

Appia Announces Excellent Desorption Results From Its Four New Ionic Adsorption Clay Targets at the PCH Project in Goiás, Brazil

written by Raj Shah | February 4, 2025

February 4, 2025 ([Source](#)) – Appia Rare Earths & Uranium Corp. (CSE: API) (OTCQB: APAAF) (FWB: A0I0) (MUN: A0I0) (BER: A0I0) (the “Company” or “Appia”) announces updated results from the Ionic Adsorption Clay (IAC) rare earth elements (REE) targets Maia, Electra, Taygeta and Merope at the PCH project (Map 1). (See August 20th, 2024 Press Release – [Click Here](#)) A total of 1,173 samples from 163 Auger drillholes were tested and confirm the presence of extensive IAC style REE mineralization and results show excellent desorption/recovery of the critical Magnet Rare Earth Oxides (MREO).

Tom Drivas, CEO, stated, “These excellent desorption results further confirm the presence of extensive IAC REE mineralization. The potential from these new zones could significantly increase the known quantity and quality of IAC mineralization as the auger drilling has only tested the upper 5-8 metres of the system with most drill holes ending in mineralization. This is in addition to the recently reported high grade hardrock carbonatitic breccia REE mineralization in the SW Extension zone of Target IV which was announced last week (see Press Release – [Click Here](#)). We are planning to execute additional drilling to further define key target zones, and to update the current Mineral Resource Estimate (MRE) of the PCH

project while preparing for the execution of a Preliminary Economic Assessment (PEA) report.”

Highlights:

- Taygeta and Merope targets presented high potential IAC REE results with NdPr average desorption ranging from 35.0% to 60.1% and DyTb desorption from 37.3% to 43.9% in average and are considered the best targets to develop substantial Magnet Rare Earth Oxides (MREO) resources.
- Taygeta Target overall recoveries: **33.8% Total Rare Earth Oxides (TREO), 34.5% Heavy Rare Earth Oxides (HREO), 60.1% NdPr and 37.3% DyTb.**
- Merope Target overall recoveries: **29.0% TREO, 44.2% HREO, 35.0% NdPr and 43.9% DyTb.**
- Maia Target overall recoveries: **34.0% TREO, 47.4% HREO, 69.0% NdPr and 49.6% DyTb.**
- Electra Target overall recoveries: **11.3% TREO, 28.5% HREO, 15.1% NdPr and 22.6% DyTb.**
- The full set of results are available through this [LINK](#) and the auger hole coordinates are available through this [LINK](#).

TARGET	Sample Grade				Desorbed Amount				Recovery			
	TREO	HREO	NdPr	DyTb	TREO	HREO	NdPr	DyTb	TREO	HREO	NdPr	DyTb
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%
Taygeta	917.6	242.1	159.2	25.7	310.6	83.5	95.7	9.6	33.8	34.5	60.1	37.4
Merope	794.1	301.7	130.0	31.6	230.2	133.5	45.5	13.9	29.0	44.2	35.0	43.9
Maia	600.8	131.0	103.1	16.0	204.4	62.1	71.1	8.0	34.0	47.4	69.0	49.6
Electra	924.6	172.1	175.5	21.2	104.8	49.1	26.4	4.8	11.3	28.5	15.0	22.6

Table 1 – Overall average sample results from all auger holes tested by target. To view the full list of results, please [click here](#)

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*Total Rare Earth Oxides: TREO = Y2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3 + La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3

*Heavy Rare Earth Oxides: HREO = Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3 + Y2O3

*NdPr = Nd2O3+Pr6O11

*DyTb = Dy2O3+Tb4O7

*Element to Oxide Conversion Factor – Cerium CeO2 1.2284,, Dysprosium Dy2O3 1.1477, Erbium Er2O3 1.1435, Europium Eu2O3 1.1579, Gadolinium Gd2O3 1.1526, Holmium Ho2O3 1.1455, Lanthanum La2O3 1.1728, Lutetium Lu2O3 1.1371, Neodymium Nd2O3 1.1664, Praseodymium Pr6O11 1.2082, Samarium Sm2O3 1.1596,, Terbium Tb4O7 1.1762, Thulium Tm2O3 1.1421, Yttrium Y2O3 1.2699, Ytterbium Yb2O3 1.1387

* ppm=parts per million

* Desorbability results were conducted using Ammonium Sulfate at 0.5M, pH4 or pH2, for 20 minutes.

Overall desorption results from the entire drilled interval from 118 auger holes (Table 1 above) show a high desorption for targets Taygeta, Merope and Maia where the Heavy Rare Earth Oxides (HREO) recoveries are higher than the light rare earth oxides.

Desorbability tests were conducted by ALS using an Ammonium Sulfate solution at 0.5M, pH4, for 20 minutes at room temperature and part of the samples were conducted at 0.5M Ammonium Sulfate, pH2, for 20 minutes at room temperature. No significant difference was found on results obtained from selected samples assayed under pH2 and pH4 as presented in table through this [LINK](#).

Individual element recoveries (Table 2) consistently indicate high average recovery for Magnet Rare Earth Oxides (MREO) consisting of Neodymium (Nd), Praseodymium (Pr), Dysprosium (Dy)

and Terbium (Tb).

Target	La	Ce	Pr	Nd	Sm	Eu	Gd	Dy	Tb	Ho	Er	Tm	Yb	Lu	Y
Taygeta	54%	6%	51%	52%	46%	42%	44%	29%	32%	25%	22%	18%	16%	15%	29%
Merope	33%	5%	33%	35%	32%	35%	34%	28%	29%	26%	25%	21%	19%	18%	29%
Maia	37%	5%	45%	51%	49%	48%	44%	37%	39%	34%	33%	31%	28%	26%	35%
Electra	12%	3%	12%	14%	14%	16%	17%	16%	15%	17%	17%	16%	16%	15%	21%

Table 2 – Overall target average desorption recoveries by rare earth element.

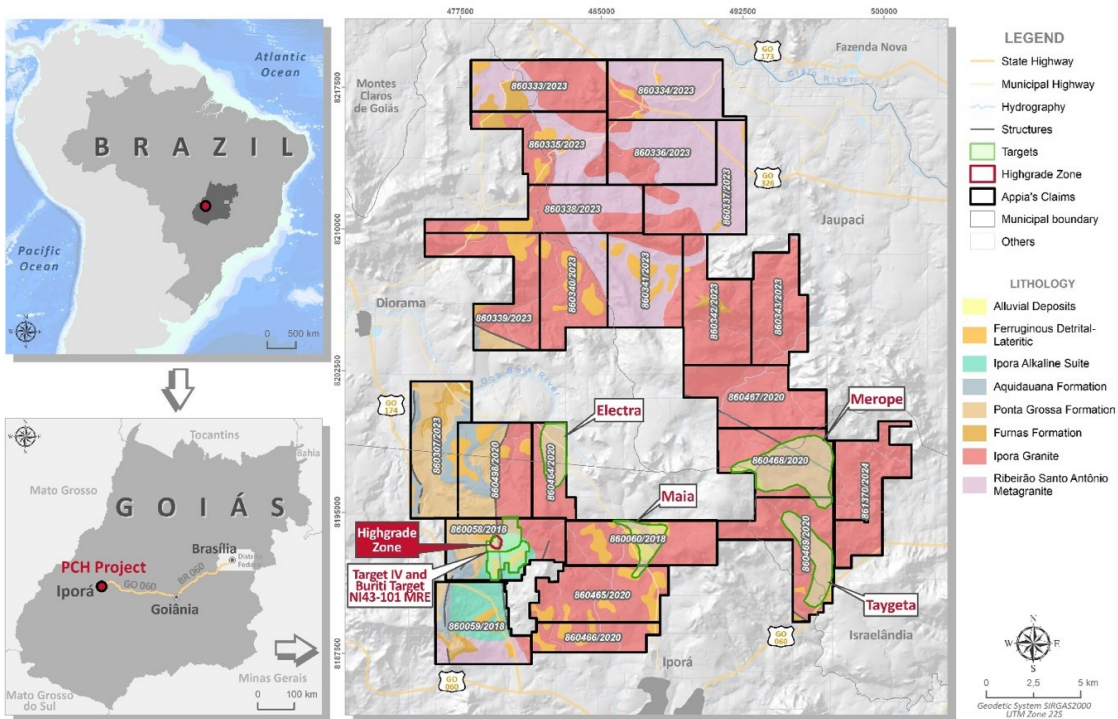
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Several auger drillholes stopped at mineralization due to the water table indicating the potential to grow the mineralized zone at depth.

The detailed location of the zones tested on each target are presented on maps 2, 3, 4 and 5 below. The mineralization is also open to the south and to the west of Taygeta IAC target, Northeast of Merope IAC target and to the south of Electra IAC target.

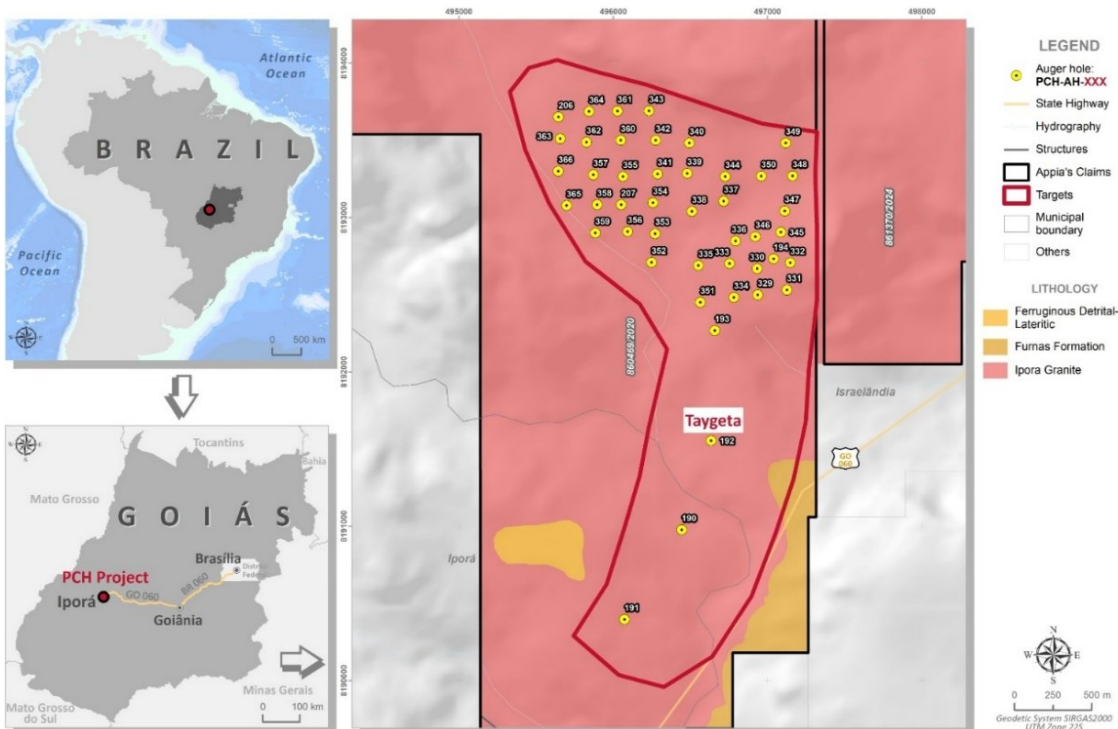
The results are from auger holes in the entire target and all of them presented smaller zones with better grades and recoveries and will be subject to further delineation and expansion drilling.



Map 1 – Location of PCH Project main targets.

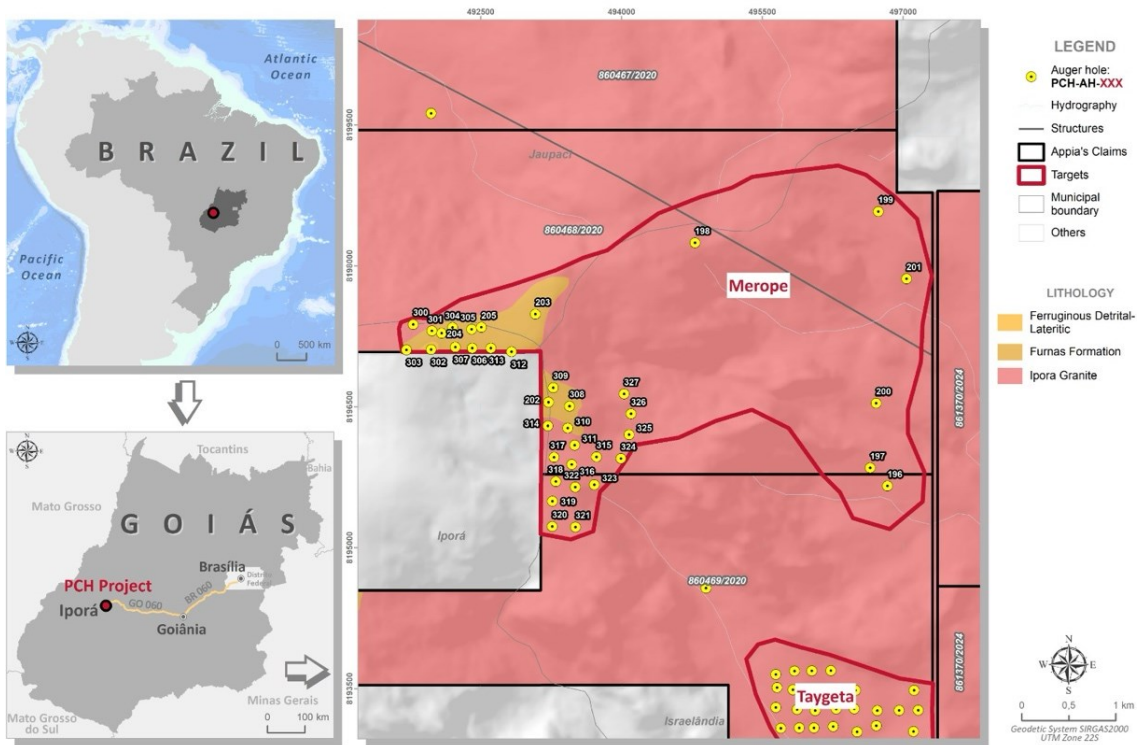
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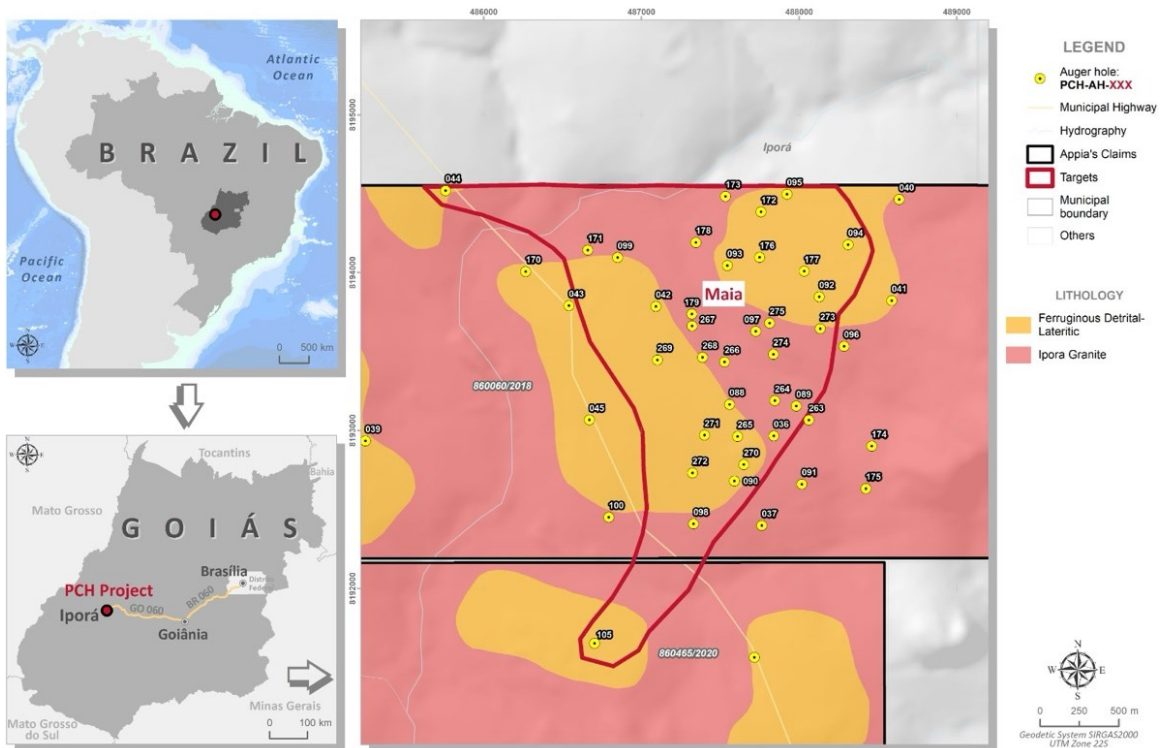
Map 2 – Map of Taygeta IAC Target auger holes.

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Map 3 – Map of Merope IAC Target auger holes.

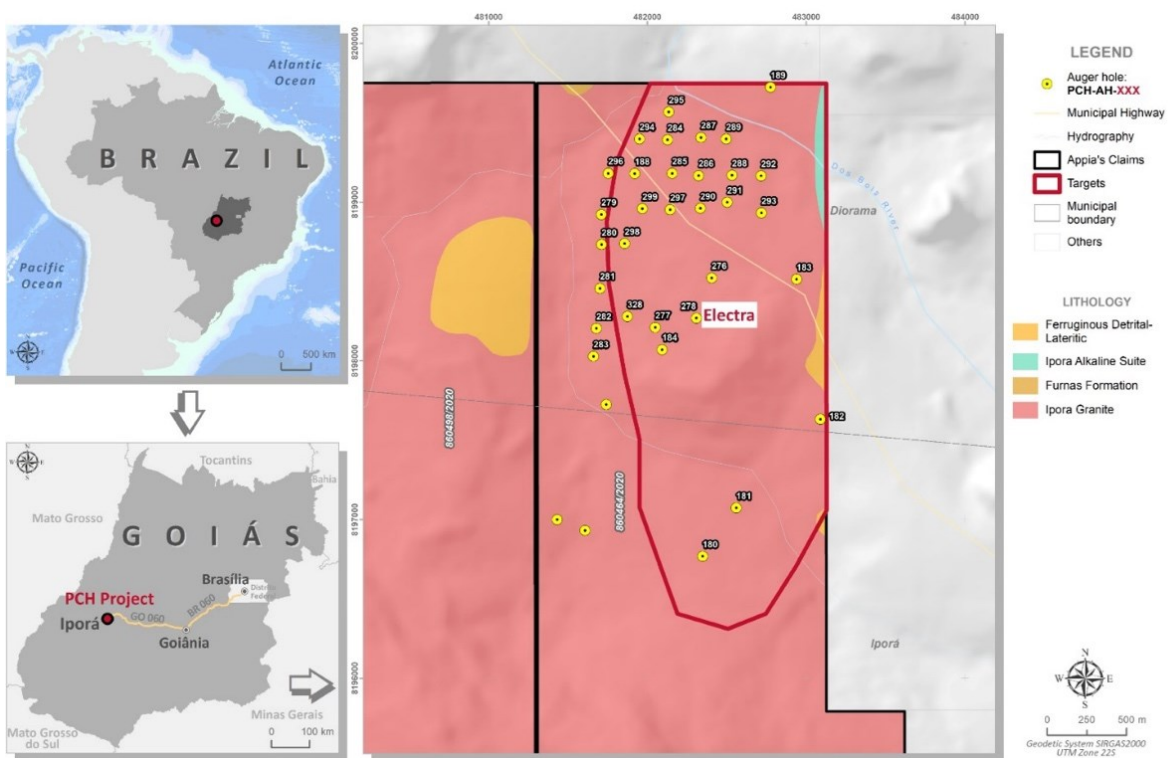
To view an enhanced version of this graphic, please visit:
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Map 4 – Map of Maia IAC Target auger holes.

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Map 5 – Map of Electra IAC Target auger holes.

To view an enhanced version of this graphic, please visit:

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QAQC

Auger drillholes are vertical and reported intervals are true thickness. The material produced from auger holes are sampled at one metre intervals, resulting in average sample sizes of 5-10 kg, no crushing or screening was executed. Quartering of the material was performed at Appia's logging facility using a riffle splitter and continued splitting until a representative sample weighing approximately 500g each was obtained, bagged in a resistant plastic bag, labeled, photographed, and stored for shipment.

The bagged samples are sent to the ALS laboratory in Goiânia, Goiás for initial preparation and sent to Lima Peru for final analysis. In addition to the internal QA/QC of the ALS Lab, Appia includes its own control samples in each batch of samples sent to the laboratory.

Quality control samples, such as blanks, duplicates, and standards (CRM) were inserted into each analytical run. For all analysis methods, the minimum number of QA/QC samples is two standard, one duplicate and one blank, introduced in each batch which comprises full-length hole(s). The rigorous procedures are implemented during the sample collection, preparation, and analytical stages to insure the robustness and reliability of the analytical results.

All analytical results reported herein have passed internal QA/QC review and compilation. All assay results of RC samples were provided by ALS, a Certified Laboratory, which performed

their measure of the concentration of rare earth elements (REE) with the ME-MS81 analytical method that uses lithium borate fusion prior acid dissolution and Inductively Coupled Plasma Mass Spectrometry (ICP-MS). Major Element Oxides were done using ME_ICP06 analytical method using lithium borate fusion and inductively coupled plasma atomic emission spectroscopy (ICP-AES)

Desorption analysis was performed by ALS using ME-MS19a analytical method with samples being crushed until 90% of material is smaller than 2 millimeters, no screening, followed by leaching using a solution of Ammonium Sulphate at 0.5 molar, pH 4, room temperature for 20 minutes. Some samples used desorption analysis using ME-MS19 analytical method with samples being leached with a solution of Ammonium Sulphate at 0.5 molar, pH 2, room temperature for 20 minutes. The leached solution content was analysed using ICP-AES/ICP-MS. No significant difference was found on results obtained from selected samples assayed under pH2 and pH4.

The technical information in this news release, including the information related to geology, drilling, and mineralization, has been reviewed and approved by Andre L. L. Costa, Appia's VP Exploration for Brazil. Mr. Costa is a APEGS Professional Geoscientist (P.Geo.) and a Fellow of Australian Institute of Geoscientists (FAIG), a Qualified Person (QP) as defined by National Instrument 43-101 – Standards of Disclosure for Mineral Projects.

About Appia Rare Earths & Uranium Corp. (Appia)

Appia is a publicly traded Canadian company in the rare earth element and uranium sectors. The Company holds the right to acquire up to a 70% interest in the PCH Ionic Adsorption Clay Project (See June 9th, 2023 Press Release – Click [HERE](#)) which is

42,932.24 ha. in size and located within the Goiás State of Brazil. (See January 11th, 2024 Press Release – [Click HERE](#)) The Company is also focusing on delineating high-grade critical rare earth elements and gallium on the Alces Lake property, and exploring for high-grade uranium in the prolific Athabasca Basin on its Otherside, Loranger, North Wollaston, and Eastside properties. The Company holds the surface rights to exploration for 94,982.39 hectares (234,706.59 acres) in Saskatchewan. The Company also has a 100% interest in 13,008 hectares (32,143 acres), with rare earth elements and uranium deposits over five mineralized zones in the Elliot Lake Camp, Ontario.

Appia has 153 million common shares outstanding, 177 million shares fully diluted.

Cautionary note regarding forward-looking statements: This News Release contains forward-looking statements which are typically preceded by, followed by or including the words “believes”, “expects”, “anticipates”, “estimates”, “intends”, “plans” or similar expressions. Forward-looking statements are not a guarantee of future performance as they involve risks, uncertainties and assumptions. We do not intend and do not assume any obligation to update these forward-looking statements and shareholders are cautioned not to put undue reliance on such statements.

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For more information, visit www.appiareu.com

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portals. If you have any questions online ([X](#), [Facebook](#), [LinkedIn](#)) please feel free to send direct messages.

To book a one-on-one 30-minute Zoom video call, please [click here](#).

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