



PyroGenesis Submits Final Gen 1 PUREVAP™ Report to HPQ Silicon Resources Inc.

November 1, 2017

MONTREAL, Nov. 01, 2017 (GLOBE NEWSWIRE) -- PyroGenesis Canada Inc. (<http://pyrogenesis.com>) (TSX-V:PYR) (OTCQB:PYRNF), a high-tech company (the "Company" or "PyroGenesis") that designs, develops, manufactures and commercializes plasma waste-to-energy systems and plasma torch products, is pleased to announce today that it has submitted to its client, HPQ Silicon Resources Inc. ("HPQ"), a report entitled " *Final Report-Silicon Metal Purity Enhancement*" pertaining to the final series of metallurgical tests completed using the Gen 1 PUREVAP™ Quartz Reduction Reactor ("Gen 1 PUREVAP™"). The results of testing the various operating parameters on the final purity of the Silicon Metal produced was rigorously tested. The original concept that, under a semi-continuous PUREVAP™ process, it should be possible to transform Quartz (SiO₂) into Silicon Metal (Si) with purity levels acceptable to the solar wafer industry was confirmed¹.

The recently announced start of the Gen 2 PUREVAP™ metallurgical testing program is aimed to not only confirm previous findings but also, and more importantly, to allow for downstream product testing as final plans are being put in place to assemble the Pilot Plant.

"We are extremely happy with the Gen 1 PUREVAP™ results, however, this first-generation reactor was limited in its ability to push yield which directly relates to purity. The second stage testing program, or Gen 2 PUREVAP™, will allow us to test those limits, thereby increasing the probability of success when assembling the pilot plant", said P. Peter Pascali, President and CEO of PyroGenesis. "We are pleased to join HPQ in announcing both the reaching of this new milestone and the commencing the second stage testing program."

Bernard Tourillon, Chairman and CEO of HPQ stated, "Results to date are spectacular, in less than 18 months the PUREVAP™ QRR process has demonstrated a one-step capacity to produce very pure Silicon Metal. Traditional industrial processes need to deploy multiple expensive steps to reach the same purity level. The Gen 2 PUREVAP™ will allow us to test, over the coming months, a number of purification options including slow cooling, as we continue our methodical metallurgical testing protocol. Our goal is straightforward, we seek to produce a Solar Grade Silicon Metal that can be used to manufacture solar cells as efficient as the one produced by Elkem Solar of Norway, the only commercially successful UMG Solar producer in the World."

About PyroGenesis Canada Inc.

PyroGenesis Canada Inc. is the world leader in the design, development, manufacture and commercialization of advanced plasma processes. PyroGenesis provides engineering and manufacturing expertise, cutting-edge contract research, as well as turnkey process equipment packages to the defense, metallurgical, mining, additive manufacturing (3D printing), oil & gas, and environmental industries. With a team of experienced engineers, scientists and technicians working out of our Montreal office and our 3,800 m² manufacturing facility, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. Its core competencies allow PyroGenesis to lead the way in providing innovative plasma torches, plasma waste processes, high-temperature metallurgical processes, and engineering services to the global marketplace. Its operations are ISO 9001:2008 certified, and have been ISO certified since 1997. PyroGenesis is a publicly-traded Canadian company on the TSX Venture Exchange (Ticker Symbol: PYR) and on the OTCQB Marketplace (Ticker Symbol: PYRNF). For more information, please visit www.pyrogenesis.com

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 ongoing filings with the securities regulatory authorities, which filings can be found at www.sedar.com, or at www.otcm Markets.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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¹ PyroGenesis Canada Inc. Technical Memo: "TM-2017-830 REV 00, - Final Report-Silicon Metal Purity Enhancement"