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News release – for immediate distribution

# GEN2 PUREVAP<sup>TM</sup> TESTING OF TAPPING SECTION OF PILOT PLANT DESIGN AND SUBSYSTEMS, DE-RISKING UP-COMING PILOT PLANT TRIALS

**HPQ Silicon Resources Inc.** (HPQ) (TSX-V "HPQ") is pleased to announce the receipt of a progress report from PyroGenesis Canada Inc ("PyroGenesis") (TSX Venture: PYR) describing continuous development testing of the pilot plant design and reactor related subsystems of the Silicon Melt Drainage (Tapping) part of the process. This work of the *Gen2 PUREVAP™ Commercial Scalability Proof of Concept* platform is undertaken in order to minimize the risk of design failure during the pilot plant trials schedule to start mid-2019.

### DRAINAGE OF LIQUID SILICON MELT AT THE BOTTOM OF REACTOR (TAPPING) CRITICAL TO PROCESS

Drainage of silicon (tapping) is one of the most important aspects of the process. Efforts have been made by PyroGenesis to optimize the design of the melt drainage subsystems of the pilot plant. In order to test design efficiency and to generate computational studies to predict the tapping behaviour of liquid silicon in the Gen3 pilot plant, a few silicon melting and tapping tests using GEN2 reactor have been conducted to date.

#### SIMULATED TAPPING DONE USING GEN2

To simulate the tapping process of the pilot plant unit, the Gen2 reactor was ramped up to operating parameters with a standard mixture of quartz and carbon introduced at the beginning. Once the reactor reached operating temperature as-received Si is introduced in the reactor for effective melting. Once the whole Si mass melted, the tap hole was opened to drain the liquid metal and the data from the test was then used to generate computational studies.



Picture of Gen2 in action during simulated tapping test.

Image © PyroGenesis (sensitive section of image deliberately blurred)



Mr. Bernard Tourillon, President and CEO of HPQ Silicon Resources Inc stated: "We are very happy to show our first ever public picture of the Gen2 in action. What these tests demonstrate is the incredible versatility of our Gen2 PUREVAP<sup>TM</sup> QRR platform, highlighting the advancement being made on the project and toward de-risking the mid-2019, Gen3 commercial scalability testing phase".

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 News Release is available on the company's <u>CEO Verified Discussion Forum</u>, a moderated social media platform that enables civilized discussion and Q&A between Management and Shareholders.

#### **About HPQ Silicon**

HPQ Silicon Resources Inc. is a TSX-V listed resource company focuses on becoming a vertically integrated and diversified High Purity, Solar Grade Silicon Metal (SoG Si) producer and a manufacturer of multi and monocrystalline solar cells of the P and N types, required for production of high performance photovoltaic conversion.

HPQ's goal is to develop, in collaboration with industry leaders, PyroGenesis (TSX-V: PYR) and Apollon Solar, that are experts in their fields of interest, the innovative PUREVAP<sup>™</sup> "Quartz Reduction Reactors (QRR)", a truly 2.0 Carbothermic process (patent pending), which will permit the transformation and purification of quartz (SiO<sub>2</sub>) into high purity silicon metal (Si) in one step and reduce by a factor of at least two-thirds (2/3) the costs associated with the transformation of quartz (SiO<sub>2</sub>) into SoG Si. The pilot plant equipment that will validate the commercial potential of the process is on schedule to start mid-2019.

#### Disclaimers:

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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