

GEN2 Attains Significantly Higher Silicon Metal Production Yield

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MONTREAL, April 25, 2019 - HPQ Silicon Resources Inc. (HPQ) (TSX VENTURE:HPQ) (FRANKFURT:UGE) (OTC PINK:URAGF) is pleased to announce the receipt of an interim progress report from PyroGenesis Canada Inc (“PyroGenesis”) (TSX-V: PYR) highlighting GEN2’s significantly higher silicon metal production yield.

on the left with Gen1, in the middle with Gen2 and on the Right with Gen2 after modification

PyroGenesis informed HPQ that (i) the technical team identified a new operational parameter that increases the Pure Silicon Metal (Silicon Nugget) Production Yield¹ of the PUREVAP™ Quartz Reduction Reactor and (ii) a test using the GEN2 PUREVAP™ was completed which together provided the following information:

1. The PUREVAP™ reactor can be modified from a stationary reactant² mixtures load to a dynamic one, without affecting other key operational parameters of the reactor which, as a result, improves production yield significantly;
2. That changing the reactant mixture load to a dynamic flow positively affects Production Yield;
3. That it is feasible to modify the GEN3 PUREVAP™ Pilot Plant to integrate these advantages into the new design.

IMPROVING REACTANT FLOW IN THE REACTOR SIGNIFICANTLY IMPROVES PRODUCTION YIELD

The scope of the potential of the new parameter became apparent when the test produced the largest single individual Silicon nuggets of all our tests to date; weighing ~ 6.5 grams.

REACTOR MODIFICATION MORE THAN DOUBLE SILICON METAL NUGGET (PURE Si) PRODUCTION YIELD

Comparing³ the 3.3% pure Silicon nugget production yield of test #14 with the 7.0% pure Silicon nugget production yield obtained by test M-001 validated the modification potential. Further tests will be needed to optimise the process and its operation but the results clearly indicate that pure Silicon production yield more than doubled with the modification. Producing 4N+ Si with the *PUREVAP™* assumes a 90%+ production yield at commercial scale. These results are part of our trendline that indicate that we are on the right track to reach that goal with our GEN 3 *PUREVAP™* Pilot Plant.

“It has always been important to maintain or improve production yield while scaling up to a commercial system,” said Mr. Pierre Carabin, Chief Technology Officer and Chief Strategist of PyroGenesis. *“Being able to improve it, with results such as today’s, and thereby further mitigating the risk of the project, is a significant achievement in itself, and it validates the decision to proceed with the GEN2 middle step. We have ticked off another box in our goal to create both a low cost and green metallurgical approach to producing solar grade silicon metal.”*

Bernard J. Tourillon President and CEO of HPQ Silicon Resources stated: *"This is an other demonstration of where the meticulous approach to R&D and proven track record of taking projects from proof of concept to commercialization of PyroGenesis provides great value to the HPQ PUREVAP™ project.*

GEN2 PUREVAP™ QRR CONTINUES TO BE AN INVALUABLE BENCH TEST PLATFORM

These latest results confirm the strategic decision to incorporate the GEN2 proof of commercial scalability reactor, as a middle step towards the GEN3 pilot plant. It provides us the ability to immediately test new concepts and design modifications using the GEN2 PUREVAP® platform while the GEN3 PUREVAP® pilot plant is being assembled. This unique proposition not only reduces the risk profile of the project, but it also reduces the project commercial validation timeline. It is also extremely cost effective since tests done using the GEN2 R&D platform are substantially less expansive than they would be if the tests were done using the GEN3 PUREVAP® pilot plant.

Pierre Carabin, Eng., M. Eng., Chief Technology Officer and Chief Strategist of PyroGenesis has reviewed and approved the technical content of this press release.

This press release is available on the forum "CEO Verified Discussion Forum", a moderated social media platform that allows civilized discussion and questions and answers between management and shareholders.

About HPQ Silicon

[HPQ Silicon Resources Inc.](#) is a TSX-V listed (Symbol HPQ) resource company focuses on becoming a vertically integrated producer of High Purity Silicon Metal (4N+) and a metallurgical producer of Solar Grade Silicon Metal ("SoG-Si") used in the manufacturing of multi and monocrystalline solar cells of the P and N types, required for production of high performance photovoltaic solar systems.

HPQ's goal is to develop, in collaboration with industry leaders, PyroGenesis (TSX-V: PYR) and Apollon Solar, experts in their fields of interest, the innovative PUREVAP™ "Quartz Reduction Reactors (QRR)", a new Carbothermic process (patent pending), which will permit the transformation and purification of quartz (SiO₂) into high purity silicon metal (4N+ Si) in one step therefore reducing significantly the CAPEX and OPEX costs associated with a metallurgical transformation of quartz (SiO₂) into SoG Si. The pilot plant equipment that will validate the commercial potential of the process is on schedule to start mid-2019

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This press release contains certain forward-looking statements, including, without limitation, statements containing the words "may", "plan", "will", "estimate", "continue", "anticipate", "intend", "expect", "in the process" and other similar expressions which constitute "forward-looking information" within the meaning of applicable securities laws. Forward-looking statements reflect the Company's current expectation and assumptions, and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated. These forward-looking statements involve risks and uncertainties including, but not limited to, our expectations regarding the acceptance of our products by the market, our strategy to develop new products and enhance the capabilities of existing products, our strategy with respect to research and development, the impact of competitive products and pricing, new product development, and uncertainties related to the regulatory approval process. Such statements reflect the current views of the Company with respect to future events and are subject to certain risks and uncertainties and other risks detailed from time-to-time in the Company's on-going filings with the securities regulatory authorities, which filings can be found at www.sedar.com. Actual results, events, and performance may differ materially. Readers are cautioned not to place undue reliance on these forward-looking statements. The Company undertakes no obligation to publicly update or revise any forward-looking statements either as a result of new information, future events or otherwise, except as required by applicable securities laws.

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Shares outstanding: 222,284,053

A photo accompanying this announcement is available at
<http://www.globenewswire.com/NewsRoom/AttachmentNg/47244fb1-1442-4f59-beda-59cd01f27054>

¹ Production Yield is the conversion efficiency of Quartz into Silicon Metal of the process

² Quartz (SiO₂) and carbon

³ Both tests used for the comparison were done under similar operational conditions

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