ASX ANNOUNCEMENT

20 July 2021

Meteoric Appoints Brazilian Director and Reports Further Copper Sulphides in JUDD043

Highlights

- **Dr Marcelo De Carvalho has been appointed to the board of Meteoric, bringing with him his intimate knowledge of the Juruena Project along with a long and successful history of Brazilian exploration**
- **Hole JUDD043 (previously reported to 355m 24/07/21) has been completed at 820m intercepting further intermediate porphyritic intrusives, and 320m of moderate to strong phyllic alteration accompanied by mixed pyrite, molybdenite, chalcopyrite and bornite**
- **Excitingly, molybdenum and copper sulphides have been observed in over 600m of core from JUDD043, pointing to the presence of a potentially large mineralised porphyry copper-moly system**
- **Initial assays from holes JUDD043 (priority) and JUDD042 are expected in August**
- **A further 5,000m of drilling is planned for the Juruena Porphyry system incorporating geological knowledge identified in JUDD042 & 043 to better target mineralisation**

Meteoric Resources NL (**ASX: MEI**) (**Meteoric** or the **Company**) is pleased to provide an update regarding its ongoing drilling for porphyry copper targets at the Juruena Project in Brazil, in addition to announcing the appointment of Dr Marcelo De Carvalho as a new Director to oversee the Company's Brazilian operations.

Dr Andrew Tunks Meteoric's Managing Director said:

"I am pleased to welcome Dr Marcelo Carvalho to the Company's Board of Directors. Marcelo has been involved in our Juruena efforts since acquisition and has helped build a strong technical team on the exploration front. We welcome his vast knowledge and extensive contacts across Brazilian Mining Industry and within Government and feel confident he is the right person to guide us as our exploration and development efforts mature.

His appointment comes at a time of strong progress with the recent Mineral Resource upgrade for the Juruena Project but also the exciting exploration for a porphyry copper gold system at Juruena where our most recent hole has intersected over 600m of porphyry style veins and alteration containing strong indications of our target sulphide minerals - molybdenite, pyrite, chalcopyrite and bornite".

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Appointment of New Director

Dr Carvalho graduated from the State University of Sao Paulo in 1996 with a Bachelor of Geology and commenced his exploration career in Brazil, working for Anglo Gold exploring for gold in the Amazon and subsequently with Vale, exploring for base metals.

In 2004, Dr Carvalho moved to Perth (UWA) to complete a PhD in Metalogenesis. Returning to Brazil he joined Yamana Gold and rose to the role of Greenfields Exploration Manager before departing in 2012. During that time, Marcelo led an experienced Exploration Team and was part of a several gold discoveries, taking projects from Project Generation all the way through to Mining Reserves and Development. With the experience acquired over these years, Marcelo co-founded his own consultancy company, Target Latin America (TLA) and has over the past 10 years consulted to explorers from across the globe, selecting and managing exploration projects in the Americas.

Commenting on his appointment Dr Carvalho said *"I am delighted with the opportunity to join the Meteoric Board. I have been working for Meteoric since its acquisition of Juruena and am very excited about the future of this project. As soon as I set foot out there, I knew Juruena had untapped potential and what has transpired with the upgrade to the Mineral Resource Estimate and the identification and initial drilling of a quality porphyry copper target is very impressive. The excellent work MEI has carried out over the last 2 years has undoubtably unlocked the potential for a major discovery.*

"In my opinion, the work carried out by Meteoric to date has discovered a new Porphyry System at Juruena. We do not know yet how big it is and what average grade it will deliver, but initial signs indicate that it is strong and large. Porphyry mineralisation was discovered a few years ago at the eastern end of the Alta Floresta Belt by Anglo American. That discovery led to a new exploration rush to the region with license applications covering the entire region and the area getting a dominant share of the investment in exploration in Brazil in recent times. Our discovery, 400km to the west of the above mentioned project, is changing exploration ideas along the entire belt.

"Finally, it is very important to point out that in my experience, success in exploration does not always come easy, however, your chances are definitely enhanced if you can get the following mix right: a project with a large potential, in a known mineralised Belt, with an experienced exploration team and an appropriate corporate strategy and financial support. MEI has done exactly that. I am confident that given my status as a Brazilian national with vast knowledge of the project and a history of exploration success in Brazil, that I can make a positive contribution to the Juruena Project and the Meteoric Board."

Drilling update -JUDD043

JUDD043 is the second of three planned drillholes into the Juruena Porphyry System, targeting the western portion of the large IP chargeability anomaly above 15 mv/v (ASX:MEI 09/12/2020), immediately below a strong Cu-Mo soil anomaly, zones of copper sulphides in a mineralised intermediate porphyry intrusion with strong proximal-propylitic alteration, and is located in close proximity to the Juruena Fault. The hole reached a final depth of 820.75m. Details of the geology of the hole are presented in a graphic log that details host rock, alteration assemblages and potentially important sulphide mineral percentages as logged by the exploration team onsite (Figure 1).

The Company has previously released hole details down to 355m (ASX:MEI 24/06/21). JUDD043 intersected barren coarse-grained granite down to 117m. At 117m the drilling moved into a mixed intrusive zone with mafic and intermediate porphyritic intrusives. All rocks are overprinted by strong alteration, multiple phases of veins and variable amounts of sulphide minerals. Molybdenite (Mo) and pyrite (Py) are especially common being between 1 and 10% of the rock mass throughout the interval from 117m to 355m. Between 355 and 467m, the hole intersected essentially monzogranitic wall rock with weak propylitic alteration this zone contains only trace sulphides.

From 650m – to the end of hole, the occurrence of copper sulphides increase. Chalcopyrite (Cpy) and bornite (Bo) occur in quartz-molybdenite veinlets (B-type) and in late carbonate veins. Chalcopyrite and bornite abundance increases to 1-2%. Two intermediate dykes intruding basement diorites and monzodiorites occur with coarser grained sulphides and vein density increased substantially (Figure 1). Hydrothermal alteration is strong at the top of the interval (650m), characterised by proximal propylitic and moderate potassic alteration. At 763m, the Sericite-Silica alteration overprint previous alteration, with increase of Py, Cpy, Mo and Bn. This strong Phyllic overprint with abundant sulphides is the strongest Meteoric has seen so far and has potential to contain gold and copper grades. Molybdenite occurs constantly particularly in two major intervals (from 145 to 344m and from 453m to the end of the drillhole) in total over 600m of drilling. It generally occurs in B-type veins in concentrations that can reach up to 5% of the total rock.

The hole ended at 820.70m depth with a subtle increase in Cu sulphides and pyrite, as granodiorite wall rock with intense silicification and quartz-pyrite veinlets. Sulphides (Py>Mo>Bo>CPy) are still present until the end of the hole, with sulphides comprising 0.5% of the total rock mass.

JUDD042

At the completion of JUDD043, the rig returned to hole JUDD042 which was suspended at 940.6m awaiting additional drilling equipment. The continuation of the hole aimed to cross the Juruena Fault zone which showed strong hydrothermal alteration and copper sulphides and explore onto the footwall of the Juruena Fault. Unfortunately, due to excessive broken ground in the Juruena Fault, the hole was abandoned at 946m depth. The rig has now moved onto Hole JUDD044 approximately 550m west (Figure 2).

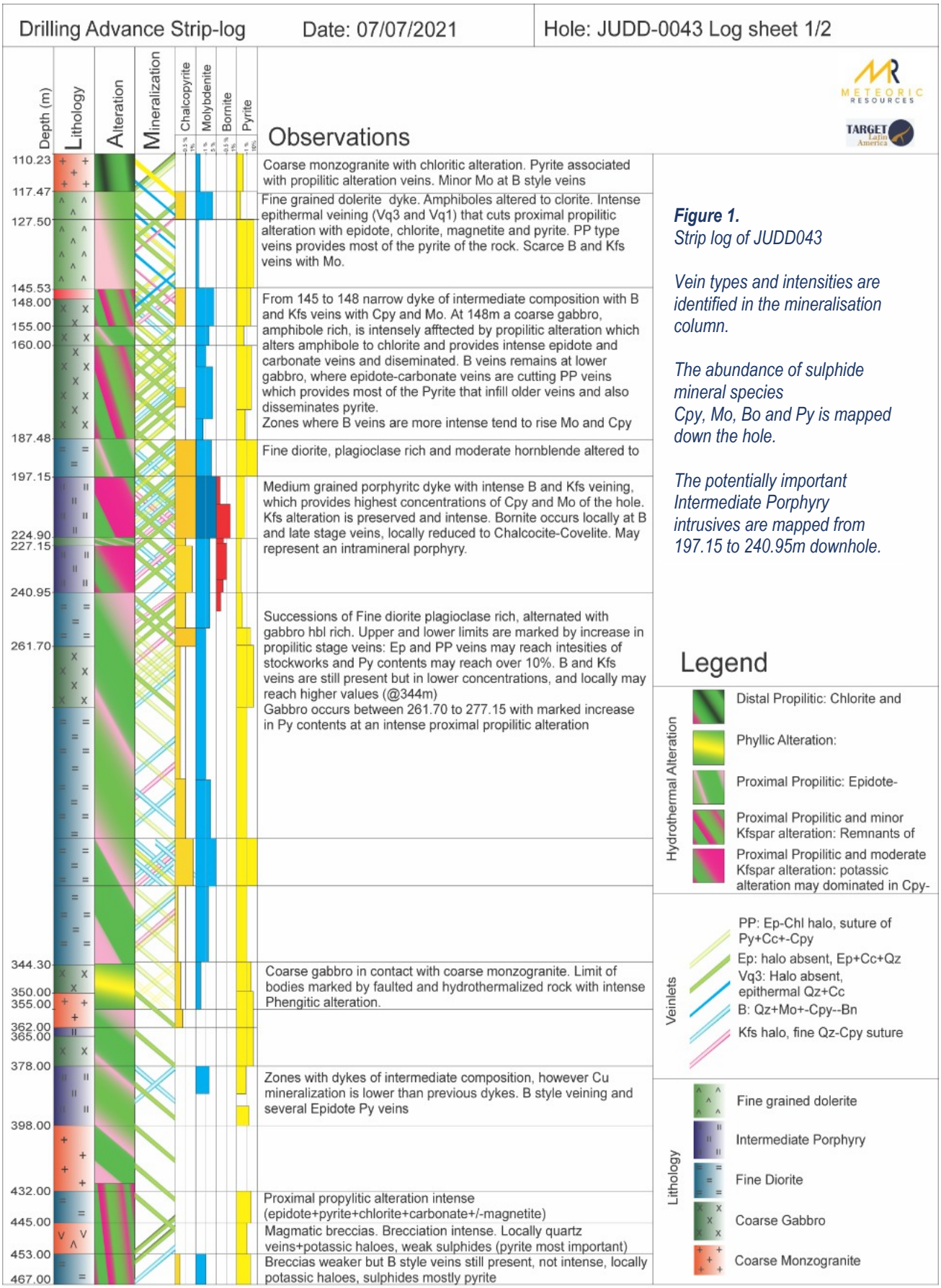

Figure 1.
Strip log of JUDD043

Vein types and intensities are identified in the mineralisation column.

The abundance of sulphide mineral species
Cpy, Mo, Bo and Py is mapped down the hole.

The potentially important Intermediate Porphyry intrusives are mapped from 197.15 to 240.95m downhole.

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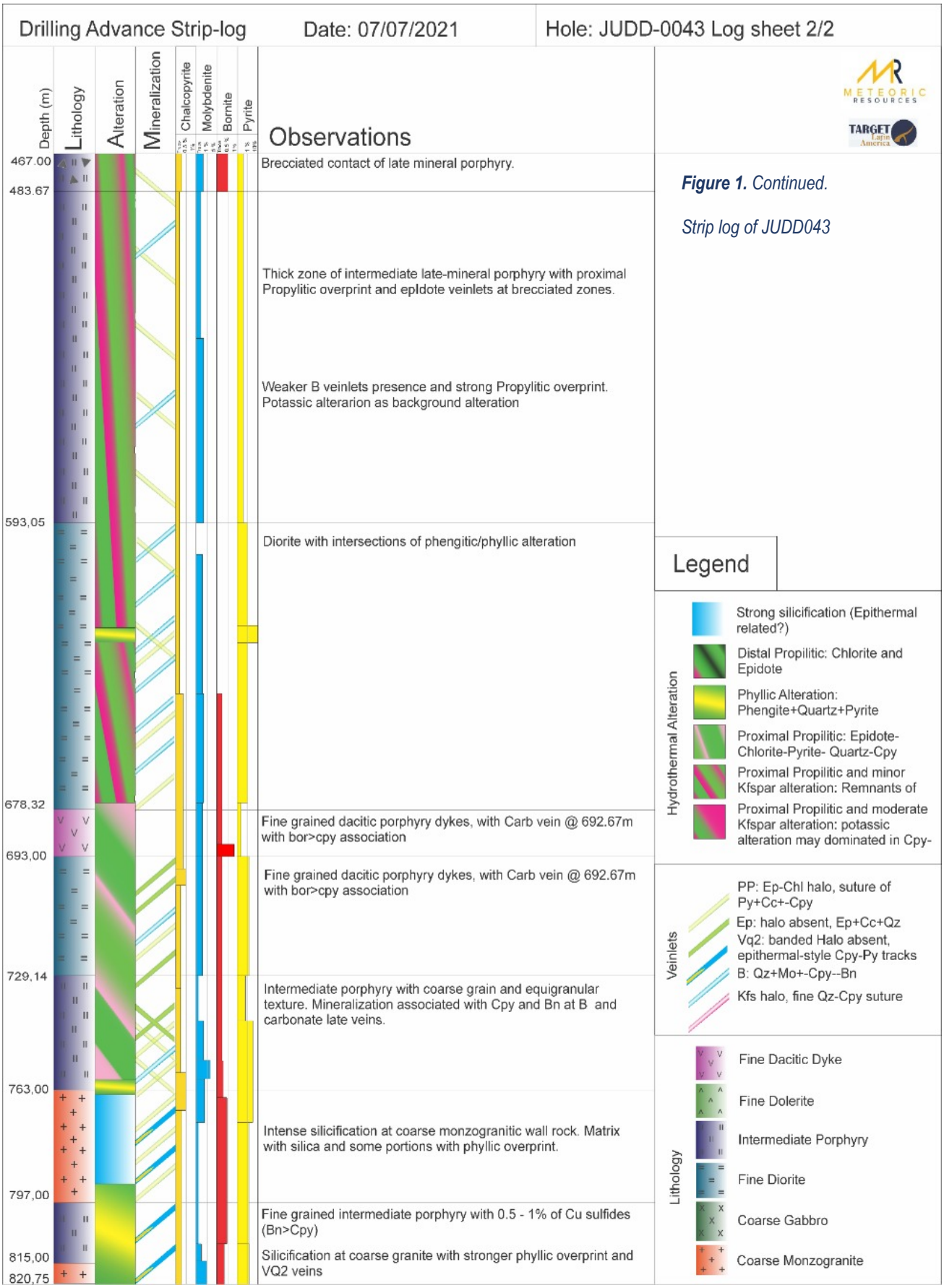

Figure 1. *Continued.*

Strip log of JUDD043

Expansion of the Deep Drilling Program

Due to the success of the first two drill holes intersecting a zoned Porphyry System with high temperature alteration minerals, copper sulphides and abundant molybdenum, an additional 6 drill holes for approximately 5,000m is currently being designed and will be drilled immediately following our current 3 hole program.

Figure 2 shows the location of JUDD044, about 550m to the NW of JUDD043. The 1,000m deep drillhole should start this week and is designed to:

- Test the continuation of the intra-mineral porphyry towards the vector defined by hydrothermal alteration and structural orientation.
- Test below strong (250 ppm) copper + molybedenum anomalies in soil (coincident with the large IP chargeability anomaly).
- Intercept the Juruena Fault corridor to the NW of JUDD043 and investigate its footwall.
- Intercept the high chargeability IP anomaly at its NW extension.

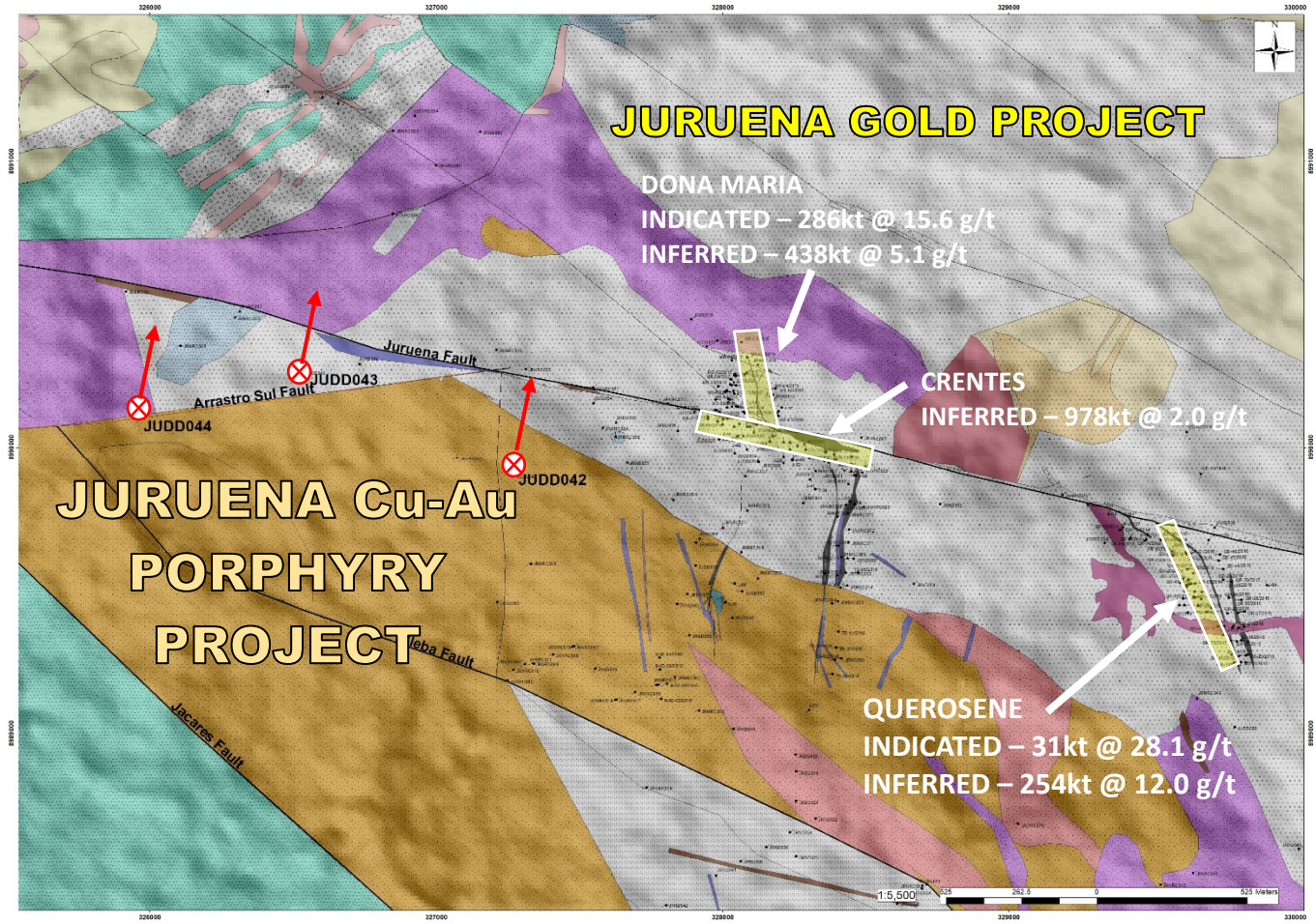

Figure 2. Drillhole collar plan with geology background – highlighting the 3 deep porphyry exploration holes and the shallow epithermal gold resources.

Assay Reporting

A significant delay is expected for initial assay results. ALS Chemex have been heavily affected by the worldwide impact of COVID-19 with preparation labs having to close several times and creating significant delays. Results for JUDD042 & JUDD043 are now expected in August.

The announcement has been authorised for release by the Directors of the Company.

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The information in this announcement that relates to mineral resource estimates and exploration results is based on information reviewed, collated and fairly represented by Mr Peter Sheehan who is a Member of the Australasian Institute of Mining and Metallurgy and a consultant to Meteoric Resources NL. Mr Sheehan has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which has been 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 Sheehan consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

Appendix 1 – JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections).

Criteria	Commentary
Sampling techniques	• Diamond core was split in half lengthways and sampled at 1.0 m intervals inside alteration zones and 1.0 m intervals outside this. Half core was retained on site in Juruena for future reference. • Samples were placed in high density plastic sample bags and sealed shut with cable ties. • Sample mass varied according to the sample length, typically mass varied between 1- 6kg.
Drilling techniques	• Coring was done by Willemita Sondagens Ltda using a Sondas MACH-1200 diamond drill rig with conventional wireline technology. It had a capacity of 600 (six hundred) meters deep in HQ diameter and 1,000 (one thousand) meters in NQ, and 1,200 (twelve hundred) metres in BQ. • Holes were collared to fresh rock using HQ diameter, and the hole was completed using NQ diameter. • Drilling was standard tube (not triple tube). • Drill hole inclinations ranged from -45 to -77 degrees. • Down-hole surveys were carried out by Willemita at the completion of each hole using a MAXIBORE 2 tool. • The drill was oriented every 3m in NQ core using a REFLEX ACT2 tool.
Drill sample recovery	• Diamond core recovery is recorded by measuring the length of core recovered compared to the length drill run. Drill recoveries were considered very good with over 90% of the drill runs > 90% recovery. • Gold mineralisation does not apparently correlate to zones of low sample recovery; sample bias due to poor sample recovery is therefore not believed to be an issue.
Logging	• All drill-holes are geologically and geotechnically logged, and the data stored in a digital database. • Logging of diamond drill-core is a combination of qualitative and quantitative and records: weathering, colour, texture, lithology, alteration, mineralisation, and structure. • The core is also photographed and catalogued.
Sub-sampling techniques and sample preparation	• Diamond drill-core is cut in half lengthways using a diamond saw. The core is consistently cut to the right of a cut/orientation line (looking downhole), and piece of core without the line is sampled. This ensures samples are representative and minimises any bias. • Duplicate samples are routinely done by cutting half of the core for sampling into quarter, and both pieces are analysed. • Sample lengths are determined by geology: 1.0m inside alteration zones and 1.0m outside them. This is considered appropriate for the style of mineralisation.
Quality of assay data and laboratory tests	• Sample preparation was undertaken by ALS Laboratories (Goiania, Brasil). Preparation included: coarse crushing of entire sample, fine crushing to 90% passing 2mm, and pulverising a 1 kg split to 95% passing 106um. • The samples were analysed for Au by ALS Laboratories (Lima, Peru) using Fire Assay Au-AA26 with 50g aliquots followed by Atomic Absorption Spectroscopy (AAS), a technique designed to report total gold. On occasions where 'visible gold' was present or Fire Assay results were >100g/t Au a Screen Fire Assay (Au-SCR24) was requested. These are considered appropriate methods for this style of mineralisation. Additionally, a multi element suite of ME-MS61 48 element 4 acid ICP-MS was done. • Standards (certified reference material), blanks and duplicates were inserted into the sample stream at the rate of 1:20, 1:25 and 1:40 samples, respectively for the sample batches of 50. • Routine analysis of the results of the Blanks, Standards and Duplicates are carried out and any variation away from pre-determined limits are discussed with the lab. Any issues not resolved to Meteoric's satisfaction are re-analysed on a batch basis. No external check laboratory assays have been completed on these samples. • The coarse and pulp sample rejects from the preparation and analytical laboratories were retained and stored at the laboratory, allowing for re-assaying in the future if required. All pulps are stored indefinitely.
Verification of sampling and assaying	• Significant intercepts have been checked and replicated by the Independent qualified person for this release. Meteoric geologists also revisit the drill core for visual inspection and verification. • All drill-hole data is recorded in Microsoft Excel spreadsheets and appended/merged into a Microsoft Access database. The entry of data is controlled by a database administrator.

Criteria	Commentary
	Standardised geological codes and checks have been employed to ensure standardised geological logging and required observations performed. The database is stored by a 'Cloud' storage service. Work procedures exist for all actions concerning data management. • No twin holes were employed in this drilling campaign. • No adjustments or calibrations were made to any assay data .
Location of data points	• Collar surveys are initially performed using handheld GPS with accuracy to ~5m . A licensed surveyor will check the locations using a total station (later in the field season. All drill-holes have been checked spatially in 3D and all obvious errors addressed. • The grid system used for all data types in a UTM projection, SIRGAS2000 Zone 21 Southern Hemisphere. • Topographic control in the area of the drilling is generally poor (+/- 10m), control is made using topographic maps and hand-held GPS.
Data spacing and distribution	• The drilling carried out is on a variable grid, depending on the targeting stage of the drilling. Grid spacing varies from 25m x 25m to approximate 50m x 50m grid, both horizontally and vertically (in the plane of the mineralised structure, which is sub- vertical). • The density of information is considered insufficient for conducting a mineral resource estimate to the standards required by the JORC 2012 mineral resource code. • No compositing was applied.
Data spacing and distribution	• The drilling carried out is on a variable grid, depending on the targeting stage of the drilling. Grid spacing varies from 25m x 25m to approximate 50m x 50m grid, both horizontally and vertically (in the plane of the mineralised structure, which is sub- vertical). • The density of information is considered insufficient for conducting a mineral resource estimate to the standards required by the JORC 2012 mineral resource code. • No compositing was applied.
Orientation of data in relation to geological structure	• Mineralised structures were targeted and planned to be intersected so that minimal sample bias would occur. All structures were planned to be intersected as perpendicular as possible and to pass through the entire structure . • Wherever possible, all drill holes were oriented to intersect the intended structure perpendicular to the strike and a minimum of 40 degrees to the dip of the mineralised zone. The mineralised structures are visible from within the artisanal miners' workings which allowed drill holes to be oriented to minimise introducing a sample bias. • None of the reported significant intersections are a result of intentional sample bias. There is discussion in the text as to possible true widths.
Sample security	• Sampled core is packed flat in plastic bags and sealed with tape. These individual bags are then put in plastic woven bags which are tied and have a metal seal attached. A packing list (confirming the number of sacks for transport) is prepared and samples are transported by Meteoric staff to commercial transport company in Nova Bandeirantes and recorded on a consignment note. • Upon receipt at the laboratory, samples were checked in and the list of received samples immediately sent back to the company' s database administrator as a security check that all samples were received, and all were fully intact and not opened.
Audits or reviews	• The sampling techniques and data have been reviewed by the Competent Person and are found to be of industry standard. • No audits were completed by any external parties.

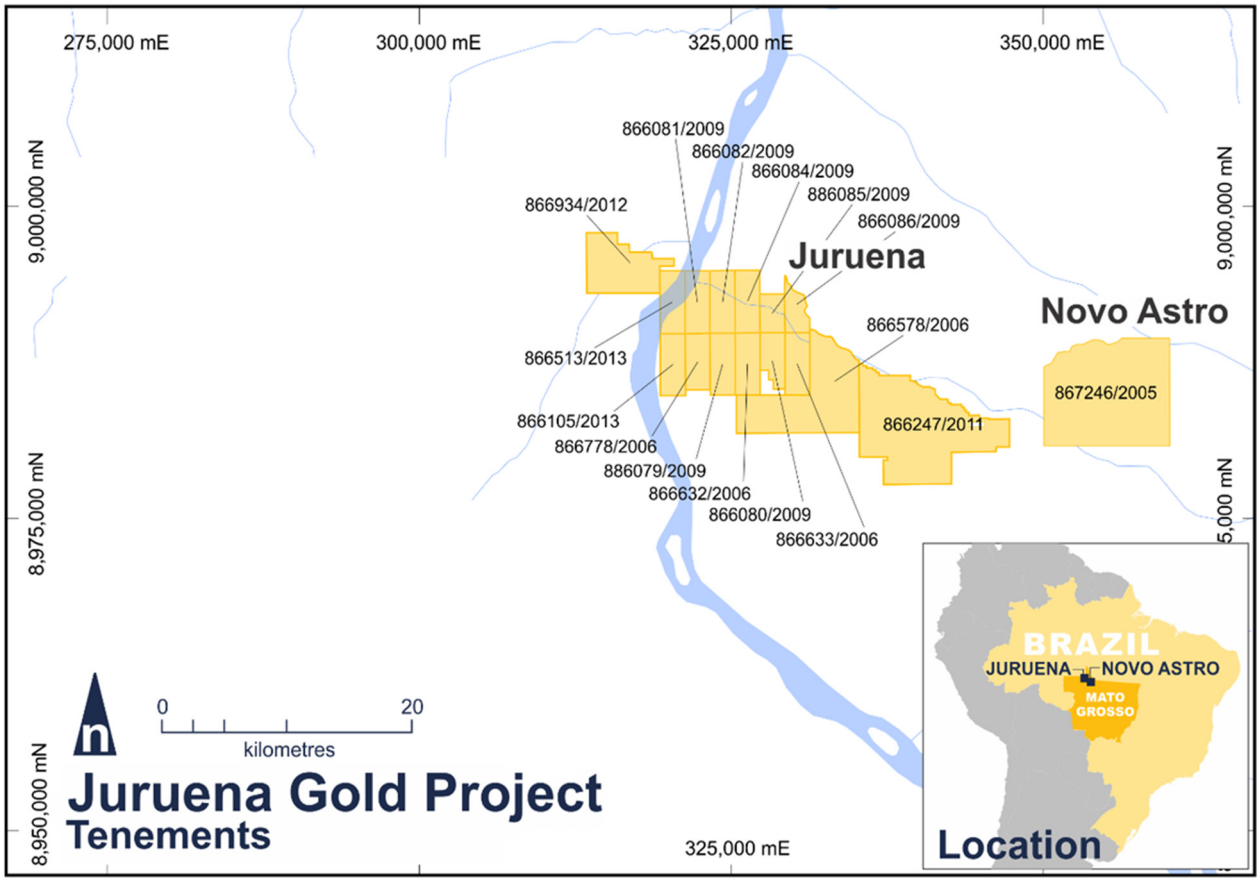
Section 2 Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure status	• License details are shown in Appendix 2. • There is an existing 1% net smelter return payable to a previous owner. There are three Garimpo mining licences within the tenement package, allowing the Garimperos to legally work under certain restrictions. The tenements are not subject to any native title interests but is located within the border zone around a national park. Within this border zone further conditions may be required to gain an operating licence. Cattle grazing and legal timber felling are the two primary industries and land uses for the area.
Exploration done by other parties	• Garimperos first discovered the mineralised areas around Juruena in the 1970's Garimperos have been active in the region since, recovering gold from alluvial, colluvial and some oxidised

Criteria	Commentary
	rock. The area has been explored on and off from the mid 1990's through to the present, with the majority of drilling taking place over the last four to five years. • Madison Minerals Ltd first explored and carried out some drilling evaluation of the Juruena core area in 1995/1996. Lago Dourado Minerals drill tested several anomalies and zones from 2010 to 2013. All work undertaken by Lago Dourado Minerals was performed to a JORC compliant standard and the data generated is considered sufficient to be used for a JORC compliant mineral resource estimate, should further results confirm continuity, grade and geological interpretation in the future.
Geology	• The Juruena mineralisation is considered to have resulted from magmatic activity (intrusions and fluids) which could be sourced from a gold rich source rock and concentrated along structural zones. The mineralisation is hosted by Paleoproterozoic volcanic and granitoid rocks of varying composition. The host rocks are found within the Juruena-Rondonia block of the Amazon Craton.
Drill hole Information	• See body of report
Data aggregation methods	• Significant intercepts are calculated using a 0.5 Au ppm lower cut-off, no upper cut, and up to 4m of consecutive dilution. Sample intervals were not equal to 1 m were weight averaged.
Relationship between mineralisation widths and intercept lengths	• As far as practically possible and with the geological interpretation available, The drill targets were tested with the aim of intersecting the interpreted mineralised structure as perpendicular as possible to the strike. All positive holes to date intersected the mineralisation are minimum of 40 degrees to the dip, which will cause a slight overstatement of the actual intercept width. All results are reported as downhole widths.
Diagrams	• See included Figure(s) in the announcement.
Balanced reporting	• Where results are reported the company intends to report all significant intercepts either in the text or as an Appendix.
Other substantive exploration data	• No other substantive data is mentioned in this release.
Further work	• Further work is discussed in the body of the report.

Appendix 2: Table of Brazil Licenses for Juruena and Novo Astro Projects

Claim No.	Status	City	Ownership %
866.079/2009	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.081/2009	Granted Exploration Permit	COTRIGUAÇU/MT, NOVA BANDEIRANTES/ MT	100%
866.082/2009	Granted Exploration Permit	COTRIGUAÇU/MT, NOVA BANDEIRANTES/ MT	100%
866.084/2009	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.778/2006	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.085/2009	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.080/2009	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.086/2009	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.247/2011	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.578/2006	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.105/2013	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.934/2012	Granted Exploration Permit	COTRIGUAÇU/MT	100%
866.632/2006	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.633/2006	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.294/2013	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%
866.513/2013	Granted Exploration Permit	COTRIGUAÇU/MT, NOVA BANDEIRANTES/ MT	100%
867.246/2005	Granted Exploration Permit	NOVA BANDEIRANTES/ MT	100%



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