ASX RELEASE
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Battery Spec Nickel Sulfate Produced from Pilot Plant MHP

Highlights

- **Bench scale testwork complete producing battery chemical nickel sulfate from nickel-cobalt MHP produced in pilot plant**
- **Conventional flowsheet used, the same that is currently utilised in the industry to produce nickel sulfate from MHP**
- **Assay results meet target specification of various spec sheets provided by potential offtakers**

Queensland Pacific Metals Ltd (ASX:QPM) ("**QPM**" or "the **Company**") is pleased to announce that it has successfully completed bench scale testwork to produce nickel sulfate from nickel-cobalt mixed hydroxide precipitate ("**MHP**") produced from its pilot plant operations.

Testwork

MHP is currently the preferred intermediate nickel product to refine into nickel sulfate for batteries. The process is a conventional commercial flowsheet that is widely employed in industry. Existing nickel sulfate refineries utilise the same process on nickel metal (after dissolution in sulfuric acid and purification) as they cannot source sufficient MHP, which is a cheaper nickel input.

From its discussions with various offtakers and general industry knowledge of its Owner's team, QPM is aware of target nickel sulfate specifications required by battery manufacturers. QPM engaged The Simulus Group ("**Simulus**") to undertake bench scale testwork with the goal of producing nickel sulfate that meets the range of specifications known to QPM.

Utilising a conventional industry flowsheet which involves re-leach, solvent extraction, impurity removal and crystallization, Simulus successfully produced nickel sulfate.

Figure 1: Nickel sulfate crystals produced from QPM pilot plant MHP

Assay results of the product are provided in the table below:

	Al	Ca	Co	Fe	K	Mg
	ppm	ppm	ppm	ppm	ppm	ppm
QPM Target	<5	<7	<30	<3		<20
Assay Result	<1.2	<1	5.56	0.61	14	2.53

	Mn	Na	Ni	P	S	Zn
	ppm	ppm	%	ppm	%	ppm
QPM Target	<10	<20	>22			<3
Assay Result	<0.4	<0.3	23.5	6	12.7	<1

Figure 2: Assay results of nickel sulfate produced

The assay results were better than QPM's targets for all elements. Based on industry specifications received by QPM, the results satisfy the strictest battery specifications. This is an important milestone for QPM as the Company has now produced battery spec nickel sulfate from a bulk sample of representative nickel ore sourced from its New Caledonian ore supply partners.

QPM will now undertake pilot scale testwork for the production of nickel sulfate from its remaining MHP. QPM also continues to work with CSIRO on the assessment of an alternative refining flowsheet that may result in potential process savings.

QPM Managing Director Stephen Grocott commented,

"*We have now completed the full process from a raw ore source to a final battery chemical product. The Australian Government is trying to develop the nation's capability for advanced manufacturing and the TECH Project is the perfect example of a project that would fit this bill.*"

This announcement has been authorised for release by the Board.

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Competent Persons Statement

Information in this announcement relating to the processing and metallurgy 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 leach ore bulk sample used to produce the MHP was sourced directly from the mine face by laterite supplier SMT in New Caledonia. • The bulk sample direct from the mine face was loaded using a small backhoe into individually sampled 1 tonne bulk bags, containerised (with security seal) and shipped directly from New Caledonia to SGS Minerals Metallurgy in Malaga, Western Australia • The 80 off 1 tonne bulk bags making up the bulk sample, monitored by a QPM representative, was indicative of the specification required under the terms outlined an ore supply MoU between QPM, SMT and SMGM.
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

Criteria	JORC Code explanation	Commentary
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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• No exploration drilling or logging was undertaken
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.*	• No exploration drilling or logging was appropriate, required or undertaken. • The bulk sample was supplied to SGS on the 29/05/20 and was classified as being type SMT by QPM. • It was received from the mine site as a moist, lumpy material ranging from extremely weathered rock to hard clay and silt consistency. • Prior to delivery to SGS, the bulk sample was inspected in accordance with Australian Quarantine requirements. • The bulk sample bulk bags were individual auger sampled. The sample was dried and assayed to confirm the grade. The bulk bags were individually decanted into large stainless steel trays and dried, screened to -100mm to remove large rocks and milled to 100% passing 1.4mm The dried and milled bulk sample was blended and loaded into 200L sealed drums. The bulk sample quantity was selected to be appropriate for the pilot plant campaign requirements.
Quality of assay data	• *The nature, quality and appropriateness of the assaying and laboratory*	• ALS carried out the assay of the MHP in

Criteria	JORC Code explanation	Commentary
and laboratory tests	*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.*	accordance with ISO standards • Independently, Simulus also carried out assay of the MHP in accordance with ISO standards to verify the results
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 control.*	• No exploration drilling was undertaken
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.

Criteria	JORC Code explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	• The bulk sample was collected, secured and sent in sealed containers via a registered transport company (QUBE), and delivered directly to the SGS laboratory.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Simulus also carried out assay of nickel sulfate in accordance with ISO standards to verify the results

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 • The bulk 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 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.*
		• No exploration drilling or sampling was undertaken.

Criteria	JORC Code explanation	Commentary
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 of Exploration Results.*	• No exploration results have been reported sampling was carried out on in situ laterite.
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.

Criteria	JORC Code explanation	Commentary
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.