QUEENSLAND PACIFIC METALS

First 4N HPA Production for QPM from New Caledonian Ore

Highlights

- ✓ **Lab scale testwork undertaken by Lava Blue successfully produces 99.996% HPA from aluminium hydroxide feedstock produced by QPM in its pilot plant.**
- ✓ **This represents the first major milestone in the QPM – Lava Blue working relationship post execution of the HPA license heads of agreement.**
- ✓ **Successful HPA production provides QPM with the confidence to proceed with further testwork and the HPA section of the Defintive Feasibility Study for the TECH Project.**

Queensland Pacific Metals Ltd (**ASX:QPM**) ("**QPM**" or "the **Company**") is pleased to announce that lab scale testwork undertaken by Lava Blue has successfully produced 4N High Purity Alumina ("**HPA**") from aluminium hydroxide feedstock produced by QPM as part of its piloting of the DNi Process™ on New Caledonian ore. The purity of the HPA was 99.996%.

In December 2021, QPM executed a License Heads of Agreement with Lava Blue regarding the use of its propriertary HPA technology for the TECH Project. One of the key early workstreams in this partnership was the successful production of HPA from QPM's aluminium hydroxide feedstock. The success of this testwork provides QPM with the confidence to commence the next phase of testwork and to finalise the appointment of Stantec (formerly known as Engenium), Lava Blue's preferred engineering consultant, to undertake the HPA refinery section of the TECH Project Definitive Feasibility Study ("**DFS**") in conjunction with Hatch (QPM's engineering partner).

Testwork

QPM's pilot plant operation produced intermediate aluminium hydroxide from New Caledonian ore. Previous testwork undertaken by QPM was successful in producing high purity aluminium chloride, the final precursor to HPA. Aluminium chloride produced by QPM was sent to Lava Blue for testwork at its Queensland University of Technology ("**QUT**") laboratory.

Lava Blue's work program was to:

- Confirm that 4N HPA could be successfully produced from QPM's aluminium chloride precursor by assaying impurities;
- Produce 4N HPA from the aluminium chloride.

Lava Blue's testwork confirmed that QPM's aluminium chloride was very pure. From the assay results of QPM's aluminium chloride, Lava Blue projected HPA purity to be in the range of 99.995 – 99.998%, giving it confidence to proceed with the second part of the work program.

To produce HPA, the aluminium chloride samples were calcined to ~800°C in batches to yield transitional alumina. The samples yielded from this process were then combined and homogenised. The next step was to take the homogenised transitional alumina and convert it to a final HPA product by a second heating stage to above 1150°C. Assaying this final product in the QUT HPA laboratory resulted in a purity of 99.996%, in line with Lava Blue's projections.

The next step for QPM in the HPA work program is to now prepare for further testwork including piloting at Lava Blue's demonstration plant, which is nearing completion, and to commission DFS activities on HPA. QPM will imminently finalise the appointment of Stantec and the HPA DFS workstream will be able to be completed in line with the rest of the TECH Project DFS.

QPM Managing Director Dr Stephen Grocott commented,

"We have now successfully produced the four key materials from New Caledonian laterite ore – nickel, cobalt, hematite and HPA. Maximising the underlying value of the feedstock ore is a key focus of QPM and in line with its goal of being a global leader in sustainability. We are delighted with the progress Lava Blue have made to date and are excited at the long term future of our partnership.

This announcement has been authorised for release by the Board.

Competent Persons Statement

Information in this announcement relating to the processing and metallurgy (including the JORC table in Annexure) is based on technical data compiled by Mr Boyd Willis, an Independent Consultant trading as Boyd Willis Hydromet Consulting (BWHC). Mr Willis is a Fellow and Chartered Professional of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Willis has sufficient experience which is relevant to metal recovery from the style of mineralisation and type of deposits in New Caledonia where the ore will be sourced (from third parties pursuant to an ore supply agreement) and to the activity which they are undertaking to qualify as a Competent Person under the 2012 Edition of the 'Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves'. This includes over 25 years of experience in metal recovery from Laterite ores. Mr Willis consents to the inclusion of the technical data in the form and context in which it appears.

ANNEXURE – JORC TABLES

1.1 Section 1 Sampling Techniques and Data

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.* • *Include reference to 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.*	• The laterite ore sample for leaching is a grab sample sourced from a shipping stockpile by laterite supplier SMT in New Caledonia. • The ore sample grade was requested by QPM to be indicative of the specification required under the terms outlined an ore supply MoU between QPM, SMT and SMGM. It did not need to be representative of any specific location and is not considered to be an in situ sample. • The intermediate aluminium-containing product was sub-sampled from the pilot plant runs. This subsample was processed through to aluminium chloride hexahydrate (ACH) • The intermediate ACH sample was packed into sealed plastic bags and sent to Lava Blue for processing through to HPA.
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).*	• No exploration drilling was undertaken
Drill sample recovery	• *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.*	• No exploration drilling was undertaken
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.*	• No exploration drilling or logging was undertaken

Criteria	JORC Code explanation	Commentary
	• *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	• *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.*	• All samples of HPA product made in the testwork were recombined and homogenised before the final analysis samples were taken. • This work was undertaken in the QUT laboratory which is dedicated to HPA testwork.
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.* • *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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• HPA samples were prepared for analysis by a total digestion procedure. Samples were digested in sulfuric acid. The digest was then quantitatively transferred to a digestion tube and made up to volume with ultrapure water. • Triplicate analysis of the HPA samples were performed to ensure accuracy and control. • The samples were assayed using a combination of ICP-OES and ICP-MS. • This work was undertaken in the QUT laboratory which is dedicated to HPA testwork.
Verification of sampling and assaying	• *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.*	• No exploration drilling or sampling was undertaken
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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic*	• No exploration drilling was undertaken

Criteria	JORC Code explanation	Commentary
	control.	
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• No exploration drilling was undertaken.
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.* • *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.*	• No exploration drilling was undertaken.
Sample security	• *The measures taken to ensure sample security.*	• The ACH sample was collected, secured and sent in closed plastic bags via either a registered transport company, or were hand delivered directly to the laboratory. • The HPA sampling work was all undertaken in the QUT laboratory, which is secure and only accessed by accredited workers.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No external audits have been completed.

1.2 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.* • *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.*	• Not Applicable • Sample was sourced from third party supplier SMT in New Caledonia.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Not Applicable
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Not Applicable.
Drill hole Information	• *A summary of all information material to the understanding of the exploration*	• No exploration drilling or sampling was undertaken.

Criteria	JORC Code explanation	Commentary
	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 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.*	
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.* • *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.*	• No exploration drilling or sampling was undertaken. • Metal equivalents were not used or reported.
Relationship between mineralisation widths and intercept lengths	• *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 (e.g. 'down hole length, true width not known').*	• No exploration drilling was completed.
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.*	• No exploration drilling was completed.
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*	• No exploration results have been reported sampling was carried out on insitu laterite.

Criteria	JORC Code explanation	Commentary
	of Exploration Results.	
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.*	• Exploration drilling was not carried out.
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).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No drilling or exploration work is planned.