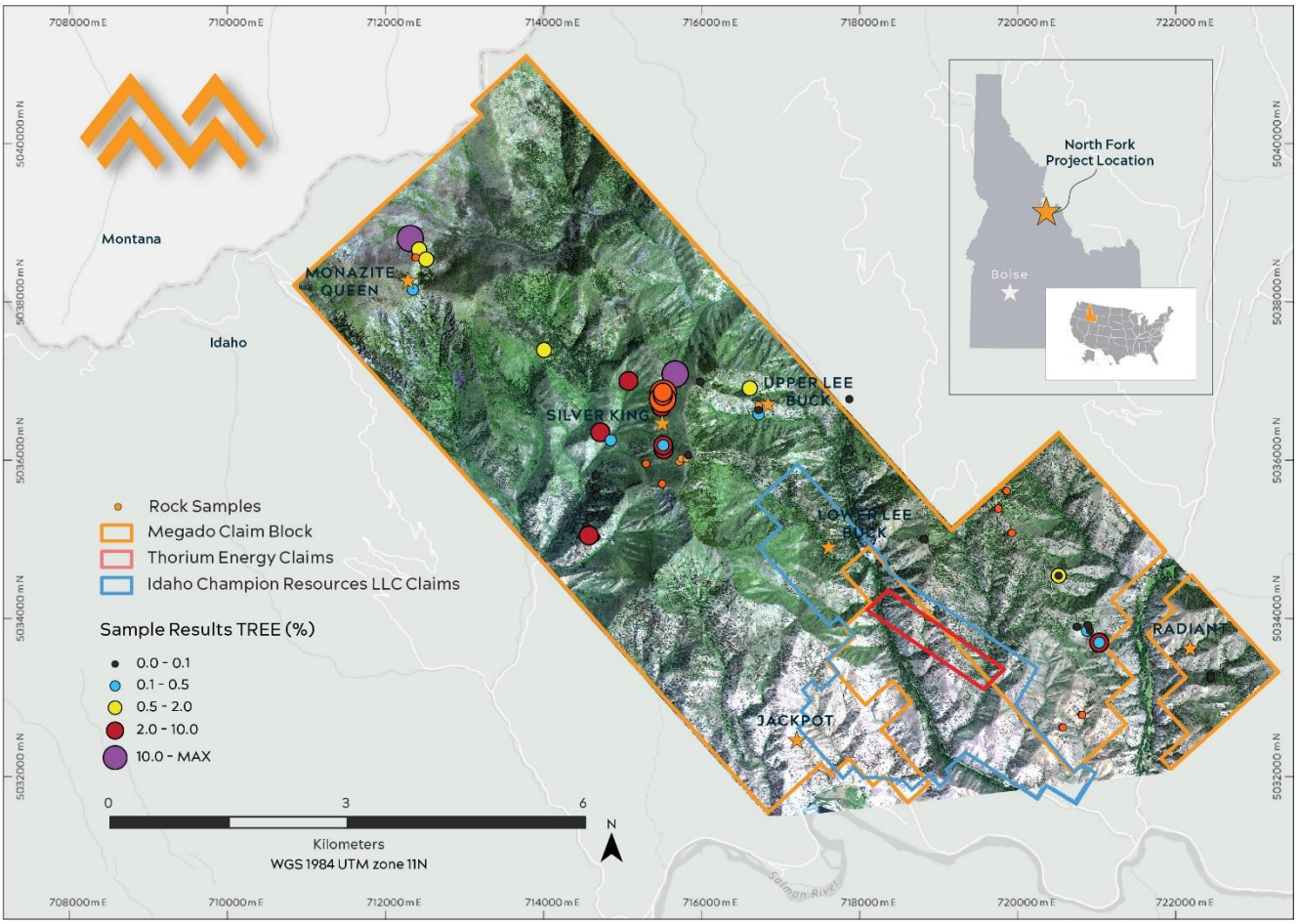

Figure 2: Hyperspectral survey footprint (initial RGB imagery) over the North Fork project area.

Future Work Programs at North Fork

Upon receipt of the final processed data from TheiaX, including targeting of carbonatites and possible REE mineralisation, Megado will merge existing datasets, namely: historical sampling results, recent mapping and sampling by Megado, historical geophysics (see announcement 29 March 2023), and the final hyperspectral data targeting carbonatites and REE mineralisation.

'Boots-on-the-ground' fieldwork will be undertaken to ground truth the identified hyperspectral targets at North Fork and aim to delineate additional drill targets for REE mineralisation.

Megado continues to work with the USDA Forest Service in permitting its inaugural drill program at Silver King.

Related Announcements:

21 Aug 2023	Field Activities Resume at Cyclone Lithium Project
06 June 2023	Fieldwork at Cyclone Lithium Project - Postponed
29 May 2023	Targets Defined - Fieldwork to Commence at Cyclone Project
28 April 2023	Canadian Project Acquisition Completes
17 April 2023	Potential Lithium Bearing Pegmatite Targets Identified
29 March 2023	Detailed Geophysics Identifies Exciting New Carbonatite Targets
14 March 2023	Silver King Prospect at North Fork returns up to 15.85% TREE
27 February 2023	North Fork REE Project Additional Claims Secured
17 February 2023	Canadian Lithium Project Acquisition
17 January 2023	Newly Acquired Historical Data North Fork REE Project
15 September 2022	Rock Samples at new REE Prospect at North Fork Project with up to 2.41% TREO, including 0.58% Nd-Pr
29 August 2022	Megado Initiates Strategic Review at USA Rare Earths Project
21 June 2022	Felix Strategic Minerals Acquisition Completes
15 June 2022	Carbonatites Located at Surface at North Fork Project, Idaho
7 June 2022	MEG Raises A$2.4m to Fund Initial Exploration at North Fork
14 April 2022	MEG to Acquire US High-Grade Rare Earth Element Project

-ENDS-

Authorised for release by the Board of Megado Minerals Limited.

For more information:

Ben Pearson
Managing Director & CEO

M: +61 8 6141 3260
E: ben.pearson@megadominerals.com

About Megado Minerals

Megado Minerals Ltd (ASX: MEG) (the Company or Megado) is an ASX-listed mining exploration company. The company's assets include the North Fork Rare Earth Project in Idaho, USA and the Cyclone Lithium Project in the James Bay region in Quebec, Canada.

In June 2022, Megado completed the acquisition 100% of the rights, title, and interest in the North Fork Rare Earth Project ('North Fork'), located in the mining-friendly Idaho Cobalt Belt region of Idaho, USA. Subsequently, Megado has acquired new lode claims in the project area. North Fork now consists of 526 (granted and in application), covering approximately 45km^2 with outcropping, high-grade, rare-earth element (REE) mineralised rock. It contains multiple carbonatite-hosted, high-grade, REE mineralised veins that have been observed at surface across numerous prospects over 10km along strike. Previous exploration has returned exceptional grades in channel samples. REE mineralisation displayed at North Fork is high-grade and enriched in critical rare earths (CREO), (typically Y, Nd, Tb, Dy, Eu). Idaho, where North Fork is located, is ranked the best mining policy jurisdiction in the world in 2020 by Fraser Institute.

In February 2023, Megado announced the acquisition of the Cyclone Lithium Project. The Project is in Quebec's James Bay region and centred on the Aquilon Greenstone Belt. The Project encompasses 130km^2 and includes 304 claims. Located within Category-III lands, the Cyclone Project does not carry any restrictions relating to mining or exploration according to the James Bay Agreement. The Project area is easily accessible year-round via the Trans Taiga Road, which transects the southern part of the Project area.

Forward Looking Statements

This announcement contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance, or achievements to be materially different from those expressed or implied by such forward-looking information.

Competent Persons Statement

Information in this "ASX Announcement" relating to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves has been compiled by Dr Chris Bowden who is a Fellow & Chartered Professional of the Australian Institute of Mining and Metallurgy and is Chief Geologist of Megado Minerals Ltd.

He has sufficient experience that is relevant to the types of deposits being explored for and qualifies as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code 2012 Edition). Dr Bowden has consented to the release of the announcement.

Appendix A: JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g., 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.*	The nature of results in the body of this ASX Release relate to acquisition of hyperspectral data over the North Fork Project. Flight survey parameters as follows: • Aircraft type: Cessna 206 • Airport base: Salmon, Idaho • Flight altitude: min - 11,362', max - 13,573', mean AGL - 6,890' • Total line kilometres: 160 (16 flight lines, block sequential flight N>S, ground swath 1,536 m) • Flight duration: 3h Data acquisition was at VNIR-SWIR – 320 bands at 1.5m resolution. Post processing will be done by TheiaX GmbH utilising proprietary algorithms for carbonatite and REE identification[1].
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Not applicable for this release, no sampling works done.
	Aspects of the determination of mineralisation that are Material to the Public Report.	Not applicable for this release, no sampling works done.
	In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverized 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 (e.g., submarine nodules) may warrant disclosure of detailed information.	Not applicable for this release, no sampling works done.
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).*	Not applicable for this release, no drilling works done.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Not applicable for this release, no drilling works done.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Not applicable for this release, no drilling works done.
	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.	Not applicable for this release, no drilling works done.
Logging	*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.*	Not applicable for this release, no drilling works done.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Not applicable for this release, no drilling works done.
	The total length and percentage of the relevant	Not applicable for this release, no drilling works done.

Criteria	JORC Code explanation	Commentary
	intersections logged.	
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Not applicable for this release, no drilling works done.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Not applicable for this release, no drilling works done.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Not applicable for this release, no drilling works done.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Not applicable for this release, no drilling works done.
	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.	Not applicable for this release, no drilling works done.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Not applicable for this release, no drilling works done.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	Not applicable for this release, no assay or laboratory procedures have been used.
	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.	Not applicable for this release, no drilling works done.
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Not applicable for this release, no samples generated thus no QAQC procedures have been adopted.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Not applicable for this release, no assays conducted thus no significiant intercepts reported.
	The use of twinned holes.	Not applicable for this release, no drilling works done.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Digital copy of the mapping survey, report, maps, and GIS data are stored on the company cloud server.
	Discuss any adjustment to assay data.	Not applicable for this release, no assay data generated thus no adjustments to assay data made.
Location of data points	*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.*	Not applicable for this release, no drilling works done thus no downhole surveys conducted.
	Specification of the grid system used.	NAD83 UTM Zone 11N
	Quality and adequacy of topographic control.	Not applicable for this release, no sampling works done.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Not applicable for this release, no Exploration Results are reported.
	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.	Not applicable for this release, no Exploration Results are reported, nor Mineral Resource or Ore Reserve estimations done.
	Whether sample compositing has been applied.	Not applicable for this release, no sampling works done thus no compositing has been applied.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	Not applicable for this release, no sampling works done.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is	Not applicable for this release, no drilling works done.

Criteria	JORC Code explanation	Commentary
	considered to have introduced a sampling bias, this should be assessed and reported if material.	
Sample security	*The measures taken to ensure sample security.*	Not applicable for this release, no sampling works done thus no sample security required.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Not applicable for this release, no sampling works done thus no audits or reviews required.

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	*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.*	Information regarding tenure is included in the body of this release, and more specifically, within earlier releases outlining the North Fork acquisition.
	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.	The Concessions are believed to be in good standing with the governing authority and there is no known impediment to operating in the area.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Limited and historical exploration works have been done on the area, which include results in previous ASX releases on North Fork.
Geology	*Deposit type, geological setting and style of mineralisation.*	Regional geology of the area consists predominantly of Proterozoic metamorphosed amphibolite and augen gneiss, with younger Palaeozoic igneous carbonatite intrusions, and minor felsic dykes. Rare earth mineralisation is primarily associated with the igneous carbonatite intrusions as dykes and sills, with additional rare earth mineralisation noted within pegmatites, and disseminated within the host rock gneiss and schistose amphibolite rocks.
Drill hole Information	*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:* *easting and northing of the drill hole collar* *elevation or RL (Reduced Level – elevation above sea level in meters) of the drill hole collar* *dip and azimuth of the hole* *down hole length and interception depth* *hole length.*	Not applicable for this release, no drilling works done.
	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.	Not applicable for this release, no drilling works done.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.*	Not applicable for this release, no drilling works done thus no reporting of Exploration Results.
	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.	Not applicable for this release, no drilling works done thus no data aggregation methods were used.
	The assumptions used for any reporting of metal	Not applicable for this release, no drilling works done thus no

Criteria	JORC Code explanation	Commentary
	equivalent values should be clearly stated.	metal equivalent values have been calculated.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	Not applicable for this release, no drilling works done.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Not applicable for this release, no drilling works done.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	Not applicable for this release, no drilling works done.
Diagrams	*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.*	Appropriate maps have been included in this ASX Release.
Balanced reporting	*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.*	Not applicable for this release, no Exploration Results are being reported.
Other substantive exploration data	*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.*	To the best of our knowledge, no meaningful and material exploration data have been omitted from this ASX Release.
Further work	*The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Megado Minerals is reviewing the data to determine the best way to advance the projects and will notify such plans once confirmed.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Refer to figures in the main body of this ASX Release that shows where works have been conducted, and highlight possible extensions and where future exploration campaigns may focus.